The Good City Sidewalk: Assessing the Impact of Greenmarket Programs on Food Inequity in New York City

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“The soil is the great connector of lives, the source and destination of all. It is the healer and restorer and resurrector, by which disease passes into health, age into youth, death into life. Without proper care for it we can have no community, because without proper care for it we can have no life.” -- Wendell Berry, The Unsettling of America: Culture and Agriculture
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ABSTRACT:

The provision of affordable, healthy food to low-income populations is as much an urban planning concern as it is a public health one, especially in a city like New York, plagued with unsettling health disparities and a widening income gap. This research seeks to explore how farmers markets can be used as planning tools for addressing issues of food inequity in urban contexts by providing underserved communities with fresh, affordable, culturally appropriate food. More specifically, this thesis assesses how GrowNYC Greenmarkets addresses issues of income inequality and food inequity in New York City through the analysis of several programs that enable the spending of federal food assistance at farmers markets. Through qualitative research methods and spatial analysis, this study identifies some of the remaining barriers and challenges that prevent disadvantaged populations from accessing affordable and healthy food. Finally, it argues that given GrowNYC’s proven capacity to engage with and serve low-income communities, Greenmarket should expand its programming to address the needs of those who fail to qualify for federal subsidy programs but struggle nevertheless to put healthy food on the table.
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I. Introduction:

The opening words – and ultimate conclusions – of In Defense of Food: An Eater’s Manifesto by the journalist Michael Pollan are as poignant as they are pithy: “Eat food. Not too much. Mostly Plants” (1). While these rules may seem on the surface somewhat obvious, they point to several key problems with the culture of American food consumption, namely the industrialization of agriculture and the fetishization of “nutritionism” as an ideology that has come to dictate (and confound) our eating habits (Scrinis, ch. 1). Journalist Michael Specter, in a 2015 New Yorker article about the evolution of fast food in America, observes, “in less than a century, our ability to produce cheap calories on a massive scale, long considered the signature triumph of American agriculture, has become a genuine threat to the nation’s health” (58). Paradoxically, we live in a world where rates of obesity are comparable to rates of hunger. In fact, according to the World Health Organization, “globesity” is a worldwide epidemic, affecting all ages and socioeconomic groups and, contrary to conventional thought, prevalent in both industrialized and non-industrialized nations. In 2014, 600 million adults were considered obese; in 2013, the staggering number of obese children under the age of five was 42 million (WHO 2015). As Specter suggests, “Nowhere is the trend as pronounced as it is in this country,” and indeed, the United States continues to exhibit the highest rates of obesity in the world (Specter 58).¹

In the introduction to his book The Third Plate: Field Notes on the Future of Food, chef-activist Dan Barber writes about the transformation of the concept of farm-to-table from a fringe idea to a veritable social movement. Farm-to-table, he argues, is a local food movement

¹ According to a 2014 report in the Journal of the American Medical Association, over one-third of American adults (34.9%) and 16.9% of youth are obese (Ogden et al., 806).
that opposes the “global food economy that erodes cultures and cuisines” (10). And yet despite its successes – he offers the rise in prevalence of farmers markets as one example – and the gradual shift in popular consciousness, Barber argues that “the gains haven’t changed, in any fundamental way, the political and economic forces shaping how most of the food in this country is grown or raised. Nor, for that matter, have they changed the culture of American cooking” (11). Although Barber’s book is predominantly about the production of food and the relationship between more responsible farming practices and food consumption, the same “political and economic forces” to which he alludes also shape the distribution of food, the processes of which inevitably relate to key social equity concerns of cost and access.

To an extent, Michael Specter voices these equity concerns in his 2015 *New Yorker* essay. Throughout the article he questions the degree to which fast food is becoming healthier by discussing what he refers to as “fast casual” chains such as Sweetgreen, Chipotle, and Shake Shack, which promise a higher quality of fresh ingredients that are often local and organic. That these kinds of restaurants are the fastest-growing segment of the food market suggests a promising shift in the way Americans are thinking about fast food (56). However, Specter highlights a grim reality: “In the United States today, you can sell meals for a dollar or you can sell nutritious meals. Doing both on a large scale is not possible” (63). This is due, in part, to a system in which the government subsidizes crops like corn and soybeans, which feed livestock and make processing and mass-production possible. In fact, at least half of the calories Americans consume come from food that has at some step along the way been subsidized by the government (63). As a consequence of a food system dependent on mass production, people must choose between cheap and healthy (nutrient-rich), and for individuals or
households with limited financial means, there exists no practical incentive to buy a ten-dollar salad at Sweetgreen when one can order a double cheeseburger at McDonald’s for less than two dollars. And indeed, Americans don’t just grapple with the choice between inexpensive and healthy at fast food restaurants: they face these decisions at grocery stores too, where nutrient-poor processed foods are both less expensive and less perishable than nutrient-rich fruits, vegetables, and whole grains (Drewnowski and Specter 6). This problem obscures, therefore, Pollan’s initially straightforward mantra to “Eat food. Not too much. Mostly Plants.”

Julie Guthman, a professor in the Department of Social Sciences at UC Santa Cruz, has criticized the work of Michael Pollan and others. In her article “Can’t Stomach It: How Michael Pollan et al. Made Me Want to Eat Cheetos,” she makes an important observation:

But there is something even more disturbing about these books and the claims they produce. To repeat Pollan’s claim: ‘When food is abundant and cheap, people will eat more of it and get fat.’ People eat corn because it’s there. They are dupes. Jane Goodall makes a similar leap when she writes, ‘There is no mechanism that turns off the desire – instinct, really – to eat food when it is available.’ Even Marion Nestle’s concern with supermarket aisles suggests that people mechanically react to product placement. This raises an important question: Why are Pollan, Goodall, and Nestle not fat? If junk food is so ubiquitous that it cannot be resisted, how is it that some people remain thin? (78)

Guthman’s critique of authors who write about obesity and food culture is that they ultimately reduce a very complex social and spatial problem to the food people decide to eat; in other words, she draws attention to the mistaken notion that “fat people exercise agency in their fatness” (78). Of course, the claims she cites fail to acknowledge the problem I mention above – that scarcity of resources greatly influences and restricts the food choices poor people can make, and thus access to nutritious fruits and vegetables is not always a given. Her conclusion, therefore, is compelling, especially from a policymaking perspective: ultimately, she calls for a
fundamental change in the structures – such as federal subsidies to the agrichemical industry – that govern a currently flawed food system.

Few would dispute that healthy food – like clean air, clean water, and shelter – is a basic daily need. And yet questions of food equity and access have historically been absent from professional planning interests. To understand the fundamental themes of this thesis, it is useful to define both “healthy food” and “food equity.” Healthy food may indeed mean different things to different people, but for the sake of this research, I use it broadly to refer to natural, nutrient-rich fruits, vegetables, and whole grains not saturated with high contents of fat, sugar, and sodium (i.e. “empty-calorie” foods). The widely accepted definition of food security was adopted at the World Summit of 1996. According to this definition, food security exists “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life” (UN FAO). My concept of food equity draws from this definition, but expands it to suggest that the notion of equity considers systems and environments in addition to people; it recognizes that certain communities are inherently at a disadvantage because of social, economic, institutional, and spatial conditions within a given system.

Fortunately, food systems planning emerged as a burgeoning discipline over the course of the last decade, as academics and practitioners alike (for example Kami Pothukuchi, Jerome Kaufman, and Patricia Allen) increasingly acknowledged food as an urban, public health, and environmental issue. Indeed, the American Planning Association Policy Guide on Community and Regional Food Planning admits, “planners can play a role to help reduce the rising incidence of hunger on the one hand, and obesity on the other” (APA 2007). Ultimately the research presented in this thesis attempts to answer how planners can play this role and with what tools.
In April 2015, the US Department of Agriculture announced that it had awarded $31 million in grants for programs aiming to increase access to healthy food for people receiving Supplemental Nutrition Assistance Program (SNAP) benefits. SNAP, formerly the Food Stamp Program, is the largest federal food assistance program in the United States, providing eligible, low-income populations with financial benefits for the purchase of food. The grants awarded by the USDA fund a variety of programs run by organizations in 26 different states, and they speak to national concern about the provision of fruits and vegetables to low-income populations. Notably, several of the programs offer incentives for the use of SNAP benefits at farmers markets throughout the country. While the practice of spending food stamps at farmers markets is, historically, not novel as a concept, Congress’ mandate in the mid-1990s that paper stamps be converted to Electronic Benefit Transfer (EBT) cards disrupted the system, primarily because farmers lacked the technology to process them. However, federal, state, and local efforts to authorize farmers and to promote the use of SNAP at farmers markets has drastically increased spending for food at these markets in the last decade from $2.7 million in 2004 to $18.8 million in 2014 (USDA, June 2015). Although in 2012 SNAP sales at farmers markets accounted for only 0.02% of SNAP dollars spent nationwide, that percentage has also slowly grown since the early 2000s. And in fact, according to research conducted by the Farmers Market Coalition, a non-profit dedicated to strengthening the role of farmers markets in communities throughout the country, “even a half-percent increase in the amount of total SNAP money spent at farmers markets would mean millions of dollars of fresh, nutritious foods going to families who need it, and millions of dollars of revenue going directly to community farmers rather than large food manufacturers and corporations.”
This thesis argues for the enormous potential for urban farmers markets to provide underserved communities with access to fresh, affordable, culturally appropriate food. It does so by examining the experience of New York City Greenmarket, which is celebrating its 40th season this year, with programs that seek to achieve these goals. Greenmarket, one of the programs administered by GrowNYC, a non-profit group established in 1970 as the Council on the Environment of New York City, is arguably the largest, most comprehensive network of open-air farmers markets in the country. It has become, since its inception, a citywide institution and a valued neighborhood asset throughout the boroughs of New York. This research analyzes the various Healthy Exchange programs Greenmarket operates aimed at engaging low-income populations. These include the Electronic Benefit Transfer (EBT) Program, which enables SNAP participants to use their federal benefits at Greenmarkets; the Health Bucks Program, which supplements EBT by providing $2 coupons for every $5 in food stamps; Women, Infants, and Children (WIC) Vegetable and Fruit Checks; and the Farmers Market Nutrition Program (FMNP), which provides $4 checks to WIC participants and low-income seniors redeemable only at farmers markets. These programs will be described below in Sections 3.1 and 3.2 of the text.

Through the use of mixed qualitative methods, I aim to understand not only how Greenmarket addresses issues of food inequity in New York, but also what barriers and challenges remain that prevent low-income households from accessing affordable and healthy food. Ultimately, my findings suggest that farmers markets are viable tools for addressing issues of income inequality and food access in urban contexts. Moreover, in the case of New York City, I argue that Greenmarket, even in the face of institutional threats to food assistance programs,
should expand its programming to address the needs of low-income populations who fail to qualify for federal subsidy programs but struggle nevertheless to put healthy food on the table.

1.1 Methodology and Data Sources

In order to answer my research questions and to better understand the relationship between farmers markets and food access programs in New York City, I used mixed qualitative methods and conducted spatial analysis using Geographic Information Systems (GIS). The qualitative methods included document review of scholarly, government, nonprofit, and activist reports. I also conducted informal interviews with Assistant Director of Greenmarket Cheryl Huber and three market managers at the Union Square, Columbia, and Inwood locations to get a sense of their experiences with food access programs and to understand the limitations of these programs. Greenmarket provided 2015 data for its access programs, which I supplemented with US Census, American Community Survey, and NYC Open Data to perform the spatial analysis.

1.2 Theoretical Framework

To frame the research presented throughout this thesis, it is useful to ground it in some of the theories of urban planning. Scott Campbell’s pivotal 1996 essay “Green Cities, Growing Cities, Just Cities,” develops a triangular framework for understanding the relationship between three often divergent, sometimes complementary planning goals: environmental protection, economic growth, and social justice. He positions the somewhat ambiguous notion of sustainable development at the center of this triangle and suggests, “This center cannot be
reached directly, but only approximately and indirectly, through a sustained period of confronting and resolving the triangle’s conflicts” (296). The planner’s role according to this model is thus to continually mediate conflicts arising when goals are at odds with one another. Because planning is inherently a political act, mediating these conflicts inevitably requires trade-offs between interest groups in society, between the community and politicians, and between planners and the public (Fainstein 134-136).

The first sentence of Mark Pelling’s book *Adaptation to Climate Change: From Resilience to Transformation* echoes the concepts underlying Scott Campbell’s “planner’s triangles” in a compelling way. He writes, “Climate change adaptation is an opportunity for social reform, for the questioning of values that drive inequalities in development and our unsustainable relationship with the environment” (3). That adaptation is at once social and political is central to Pelling’s discussion, but it also reflects the complicated dynamic that Campbell illuminated in his framework. Pelling produces his own framework for thinking about many of the same issues, which describes the incremental processes by which “adaptation as resilience” becomes “transformative adaptation.” Campbell argues that “it is one thing to locate sustainability in the abstract, but quite another to reorganize society to get there,” and Pelling would presumably agree (301). The resilience-transition transformation framework is, unsurprisingly, one that unfolds in three steps. The first of these steps, *adaptation as resilience*, represents the refinement of actions without challenging or questioning the status quo. From there, however, the important processes of social learning and self-organization can lead to a *transitional* process through which new values, ideas, and practices are formed (through social relationships and interactions) and normalized into society. Transitional adaptation therefore
serves as a catalyst for rethinking the institutional architecture of socio-spatial institutions, like food systems, and can ultimately lead to *transformative adaptation*, which he describes as subversion of the old regime in favor of widespread social reform.

Figure 1 below shows both Campbell’s original diagram and the adapted form of it, which considers the interaction of these two frameworks when applied to a concept with a narrower scope. For the sake of this research, placing farmers markets at the center of the triangle forces us to consider not only the ways in which farmers markets are in dialogue with the goals of social justice, economic growth, and environmental protection, but also how they implicitly relate to the broader theme of sustainability, especially when the entire system feels the burden of external pressures such as climate change or local political instability. Of course, this framework has been adapted in the sense that the center of the triangle no longer represents an ambiguous outcome (i.e. sustainable development), but rather a concrete instrument capable of engaging with the concepts of social learning and self-organization to transform the status quo and balance the three conflicting goals.

*Figure 1: Scott Campbell’s Triangle of Conflicting Goals for Planning*
In practice, the framework may be explained as follows: the local economic and environmental benefits of farmers markets are well documented. Research conducted by the Farmers Market Coalition suggests that farmers markets stimulate local and regional economies. According to a 2011 Economic Research Report, they create 13 full time jobs per $1 million in revenue earned, and for every $100 spent at farmers markets, $62 stays in the local economy and $99 stays in the state (FMC). Moreover, farmers markets ensure the economic viability of small farmers who may otherwise fall victim to large, industrial producers. Similarly, the environmental benefits of farmers market are numerous: they protect regional farmland and significantly reduce the environmental impacts and costs of transporting produce thousands of miles. While farmers markets provide numerous economic and environmental
advantages, their social benefit is perhaps less obvious – nor is it a given. Patricia Allen, chair of the Department of Food Systems and Society at Marylhurst University in Oregon, has written extensively about questions of social equity as they relate to localized food systems. In an article published in the *Cambridge Journal of Regions, Economy, and Society*, she provides a useful definition of a socially just food system as “one in which power and material resources are shared equitably so that people and communities can meet their needs, and live with security and dignity, now and into the future” (297). Ultimately, according to this framework, the processes of social learning and self-organization have the capacity to inform Campbell’s planner-cum-mediator so that negotiation among the three development goals render farmers markets not an outcome, like sustainable development, but rather as a tool for questioning and challenging complex issues of economic, environmental, and social equity.
II. Literature Review:

2.1 Food Systems Planning

First and foremost, this thesis seeks to contribute to the growing literature in the field of food systems planning. The processes of the food system – production, distribution, consumption, and disposal – have only recently been conceived of as urban planning and policymaking concerns, largely thanks to groundbreaking work by Jerome Kaufman and Kameshwari Pothukuchi in the late 1990s. Kaufman and Pothukuchi, scholars in the departments of Urban Planning at the University of Wisconsin-Madison and Wayne State University respectively, attempted in 1999 to explain why food systems have traditionally not been perceived of as urban issues. “Placing the Food System on the Urban Agenda” offers four reasons for the traditional low visibility of food as an urban system and suggests ways in which municipal institutions can better mediate issues related to food policy.

First, they argue that we simply take access to food for granted: “urban residents are lulled into a false sense of security; from their perspective, there is little cause for concern, since the food system basically works and works fine” (214). As the authors suggest, that the system “basically works” is problematic because we fail, as a result, to think critically about complex socioeconomic and environmental factors associated with equity and with the food system itself. The ubiquitousness of food in the urban context prevents us from recognizing those community residents for whom regular access to healthy, culturally appropriate food through conventional means is not a given (214).

Fortunately, in recent years, urban planners have worked together with public health officials to make questions of spatial access to food a priority to combat health concerns such
as obesity. One result of this is the shift in focus from food “deserts” to food “swamps.” The US Department of Agriculture defines food deserts as “urban neighborhoods and rural towns without ready access to fresh, healthy and affordable food.” More specifically, the Departments of Agriculture, Treasury, and Health and Human Services identify food deserts as “census tracts with a substantial share of residents who live in low-income areas that have low levels of access to a grocery store or healthy, affordable retail outlet,” according to specific income and access criteria, such as no large grocery store within one mile of a particular residence.

Some critics argue that the concept of a food desert fails to paint a holistic picture of the problem of food access, particularly in denser cities, where physical proximity to large grocery stores may not be as much of an issue. In a 2011 article in the *Journal of the American Medical Association*, Jonathan Fielding and Paul Simon of the UCLA School of Public Health describe this tension well: “in many disadvantaged communities, the food environment is more swamp than desert, with a plethora of fast food; convenience stores selling calorie-dense packaged foods, super-sized sodas, and other sugar-loaded beverages; and other nonfood retail venues selling junk food as a side activity” (1171). In other words, they acknowledge that food choices may be influenced by environmental factors other than proximity to a supermarket. They base this discussion on a 2011 study conducted by Boone-Heinonen et al., which found on the one hand that there was little association between supermarket availability and dietary behaviors, and on the other hand that increased availability of fast food resulted in increased consumption (1160). Fielding and Simon explain, “the addition of a supermarket in an underserved community may be necessary but not sufficient to induce increased fruit and vegetable consumption unless accompanied by efforts to ensure high-quality and affordable produce” (1171). As a result,
they suggest the need to balance policy efforts to reduce access to these types of foods at the community level (through zoning and other regulatory interventions) with efforts to increase access to affordable, healthy produce (1172).

The other factors Kaufman and Pothukuchi identify to explain why urban food systems have traditionally been treated with benign neglect by urbanists speaks to the historic processes by which issues came to be defined as urban, as well as to how technological improvements in transportation, processing, and refrigeration restructured the provisioning of food in the twentieth century. Importantly, the authors emphasize the notion that urban and rural were, from the onset, mutually exclusive: “‘Urban’ thus came to be defined by early twentieth century texts as non-agricultural, thereby conceptually distancing food as an urban issue. Housing, health, pollution, jobs, and crime came to be identified as important urban issues in the 20th century; food was not among them” (215). Subsequently, in the middle of the century, the same technologies that permitted cities to expand into and through regional farmland also shifted the ways by which food traveled from farm to grocery store. Sophisticated processing techniques allowed for the mass production, transportation, and commercialization of food; as a result, for city dwellers, “the ‘thereness’ of food…for the majority of residents did not change” (216). In other words, few saw the real consequences of suburban sprawl and industrial agriculture because food was available either way. Ultimately, the processes within the food system have always shaped our consumption habits. Fortunately, with the rise of social movements such as environmentalism and the local food movement, recent decades have witnessed a shift in these practices for the better.
2.2 The Local Food Movement

Interest in and demand for food that has been locally produced has increased throughout the United States, and this phenomenon has spurred an increase in both scholarly and grey literature that raise questions about what characterizes local food systems. According to Steve Martinez and his colleagues at the USDA Economic Research Service, there is no universally accepted definition of what “local” food is in terms of geographic proximity from production to consumption, and in fact conceptions of what constitutes “local” tend to vary by region based on factors such as population density (Martinez et al. 3). On a policy level, the lack of a concrete definition can at times be problematic because different scales of programming, funding, and governance (i.e. municipal, state, federal) may at times be at odds with one another. As a result, many other characteristics may be attributed to the “local food” movement, including but not limited to production methods (that are organic and/or environmentally friendly), fair labor practices, and small farms “that are committed to place through social and economic relationships” (4).

Despite the lack of a specific geographic definition, proponents of localization acknowledge its overarching goals and benefits, be they environmental or economic. According to Patricia Allen of the Center for Agroecology and Sustainable Food Systems at UC Santa Cruz, localized food systems have the following advantages: they provide a market for local farmers, thereby reversing the decline in small farms; they create local jobs; they reduce environmental degradation and protect regional farmland from the negative impacts of urbanization; and they foster a sense of community (296-297).
These benefits align with the motivations and goals of Barry Benepe and his colleagues when they developed the idea for Greenmarket in the 1970, which I will discuss at greater length in the next section. Witnessing the degree to which suburban land development – in the form of housing, highways, and shopping centers – had destroyed half a million acres of regional farmland around New York City, Benepe, along with friend and fellow planner Bob Lewis, decided that “an open-air farmers market would provide an opportunity for growers to sell directly to customers, which would bring good food into New York and make it possible for farmers to keep their farms solvent” (Benepe, Kornfeld 346). For Benepe and colleagues, farmers markets were, from the beginning, “local” institutions, and indeed from the beginning, Greenmarket has held – and enforced – strict geographic and production standards in order to protect both small farmers and regional farmland. Today, the region represented by Greenmarket farmers extends 120 miles to the south, 170 miles to the east and west, and 250 miles to the north of New York City, encircling a region that covers parts of New York, New Jersey, Connecticut, and Pennsylvania (GrowNYC “Greenmarket Rules”). In his well-known 1978 New Yorker essay “Giving Good Weight,” about the Greenmarket’s early experiences, the journalist John McPhee writes, “The customers, the people of the city, believed – and were encouraged to believe – that when they walked into a Greenmarket they were surrounded by true farmers who had grown the produce they displayed and were offering it fresh from the farm. That was the purpose and promise of the Greenmarket – if not the whole idea” (56). Thus, although the local food movement has gained popular traction in recent years in response to the effects of industrial agriculture, the idea of local food systems and foodsheds has been acknowledged for several decades (Barber, Kloppenhurg et al. 1996).
2.3 Urban Agriculture

Luc J A Mougeot, Senior Program Specialist at the International Development Research Center, defines urban agriculture as “an industry located either within intra-urban or on the peri-urban fringes of a city, [which] grows and raises, processes and distributes a diversity of food and non-food products and (re)uses both human and material resources, products, and services found in and around that urban area” (Mougeot 2). One of the particularly compelling aspects of this definition is its emphasis on place: urban agriculture is, by definition, a local process, and as a result its impact can be felt and measured at the community level. Although Mougeot’s definition speaks to the advantages of a localized system, it does not explicitly address the social dynamics inherent in the processes it describes, and indeed I question his use of the word “industry,” with its implications of commercial mass-production. Despite this, his definition importantly alludes to the predominant themes in the literature about urban agriculture – that is, it’s relationship to questions of food security, economies, and sustainable urbanization (Mougeot 2005; Lawrence, Lyons, and Wallington 2010).

While the concept of urban agriculture varies in scale from rooftop gardens to regional farms, from the planning perspective the literature tends to focus on the positive social impacts of community gardens (Cohen, Reynolds, Sanghvi 2012; Hanna and Pikai 2000; Lawson 2005). Moreover, the relatively limited (although growing) scholarship about farmers markets seem to focus on their benefits to producers as opposed to consumers (Brown and Miller 2008; Feenstra and Lewis 1999; Ferris, Norman, Sempik 2001). My research, therefore, aims to fill this gap by considering the role of urban farmers markets specifically from both a policy and equity perspective.
III. Background:

3.1 New York City Greenmarket:

“If they are something good for the urban milieu – tumbling horns of fresh plenty at the people’s feet – they are an even better deal for the farmers, whose disappearance from the metropolitan borders may be slowed a bit by the many thousands of city people who flow through the streets and vacant lots and crowd up six deep at the trucks to admire the peppers, fight over the corn, and gratefully fill our money aprons with fresh green city lettuce.”

John McPhee, “Giving Good Weight”

The Greenmarket program was created in 1976 and is administered by GrowNYC (formerly Council on the Environment of New York - CENY). Despite humble beginnings, Greenmarket has, over the course of three decades, grown into what is arguably the most comprehensive network of urban farmers markets in the nation, with over fifty farmers markets throughout the five boroughs of the city.

In her 2014 history of NYC Greenmarket published in the Journal of Urban History, Dory Kornfeld claims that the program “provides a model in which equity and justice concerns are present in all aspects of food distribution; this is reflected in Greenmarket’s history from its origin to the present day” (346). Kornfeld’s research, which draws on a number of primary documents, newspaper articles, and other popular press, uses a historical lens to explore the extent to which Greenmarket has, over the years, fulfilled its three primary goals: to increase food access to New Yorkers of all incomes; to strengthen the business of local farmers; and to contribute to neighborhood revitalization. Kornfeld usefully separates the Greenmarket narrative into four periods: its creation in the mid-1970s, institutionalization in the 1980s and 1990s, a “midlife crisis” in the early 2000s due to mismanagement, and recovery under new leadership since 2007.
Greenmarket receives citywide support from both public and private actors, and it owes much of its success to the strong leadership at its inception by Benepe, CENYC Executive Director Lys McLaughlin, Chair Marian Heiskel, and Bob Lewis of the New York State Department of Agriculture (Klein-Rosenthal). An urban planner by trade, Benepe knew – with the help of McLaughlin, Heiskel, and Lewis – how to overcome and navigate the many political and logistical obstacles he faced in the process of establishing the first farmers markets.

In 1978, two seasons into the program, Benepe wrote a booklet entitled *Greenmarket: The Rebirth of Farmers Markets in New York City*. Through this, he aimed to “document Greenmarket’s birth and development and thereby provide assistance to others seeking to establish similar markets elsewhere” (3). He outlined the logistical challenges he and his partners Bob Lewis and Lys McLaughlin faced as they turned the idea of Greenmarket into reality, including the acquisition of necessary permits, selection of sites, recruitment of farmers, mechanisms for funding, among others. While Greenmarket has undoubtedly served as a model for other cities and farmers market programs, there has been relatively little follow-up about the extent to which the best practices provided by Benepe in his 1978 text have inspired or informed programs elsewhere. Nevertheless, the organization continues to develop its repertoire of programming to ensure that New Yorkers have access to local produce and nutritional information.

Much of Greenmarket’s success from a social justice perspective lies in the numerous programs it administers that aim to increase access of healthy fruits and vegetables to low-income populations. For the scope of this thesis, I am focusing on its Healthy Exchange Project, which includes all of the programs that allow customers to use their federal benefits at the
farmers markets. They include the Electronic Benefit Transfer (EBT) Program, which enables SNAP participants to use their federal benefits at Greenmarkets; the Health Bucks Program, which supplements EBT by providing $2 coupons for every $5 in food stamps; Women, Infants, and Children (WIC) Vegetable and Fruit Checks; and the Farmers Market Nutrition Program (FMNP), which provides $4 checks to WIC participants and low-income seniors redeemable only at farmers markets. I will discuss them at length below.

3.2 An Overview of Relevant Food Assistance Programs: SNAP, WIC, and FMNP

The US Department of Agriculture’s Food and Nutrition Service (FNS) addresses issues of hunger and nutrition in the United States through the administration of thirteen nutrition assistance programs, which vary in scale, mission, and scope and can be divided into three categories:

Figure 3: Food and Nutrition Service Food Assistance Programs

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<td>Supplemental Nutrition Assistance Program (SNAP)</td>
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<th>Food Distribution Programs</th>
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<td>Food Distribution Program on Indian Reservations (FDPIR)</td>
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<td>The Emergency Food Assistance Program (TEFAP)</td>
</tr>
<tr>
<td>National Processing Agreement</td>
</tr>
<tr>
<td>Nutrition Services Incentive Program (NSIP)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Child Nutrition Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child and Adult Care Food Program (CACFP)</td>
</tr>
<tr>
<td>Fresh Fruit and Vegetable Program (FFVP)</td>
</tr>
<tr>
<td>National School Lunch Program (NSLO)</td>
</tr>
<tr>
<td>School Breakfast Program (SBP)</td>
</tr>
<tr>
<td>Special Milk Program (SMP)</td>
</tr>
<tr>
<td>Summer Food Service Program (SFSP)</td>
</tr>
</tbody>
</table>
Supplemental Nutrition Assistance Program (SNAP)

“We got a picture of a gorge, with farm surpluses on one cliff and under-nourished city folks with outstretched hands on the other. We set out to find a practical way to build a bridge across that chasm.” Milo Perkins, Administrator of the first Food Stamps Program

The Supplemental Nutrition Assistance Program (SNAP), previously known as the Food Stamp Program, is the nation’s largest federal food assistance operation, providing benefits to 45.7 million participants (22.5 million households) in 2015, with an average monthly benefit of $126.83 per person (FNS, 2016). Although it is administered by the Food and Nutrition Service, benefits are distributed by State agencies, such as New York State’s Office of Temporary and Disability Assistance. The first national food stamp program dates back to 1939 (FNS, 2014). Its inception is credited to Secretary of Agriculture Henry Wallace, and it was, as the Milo Perkin’s quotation above suggests, motivated by a desire to provide farm surpluses to the urban hungry. Since then, it has witnessed a rich, even if at times turbulent, history, having been institutionalized under Lyndon B. Johnson by the Food Stamp Act of 1964, but amended at several junctures ever since.

In the late 1990s and early 2000s, there was an important shift in the way benefits were distributed and spent, as Electronic Benefit Transfer (EBT) cards replaced paper food stamps. EBT is an electronic system in which government benefits are automatically deposited into a participant’s account on a monthly basis. According to the Food and Nutrition Service, the transition from food stamps to an electronic debit-style card was designed for several important reasons: to increase program efficiency by eliminating the need for the government to print paper coupons and by making benefits available immediately; to reduce instances of theft and fraud; to streamline the distribution of multiple forms of welfare (e.g. SNAP and WIC);
and to reduce the stigma associated with the use of food stamps (FNS 2014). The Food Stamp Program became SNAP in 2008 through the Food, Conservation, and Energy Act, also known as the 2008 Farm Bill. According to the FNS, there were several reasons for this name change. Not only did the USDA hope the new name would reflect its desire to make nutrition a major priority of the program, but it also represents an attempt to modernize the program and, like EBT, to reduce stigma of using food stamps.

Tatiana Andreyeva and Cindy Leung have studied the consumption habits of SNAP participants, looking in particular at the relationship between dietary quality and benefit spending. In 2015, Andreyeva, Director of Economic Initiatives at the Rudd Center for Food Policy and Obesity, wrote a systematic review of twenty-five peer-reviewed studies published between January 2003 and August 2014. Importantly, she found that although SNAP participants consume as many calories as groups who do not receive benefits, on the whole they eat fewer fruits, vegetables, and whole grains (Andreyeva 594).

Leung, a postdoctoral scholar at the Center for Health and Community at USFC, has attempted to question why this may be the case. In her 2013 article published in the Journal of the Academy of Nutrition and Dietics, she identified four barriers and suggested five strategies for improving nutrition under SNAP by interviewing experts in a variety of sectors to assess the challenges of eating nutritiously while receiving benefits. The barriers included the high cost of nutrient-rich food compared to nutrient-poor food, inadequate SNAP benefits, limited access to healthy foods, and environmental factors associated with poverty (Leung 70). The strategies for addressing the problem fall under five categories: incentive programs, adjusting the frequency with which SNAP participants receive their benefits (i.e. biweekly rather than monthly),
nutritional education, changing the SNAP retailer environment, and increasing state- and federal-level coordination and evaluation. A similar study by Christine and Thomas Grace, entitled “Barriers to Using Urban Farmers’ Markets: An Investigation of Food Stamp Clients’ Perceptions,” also found high prices, as well as inconvenient hours and complex shopping experiences (aggravated by language barriers), to be limiting factors for SNAP participation at farmers markets (3).

**Women, Infants, and Children (WIC) and Farmers Market Nutrition Program (FMNP)**

The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) provides federal grants to states for food assistance, health care referrals, and nutritional education for low-income women who are pregnant, have infants or children up to the age of five, and are at nutritional risk (FNS, 2016). According to FNS, the program issued benefits to 8 million participants in 2015. The program dates back to the late 1960s and developed in response to growing concern for malnutrition among low-income mothers and children (Oliveira 7). It was formally authorized as a two-year pilot program in 1972 by an amendment to the Child Nutrition Act of 1966 and established as a permanent program in 1975. Although WIC, like SNAP, is transitioning to the EBT system, in several states it still employs its original voucher model, according to which eligible participants receive monthly “food packages,” or checks that can only be spent on particular kinds of foods. In general, those receiving benefits must have an income below 180% of the federal poverty level.

The third food assistance program relevant to the Greenmarket experience is the Food Market Nutrition Program (FMNP), which is also federally funded but state administered. It was
developed by Congress in 1992 to expand awareness and use of farmers markets, and to encourage pregnant and postpartum women, as well as seniors to eat more nutritious fruits and vegetables (FNS 2016). FMNP distributes checks to women, infants, and children through the WIC program and to low-income seniors in the Commodity Supplemental Food Program (CSFP), which can only be spent at farmers markets. Eligibility requirements are the same as they are for WIC and CSFP: participants must earn less than 180% poverty. These checks serve as small bonuses for low-income women and seniors already participating in federal subsidy programs.
IV. Analysis and Discussion:

According to the 2015 New York City Hunger Report published by the NYC Coalition Against Hunger (renamed Hunger Free America in January 2016), 1.4 million New Yorkers – including one in four children – lived in households lacking sufficient access to food between 2012 and 2014 (NYCCAH 2015). Map the Meal Gap, a similar research project conducted by Feeding America, a national network of food banks and food rescue organizations, came up with an almost identical number of food insecure New Yorkers – 1.36 million – using different sets of indicators and data from 2011-2013. The table below breaks down the findings of both reports by borough.

**Figure 4: Number and Percentage of Food Insecure NYC Residents by Borough**

<table>
<thead>
<tr>
<th>Borough</th>
<th>Coalition Against Hunger</th>
<th>Feeding America</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronx</td>
<td>396,326</td>
<td>262,580</td>
</tr>
<tr>
<td></td>
<td>29.1%</td>
<td>18.8%</td>
</tr>
<tr>
<td>Brooklyn</td>
<td>569,659</td>
<td>502,240</td>
</tr>
<tr>
<td></td>
<td>19.3%</td>
<td>19.8%</td>
</tr>
<tr>
<td>Manhattan</td>
<td>227,261</td>
<td>246,120</td>
</tr>
<tr>
<td></td>
<td>13.2%</td>
<td>15.3%</td>
</tr>
<tr>
<td>Queens</td>
<td>192,416</td>
<td>300,190</td>
</tr>
<tr>
<td></td>
<td>8.6%</td>
<td>13.3%</td>
</tr>
<tr>
<td>Staten Island</td>
<td>N/A</td>
<td>49,610</td>
</tr>
<tr>
<td></td>
<td>6%*</td>
<td>10.6%</td>
</tr>
</tbody>
</table>

*According to NYCCAH, “citywide numbers and percentages for food insecurity include Staten Island, but there is not enough federal food insecurity data for that borough to adequately calculate a borough-specific food insecurity rate for Staten Island. According to U.S. Census data, Staten Island had a poverty rate of 6.67% for 2014; the food insecurity rate is likely similar” (10).

These numbers are startling, especially considering that at the same time, the New York City Department of Health reports that 22% of New Yorkers are obese, while another 34% are considered overweight. It is in this context of malnutrition and health disparity that Greenmarket continues to address issues of income inequality and food inequity through its food access and nutrition programs.
4.1 GrowNYC’s Greenmarket SNAP Program

In 2011, the Food and Nutrition Service reported that nationwide 90% of SNAP benefits were redeemed at supercenters, supermarkets, and small, medium, and large grocery stores (Castner 2011). Despite this fact, the successes and annual growth of Greenmarket’s SNAP program since it began in 2005 suggest the potential for farmers markets to serve increasingly as viable outlets for food assistance spending, especially when supplemented with other food access programs. GrowNYC’s EBT program developed in response to the national transition from food stamps to Electronic Benefit Transfer cards in the early 2000s. Although this new system had several advantages (as discussed in the previous chapter), it proved to be a major obstacle for farmers markets, because the machines that processed the new cards required electricity and a phone line. Further, farmers incurred the financial burden of buying terminals and processing fees, in addition to losing out on federal aid dollars coming into the city.

To begin to address these challenges, between 2001 and 2005, the Farmers Market Federation of NY, New York State OTDA, and New York State Department of Agriculture and Markets (NYSDOAM) implemented several programs in which battery-operated, wireless terminals were distributed directly to individual farmers (CENYC 2008, 4). Unfortunately, due to technological and publicity issues, these programs failed to meet widespread success, and in 2004 only 55 farmers markets in the entire state were capable of accepting SNAP benefits. As a result, in 2005, GrowNYC (then called Council on the Environment of New York - CENYC), partnered with NYSDOAM to pilot the Central Terminal Market Token Model, which the organization continues to operate today. According to this model, which was initially tested at three Greenmarkets, the market manager swipes EBT cards in exchange for $1 or $5 tokens,
which can then be spent like cash at farm stands. Since 2005, this program has grown immensely and in 2015, SNAP benefits were redeemable at 52 markets. The project is funded primarily by New York City Council, but it receives additional support from the New York Farmer’s Market Federation, as well as from Greenmarket Stand fees and Customer Token Handling fees. In 2015, SNAP sales at farmers markets totaled $918,105 – a 180% increase from 2010.

**Figure 5:**

Increase in Annual SNAP Sales Since 2005

![Graph showing increase in annual SNAP sales from 2005 to 2015.](image)

Data Source: GrowNYC

Using GrowNYC data from 2015, as well as American Community Survey 2014 data, I attempted to understand the spatial relationship between market locations, household SNAP participation at the census tract level, and SNAP sales at Greenmarkets. The map below illustrates the findings from that analysis.
SNAP Sales at Greenmarkets compared to Percentage of Households Receiving SNAP Benefits (2015)

Greenmarket SNAP Sales
- $229 - $5,000
- $5,000 - $15,000
- $15,000 - $50,000
- $50,000 - $287,777

Households Receiving Benefits

Top five Greenmarkets for SNAP sales citywide & top market in each borough are highlighted.
The physical distribution of Greenmarkets throughout the city suggests that most neighborhoods are well served, notwithstanding parts of eastern Brooklyn and Queens, where they do not yet exist. Further, the data demonstrate a substantial range in SNAP sales, with the Water Street Greenmarket redeeming $229 during the course of its season and Union Square redeeming $278,777 in 2015. Overall the distribution is as follows:

**Figure 7: Distribution of SNAP Sales at NYC Greenmarkets**

<table>
<thead>
<tr>
<th>SNAP Sales</th>
<th>No. of Greenmarkets</th>
<th>% Total SNAP Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $5,000</td>
<td>20</td>
<td>5%</td>
</tr>
<tr>
<td>$5,000-$15,000</td>
<td>16</td>
<td>16%</td>
</tr>
<tr>
<td>$15,000-$50,000</td>
<td>11</td>
<td>29%</td>
</tr>
<tr>
<td>Greater than $50,000</td>
<td>4</td>
<td>50%</td>
</tr>
</tbody>
</table>

Data: GrowNYC

In addition to sales data from GrowNYC, the choropleth layer of the map uses US Census data to show the percentage of households receiving SNAP benefits at the census tract level. The dark blue, which represents tracts where between 44% and 76% of households are receiving assistance, exhibits that there are greater concentrations of recipients in neighborhoods of the South Bronx, Upper Manhattan, and along the border between Brooklyn and Queens. On the whole, there does not appear to be a correlation between the number of households receiving benefits and the Greenmarkets where the most SNAP sales are made. Therefore, to understand further the relationship between Greenmarkets and their local contexts, I performed the analysis summarized in the table below, which characterizes the top five markets for SNAP sales citywide. Altogether, these five markets redeemed 53% of total SNAP sales in 2015, more than the other 47 markets combined.
Figure 8: Characteristics of Top Five Greenmarkets for SNAP Sales Citywide (2015)

<table>
<thead>
<tr>
<th>Name</th>
<th># Days of Week</th>
<th>Seasonality</th>
<th>Transit</th>
<th>% Households on SNAP</th>
<th>% Total SNAP Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Union Square</td>
<td>4 (M, W, Fr, Sat)</td>
<td>YR</td>
<td>N, Q, R, L, 4, 5, 6, M1, M2, M3, M6, M7, M14</td>
<td>0.48%</td>
<td>30%</td>
</tr>
<tr>
<td>Poe Park</td>
<td>1 (Tues)</td>
<td>S</td>
<td>D, 4, Bx1, Bx2</td>
<td>63%</td>
<td>7.14%</td>
</tr>
<tr>
<td>175th Street</td>
<td>1 (Thurs)</td>
<td>S</td>
<td>A, Bx7, M100</td>
<td>47%</td>
<td>6.78%</td>
</tr>
<tr>
<td>Grand Army Plaza</td>
<td>1 (Sat)</td>
<td>YR</td>
<td>2, 3, B69</td>
<td>2.30%</td>
<td>5.56%</td>
</tr>
<tr>
<td>Inwood</td>
<td>1 (Sat)</td>
<td>YR</td>
<td>1, A, Bx12, Bx20, Bx7, M100</td>
<td>17%</td>
<td>3.60%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>53%</strong></td>
<td></td>
</tr>
</tbody>
</table>

Remarkably, Union Square accounted for 30% of total SNAP sales at Greenmarkets in 2015, redeeming $278,777 in benefits out of $918,105. And yet, it is located in a census tract where only 0.48% of households receive SNAP benefits. Several factors help to explain this. First, Union Square is GrowNYC’s flagship Greenmarket, a source of historical pride since it opened in in the late 1970s. Open four days a week throughout the entire year, it hosts, according to Greenmarket, as many as 140 regional producers at peak season, in addition to special events year-round. Moreover, because the market occupies one of the city’s central public spaces, it is highly accessible by public transit: the N, Q, R, L, 4, 5, and 6 subway lines have entrances directly within Union Square Park, and it is just a short walk from the F, M, 1, 2, and 3 lines (not to mention its proximity to several bus routes and the 14th Street PATH Station). That Union Square attracts such a large portion of Greenmarket EBT sales challenges assumptions we often make that people require close physical access to grocery stores (which is fundamental to the concept of food deserts, which are defined as areas further than a mile from a supermarket). Rather, the data suggest either that New Yorkers are willing to travel for the fresh, local produce of Greenmarkets, or at the very least that they plan their trips to the market around commutes to or from work and other appointments.
That said, Union Square contrasts drastically with Poe Park and 175th Street markets, which had the 2nd and 3rd highest SNAP sales respectively in 2015. Whereas Union Square is open year-round, these two markets are open seasonally between the months of June and November. Moreover, they are only open on one weekday per week. Despite this, they are in census tracts with relatively large portions of households receiving SNAP benefits – 63% and 47% -- and both had SNAP sales over $60,000. The success of these markets at engaging low-income populations participating in SNAP makes one wonder how they may serve as models for other markets throughout New York City and in other cities across the country. Ultimately, I recommend that both Poe Park and 175th Street markets warrant further analysis beyond the scope of this research, through the use of qualitative methods such as observation, interviews, and surveys, which cannot be conducted until the markets reopen for the season.

Since 2005, the New York City Department of Health and Mental Hygiene (DOHMH) has contributed to the SNAP program's growing success through its incentive Health Bucks program. According to a press release from October 2015 on the occasion of the program’s 10th anniversary, Health Bucks is the “largest city-run fruit and vegetable incentive program in the nation,” having enabled the redemption of $2 million in fresh fruit and vegetable vouchers since 2005 (NYC DOHMH 2015). Health Bucks are paper coupons worth $2, which are distributed at Greenmarkets for every $5 spent in SNAP benefits. Therefore, they increase a customer’s buying capacity for fresh produce by 40% and incentivize participants to spend more of their monthly allotment at farmers markets. In October 2015, Public Health Nutrition published a study evaluating New York City’s Health Bucks program entitled “Impacts of a farmers’ market incentive programme on fruit and vegetable access, purchase and
consumption” (Olsho et al.). The authors’ research importantly finds that greater Health Bucks exposure was associated with both greater awareness of farmers markets, increased frequency of purchases, and a self-reported increase in fruit and vegetable consumption (2712). In 2011, almost 90,000 Health Bucks were distributed to SNAP participants, with a 93% redemption rate (2713). According to 2015 GrowNYC data, Greenmarkets distributed nearly 150,000 Health Bucks, for a value of about $300,000. This growth, in addition to the conclusions of the study cited above, provide promising evidence for the possibility of long-term health improvements through SNAP and other incentive programs, which is especially significant given the USDA grants discussed in the introduction of this thesis.

4.2 Greenmarket FMNP and WIC Programs

The Central Terminal Market Token model, whereby each individual market manages the exchange of SNAP benefits for tokens, is especially useful for the SNAP/EBT program, because it allows for analysis at the individual market level. However, the WIC and FMNP programs lack this intermediary system, relying instead on direct consumer-to-farmer transactions. While Greenmarket farmers do report this data to GrowNYC, the analysis that can be done with it is more limited. Despite these limitations, it is useful to acknowledge how these programs have evolved and grown over the years, because they supplement the SNAP program while also targeting a more specific audience – namely women, children, and seniors – and their contribution to the landscape of food access programs in New York City is significant.

The chart below shows annual FMNP sales at Greenmarkets since 2009. In 2015, farmers redeemed $2.6 million in coupons through this program. Ultimately, the historical data
presented in this chart fails to suggest growth in the program over the years. This is because FMNP is allocated each year by the government and is not a set amount; redemptions for farmers, therefore, vary based on what money is available (Huber). Nevertheless, the numbers remain significant: annually over $2 million is spent on products at farmers markets as a bonus to stretch the budgets of low-income women and seniors. Moreover, in 2015 the total budget for FMNP in the entire State of New York was $5.3 million, which means that half of all FMNP redemptions went through NYC Greenmarkets. That said, according to the Food and Nutrition Service, the food benefit level for FMNP recipients may not be less than $10 or exceed $30 per year, per recipient (FNS 2016). One must question, then, the extent of impact of these checks on the overall health and food security of the populations they are meant to serve; indeed, they may actually benefit farmers more.

Figure 9:

**FMNP Redemptions at Greenmarkets Since 2009**

Data: GrowNYC
In addition to receiving $4 checks through the Farmers Market Nutrition Program, as of 2009 WIC participants also receive Vegetable and Fruit Checks (WIC V&F) as part of their monthly food packages. In 2015, these checks were in increments of $8, $10, or $15, and could be used at grocery stores, farmers markets, and farm stands solely for the purchase of produce. Below is a chart displaying GrowNYC’s historical data for the WIC V&F program since the summer of 2009:

**Figure 10:**

*Increase in Annual WIC Sales Since 2009*

Data: GrowNYC

Like Greenmarket SNAP program sales, WIC V&F redemptions have increased substantially since the program began in 2009, but as with both programs discussed thus far, there are limitations that do not necessarily present themselves explicitly in the raw data. For example, WIC V&F sales at Greenmarkets in 2014 totaled $44,863. Whereas the $2.6 million in FMNP sales in New York City accounted for half of all FMNP dollars available in the state that year, there was $33 million available statewide for WIC V&F, which means Greenmarkets accounted
for a small fraction of total redemptions – less than one percent. This is due both to the nature of the program and to the administrational challenges it faces. First, WIC V&F checks do not have to be used at farmers markets like those distributed as part of the Farmers Market Nutrition Program: they can be used at any retailer, and can be spent on canned and frozen – in addition to fresh – fruits and vegetables. Moreover, as Cheryl Huber explained in an email dated March 11, 2016, “nationwide, only about half of states can accept [the checks] at farmers markets. The enrollment for farmers is difficult, they have a narrow window to cash/deposit the checks, and it’s also a tough marketing campaign to spread the word that they can be used at farmers markets since it’s not universal” (Huber). Finally, specific dates on WIC V&F checks indicate that they can only be spent during a particular thirty-day time period.
V. Barriers, Challenges, Opportunities:

The primary research techniques conducted for this thesis – document review, as well as data and spatial analysis – were supplemented in the later phases of research by informal interviews with Assistant Director of Greenmarket, Cheryl Huber, and with three market managers. While the strength of Greenmarket’s food access programs is impressive (and indeed, they continue to grow and improve annually), the analyses presented in this thesis point to several remaining barriers and challenges for the provision of healthy, affordable food to New Yorkers with limited financial means. Ultimately, I have separated these into three categories: populations not currently being targeted (which I refer to later in the text as the “NYC food gap”), institutional threats, and cultural barriers/questions of convenience. While there exist opportunities to address these challenges through program reinforcement, additional marketing and outreach (many New Yorkers still aren’t aware they can use EBT at the farmers market), and policy implementation, certain obstacles – in particular those related to institutional structures – cannot easily be addressed at the municipal level.

5.1 The NYC Food Gap: Populations Not Currently Being Targeted

There is data to back up that Greenmarket’s SNAP, WIC, and FMNP operations are successful at engaging populations who are eligible for federal subsidies, and that these programs continue to grow annually through outreach efforts and incentive programs such as Health Bucks and Greenmarket Bucks. Moreover, the discussion throughout this thesis concludes that farmers markets themselves are viable tools for addressing issues of income inequality and food access in urban contexts. But what about those individuals who do not
qualify for federal assistance and yet struggle financially to access healthy and affordable fruits and vegetables? Is there a way for Greenmarket to target this population?

SNAP, WIC, and FMNP eligibility are all determined by federal poverty guidelines, which are issued annually by the US Department of Health and Human Services (HHS) in the Federal Register and adapted from US Census poverty data. Table X below shows the 2015 poverty guidelines in relation to the eligibility requirements of SNAP, WIC, and FMNP in New York State, which are simply measures of annual gross income (although other factors can be considered to determine eligibility).

**Figure 11: Program Eligibility Based on Federal Poverty Guideline (Annual Gross Income)**

<table>
<thead>
<tr>
<th>Household Size</th>
<th>Poverty Guideline</th>
<th>SNAP Guideline</th>
<th>WIC/FMNP Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$11,770</td>
<td>$15,312</td>
<td>$21,775</td>
</tr>
<tr>
<td>2</td>
<td>$15,930</td>
<td>$20,712</td>
<td>$29,471</td>
</tr>
<tr>
<td>3</td>
<td>$20,090</td>
<td>$26,124</td>
<td>$37,167</td>
</tr>
<tr>
<td>4</td>
<td>$24,250</td>
<td>$31,536</td>
<td>$44,863</td>
</tr>
<tr>
<td>5</td>
<td>$28,410</td>
<td>$36,948</td>
<td>$52,559</td>
</tr>
</tbody>
</table>

Data: HHS, New York State OTDA, New York State DOH

These numbers indicate that individuals or households eligible for SNAP must fall below 130% of the federal poverty guidelines; women, infants, children, and seniors wanting to receive benefits for the WIC and FMNP programs must, on the other hand, fall below 180% of the poverty line. While all of these programs succeed in reaching a large population, they are also very limited in terms of relieving financial burden, especially in a city like New York where cost of living is significantly higher than in other parts of the country.

The Population Reference Bureau (PRB) defines low-income families as those earning less than twice (200%) the federal poverty line (PRB 2013). And yet SNAP benefits are only available to those making less than 130%. Using data from the 2014 American Community...
Survey, the table below attempts to understand the food gap in New York City between those who qualify for federal food assistance and those who do not, but still fall within the PRB’s definition of “low-income.” Because the available data reports populations below 125% poverty rather than 130%, the total numbers for this food gap are not entirely precise. However, they still make a compelling argument: about 1 million New Yorkers – 14% of the city’s total population – are low-income but do not qualify for SNAP benefits, and presumably questions of access to healthy, affordable food are of concern to them.

**Figure 12: NYC Population Between 125 and 200% Poverty**

<table>
<thead>
<tr>
<th>Borough</th>
<th>Total Population</th>
<th>Below 200% Poverty</th>
<th>Below 125% Poverty</th>
<th>Between 125-200%</th>
<th>Percent Between 125-200% Poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronx</td>
<td>1,377,199</td>
<td>759,741</td>
<td>518,043</td>
<td>241,698</td>
<td>17.55%</td>
</tr>
<tr>
<td>Kings</td>
<td>2,549,012</td>
<td>1,113,788</td>
<td>751,695</td>
<td>362,093</td>
<td>14.21%</td>
</tr>
<tr>
<td>New York</td>
<td>1,572,363</td>
<td>518,954</td>
<td>345,437</td>
<td>173,517</td>
<td>11.04%</td>
</tr>
<tr>
<td>Queens</td>
<td>2,255,875</td>
<td>785,773</td>
<td>453,997</td>
<td>331,776</td>
<td>14.71%</td>
</tr>
<tr>
<td>Richmond</td>
<td>465,457</td>
<td>119,068</td>
<td>72,481</td>
<td>46,587</td>
<td>10.01%</td>
</tr>
<tr>
<td><strong>Total NYC</strong></td>
<td><strong>8,219,906</strong></td>
<td><strong>3,297,324</strong></td>
<td><strong>2,141,653</strong></td>
<td><strong>1,155,671</strong></td>
<td><strong>14.06%</strong></td>
</tr>
</tbody>
</table>

Data: American Community Service 2014 (5-year estimates)

The map and Infographic on the following page attempts to understand the food gap population further by representing census tracts that are potentially underserved by existing GrowNYC programs. The map includes not only Greenmarkets, but also two other food access programs, to which I alluded in Section 3.1 of this text: Youthmarket and Fresh Food Box. I performed this analysis using GrowNYC and American Community Survey data, as well as ArcGIS. The census tracts represented in blue are those in which 50-70% of households received SNAP benefits in 2014, but are more than one-half mile (a comfortable walking distance) from a food access program.
Potentially Underserved Census Tracts:

Census tracts in which 50-76% of households are receiving SNAP benefits & are greater than 0.5 mile from a GrowNYC food access program.

287,774 total population
- 97% Hispanic
- 44% below poverty
- 71% below 200% poverty
- 10% over age of 65
- 43% below poverty
- 29% under age of 18
- 56% below poverty
Although it may be true that proximity to a program does not necessarily determine whether or not someone will participate in one of GrowNYC’s programs, the composition of this population should at least be acknowledged. Of a total population of 287,774, a substantial 97% are Hispanic. Nearly half (44%) fall below the poverty line, while three-fourths (71%) are considered low-income. There is also a significant proportion of both elderly and youth residents living below the poverty line (43% and 56% respectively).

**Implications for Greenmarket:**

The need to gain a better understanding of the aforementioned populations seems to be in line with Greenmarket’s socially just mission of providing affordable, healthy food to as diverse a population as possible. While Greenmarket may not immediately have the resources or capacity to implement programs targeting these individuals, it is an organization with strong ties to community-based organizations, and it has widespread support from public and private actors alike.

Undoubtedly, addressing these issues requires creative and ambitious solutions, but acknowledging these groups as populations worth studying is an important first step. By partnering with educational and research-based institutions, as well as non-profit organizations and advocacy groups, Greenmarket could begin to conduct surveys and spatial research to better understand the local needs of these New Yorkers. Outreach and educational efforts and resources should, of course, be bilingual and culturally appropriate, given the large Hispanic population discussed above. Although it is possible that access to healthy fruits and vegetables is not a major concern for these groups, or that other food access programs throughout the city
are serving them, the fact there are over a million residents within this food gap suggests a need for intervention.

5.2 Institutional Threats

According to a recent report from the Center on Budget and Policy Priorities (CBPP), between 500,000 and 1 million Americans, most of them living well below the poverty line, will be cut off from their SNAP benefits beginning April 1, 2016 (Bolen et al.). The affected individuals, unemployed able-bodied adults without dependents (ABAWDs) between the ages of 18 and 49, will suffer from the return of a provision from the 1996 Personal Responsibility and Work Opportunity Act. The clause in question imposes a three-month limit on SNAP benefits within a thirty-six month period for individuals not enrolled in a job-training or community service program at least 20 hours per week. Since before the recession, this time limit has not been in effect in most states, because the welfare law allowed states to apply for a waiver if they sustained high rates of unemployment. Unfortunately, as unemployment rates have fallen, the legislative waivers protecting the individuals of 19 states (including New York) lapsed in January 2016. The charts below, produced by CBPP, put into perspective the diversity of the people who will be affected by the re-implementation of these limits. Worse yet, USDA data show that most of these individuals are extremely poor, earning on average annual gross incomes that are 17% of the poverty line – about $2,000 per year for one-person households; a total of 83% of these individuals live in households with incomes below 50% of the poverty line.
A Food Bank for New York City report estimates that 53,000 individuals in New York State will be subject to the time limit in 2016, resulting in the loss of 31 million meals over the course of a year (Koible and Stampas 2016, 2). These numbers are significant given that the State government has worked hard to secure waivers for 20 counties, including four of five New York City boroughs, as well as four Community Districts in Upper Manhattan. However, as an article published in The Nation in early March highlights, many Manhattanites will remain “casualties of the city’s tragic arithmetic of inequality. The huge wealth gap has skewed the area’s economic profile enough to push Manhattan out of waiver eligibility, so local socioeconomic indicators essentially price the neediest out of their benefits,” and indeed estimates indicate that 140,000 food-insecure individuals live in parts of the city that won’t be waived (Chen, Anzilotti).

As far as municipal policy is concerned, New York City’s emergency food network – which includes food pantries and soup kitchens – continues to feel the stress of a November 2013 Congressional decision, known as the Hunger Cliff, which reduced the benefits of all SNAP
participants nationwide by an average of seven percent (Rosenbaum). A report on the effects of this decision, published by Food Bank for New York City in fall 2015, finds that even two years later, 49% of food pantries surveyed ran out of supplies to compile adequate meal bags (Koible and Stampas 2015, 3). The unfortunate reality of the three-month time limit is that most unemployed workers on SNAP don’t qualify for unemployment insurance or any other federal or state food assistance benefits. As a result, already vulnerable food pantries will likely carry most of the burden of these cuts. And to make matters worse institutionally, the CBPP has also recently issued a report stating that the 2017 House Budget Committee-approved budget plan, if carried through, will cut the SNAP program by more than $150 billion over the next ten years, effectively excluding millions of low-income families from receiving food assistance or severely reducing the benefits for millions of households (Rosenbaum).

Implications for Greenmarket and New York City

Inevitably, food pantries and soup kitchens will need additional support from the City’s existing Emergency Food Assistance Program (EFAP), as well as from federal and state emergency food programs. This additional support should focus especially on providing operational resources and administrative support, so that these networks can more efficiently manage programming and responsibilities. At the state and local scale, the city would benefit from an increase in resources for job-training programs, which would help to protect and empower those at risk of being affected this year by the reimplementation of the time restriction.

At the local scale, I recommend that Greenmarket, to the extent possible, reinforce its Fresh Pantry Project, a food-rescue program in collaboration with City Harvest and the New
York City Coalition Against Hunger, which donates fresh fruits and vegetables to food pantries, soup kitchens, and homeless shelters around the city. Emergency food providers would benefit from an increase in Greenmarket’s capacity to rescue food waste. Currently, Greenmarket receives donations from farmers at 30 markets throughout the city; additional outreach to farmers, as well as to Greenmarket Co. clients – particularly retailers and restaurants – would create opportunities to combat problems of food waste while also increasing food access to the needy. Fresh Pantry Project efforts could, further, help supplement the operational needs of the emergency food network mentioned above.

5.3 Cultural Barriers and Questions of Convenience

One of the limitations of the scope of this research is that it did not explicitly address the fact that food culture may influence the nutritional decisions we make as much – if not more – than socioeconomic status (and indeed, the question of food culture could be an entire thesis in itself). Yet, because the analyses and interviews conducted throughout the course of this project have pointed to barriers that inherently have to do with questions of culture, it is important to briefly discuss them, although ultimately I recommend the need for further research in this area.

Shopping at farmers markets can be daunting for many of the low-income populations discussed throughout this thesis. In an email from March 24, 2016, Cheryl Huber suggested that part of the problem lies in the shift away from cooking that has happened over the last few decades, which has made people more reliant on highly processed or fast foods (Huber). Thus, not only are people faced with the idea of having to cook and prepare food, but they also have the additional risk of perishable items going bad before they can be consumed, which puts
pressure on an already limited food budget. Also intimidating is the fact that farmers markets sell unfamiliar ingredients. One solution to both of these challenges is to increase and develop GrowNYC’s already rich educational programming so that it spans the entire Greenmarket network, particularly in some of the locations where issues of food culture may be more pronounced. Further, Greenmarket could, in partnership with restaurants across the city, develop recipes that incorporate more culturally specific ingredients with potentially unfamiliar fruits and vegetables to make cooking with them more comfortable.

Added cultural and convenience barriers to participation at farmers markets include their impermanence (they happen only once or twice a week but otherwise remain invisible), the cosmetic issues of seemingly imperfect produce, and the fact that most people who shop at farmers markets will still need to go to the grocery store for non-perishable items and ingredients not produced on local farms (Huber). Although there may be no solution to the latter barrier, the first two can potentially be addressed through further marketing campaigns and educational programs.
6. Conclusion:

Despite inevitable challenges, the New York City Greenmarket experience demonstrates the potential for farmers markets to serve as powerful planning tools in urban contexts. Its historically strong leadership and socially just vision have allowed it to become a citywide institution and valuable neighborhood asset, especially in parts of the city where access to affordable, healthy, culturally appropriate food is not always a given, and innovative solutions are crucial. The continual growth of the programs assessed throughout the course of this study speak to Greenmarket’s capacity to engage with and respond to the needs of low-income communities. Even more, it demonstrates the opportunity for Greenmarket and GrowNYC to expand its programming, develop creative solutions to address populations for whom access to fresh food options still remains a challenge, and fight against local and national institutional threats.

Of course, a city’s hunger and obesity problems will not be solved by farmers markets alone, but planners and policymakers must not fail to integrate them into the larger urban food system, as their environmental, economic, and public health advantages are numerous. Over the course of 40 years, the Greenmarket Program has demonstrated how Scott Campbell’s three planning goals can be balanced through Pelling’s instruments of social learning and self-organization. More importantly, the organization has become a paradigm that should enlighten community leaders in cities across the country, whose farmers market networks fail to confront urban issues as comprehensively, cohesively, and vigorously as New York City’s.

In her pivotal 1961 book *The Death and Life of Great American Cities* Jane Jacobs wrote the following powerful words:
Its essence is intricacy of sidewalk use, bringing with it a constant succession of eyes. This order is all composed of movement and change, and although it is life, not art, we may fancifully call it the art form of the city and liken it to the dance – not to a simple-minded precision dance with everyone kicking up at the same time, twirling in unison and bowing off en masse, but to an intricate ballet in which the individual dancers and ensembles all have distinctive parts which miraculously reinforce each other and compose an orderly whole (50).

In the midst of political uncertainty, food insecurity, racial violence, poverty, and climate change, it is easy to forget that the role of farmers markets is not simply to sell food from local producers. Farmers markets transform the public spaces they occupy. They are community gathering spaces, where city meets country, where consumers learn about where their food comes from, and where people from all walks of life come together to participate in the “ballet of the good city sidewalk.”
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