EATING THE CITY:
FOOD ENVIRONMENTS, INEQUALITY, AND THE EVERYDAY JOURNEYS OF EATERS IN NEW YORK AND LONDON

by

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Abstract

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Municipal policies aiming to improve equity in food access and health often rely on the assumption that neighborhoods with limited availability of healthy foods and high levels of diet-related illness should be the targets for change. However, food systems planners have used the 'local trap' to caution that there is nothing inherently beneficial about the local or any other scale of action with regard to improving the social justice, ecological sustainability, or public health outcomes of food systems. This study examines the local trap argument in the food policy contexts of New York and London. It asks: Are there comparable inequalities in food environments of New York and London? How do individuals living and working in the highest and lowest income areas of these cities perceive, navigate, and use the food environment? How does local, or neighborhood, food availability influence access to food and health? This study employed a cross-national, comparative, and mixed-method design. A total of 110 food establishments were observed in the study areas. The number and type of establishments in the study sites reflected the income of residents. The types of food available reflect the place-types present as well as the demography of local areas.

To gather narrative and spatial data about everyday experience and food events, space-time food diaries, mental mapping, and semi-structured interviews were collected from a total 40 participants. Space-time food diaries and mental maps were analyzed to determine the proportion of in- and out- of neighborhood food events. Individual participants operationalized neighborhood boundaries in their mental maps of the study sites. There was a variation across individuals with regard to the percentage of in-neighborhood food events they reported in the space-time food diaries.

Findings show that neighborhood food environments are meaningful determinants of diet for diverse eaters, but eaters' usages, perceptions, and identifications with the food environment operate across a range of geographic scales. They suggest that neighborhood social and economic integration may be a determinant of urban food environments. Thus, definitions of urban food policy should include those housing and community development policies that impact neighborhood social and economic diversity.

It was the best of times,
it was the worst of times,
it was the age of wisdom,
it was the age of foolishness,
it was the epoch of belief,
it was the epoch of incredulity,
it was the season of Light,
it was the season of Darkness,
it was the spring of hope,
it was the winter of despair,
we had everything before us, we had nothing before us, we were all going direct to Heaven, we were all going direct the other way— in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.

***

It is a far, far better thing that I do, than I have ever done; it is a far, far better rest that I go to than I have ever known.

A Tale of Two Cities
Charles Dickens
1859

(Quoted in) Star Trek II: The Wrath of Khan
1982

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INTRODUCTION AND PROBLEM STATEMENT

The title of this dissertation, *Eating the City*, reflects two core elements of this work. First, it reflects this dissertation's attempt to contribute to the scholarly literature and theoretical discussions on how environments "get into" the body and produce inequalities in health. Secondly, the title reflects the critical stance of this research toward conceptualizing residential neighborhoods as primary determinants of diet and health. *Eating the City* looks not just at neighborhoods, but also at how entire cities figure in the geography of everyday food behavior. This dissertation addresses issues of scale, income inequality, and social policy as they relate to understanding the relationship between food environments and diet-related health inequalities. More specifically, it seeks to answer the following questions. Are there comparable food environment inequalities in New York and London? How do people at opposite ends of the socioeconomic spectrum in these cities perceive and use urban food environments? What roles do neighborhoods play in the eating and food buying experiences of these individuals? How do the geographies of everyday food behavior fit with or contrast with the geography of urban food policy? And, thus have New York and London fallen into the local trap?

These questions respond to a number of concerns that remain unresolved within the scholarly literature and evidence-base on inequalities in food access, diet, and health. By extension, their answers have consequences for social and health policy. Upstream interventions aiming to improve equity in food access and health have relied on the assumption that local environments with limited availability of healthy foods and high levels of diet-related illness should be the targets for change. The Food Retail Expansion to Support Health (FRESH) supermarket siting initiative in New York and anti-fast food zoning polices in London are examples of this thinking. However, when they even exist, evaluations of such interventions show mixed results at best (Cummins, Petticrew, Higgins, Findlay, & Sparks, 2005; Wrigley, Warm, Margetts, & Whelan, 2002). Researchers in food systems planning use the term the 'local trap' to caution that there is nothing inherently beneficial about the local, or any other scale (e.g. municipal or

national), of action with regard to improving the social justice, ecological sustainability, or public health outcomes of food systems (Born & Purcell, 2006; Purcell, 2006). Public health researchers echo this stance and further caution that, by focusing on neighborhoods to estimate social or material environmental exposures, research designs may create significant measurement errors failing to capture exposures that are part of routine life that occur outside the local context such as television advertising and foods at school and work (Cummins, 2007). Simultaneously, connections between disparities in food environments, diet and health are demonstrated in the United States (US) but not in other high-income countries (Cummins & Macintyre, 2006). Collectively, these issues raise questions about both the geographic scale of food behavior in cities and the policy responses to inequalities in food availability and health.

In particular, the local trap raises questions about both the geographic scale of food behavior in cities and the appropriate scale for policy responses to inequalities in food availability and health. Thus the central pragmatic concern of this research is to examine the fit between the specific environments in which people make food choices in cities and the geography of urban food policy as it is discussed, conceived, practiced, and perceived. More specifically, this dissertation examines the local trap argument in the context of food policy developments from 2005 onward in New York and London. Using examples from New York and London, I will argue that in those cities urban policy related to food has fallen into the local trap. And, that as a strategy, localization in urban food policy is useful, but that absent complementary strategies at other and intersecting scales it will likely be ineffective at reducing inequalities in food access and health in these and other global cities.

In this chapter, I begin by reviewing literature relevant to the core concepts and theoretical frameworks that underpin this study. After reviewing that literature, I explicate the questions this research seeks to answer. Then I discuss the study design, its roots in the health inequalities and social determinants of health frameworks, and introduce the sites selected for this study. This chapter closes with an overview of the structure of this dissertation.

CORE THEORIES AND CONCEPTS

Critical Urban Theory

> *Critical urban theory is (thus) grounded on an antagonistic relationship not only to inherited urban knowledges, but more generally, to existing urban formations. It insists that another, more democratic, socially just and sustainable form of urbanization is possible."*
> *(Brenner, 2009, p. 198)*

Neil Brenner (2009) writes that "critical urban theory emphasizes the politically and ideologically mediated, socially contested, and therefore malleable character of urban spaces" and takes the stance that the city is both "a medium and outcome of historically specific relations of social power" (pg. 198). By taking on the stance of critical urbanism, this dissertation aims to critique the "existing urban formations" of health and inequality in New York and London as they relate to food policy. This research uses the local trap argument to antagonize the assumptions and strategies at the foundations of urban policies that aim to reduce inequalities in health by intervening on the urban food environment and individuals' interactions with it. Drawing on developments in the literatures on urban neighborhoods and their relationship to health, urban community and place, mobility and food behavior, and the social construction of scale, this study investigates the assumptions of these specific routes toward a better urban future by disambiguating their limitations and biases. The conclusions will suggest new approaches to the challenge of envisioning and building an urban future that is just in its distributions of food and health by realigning policy to better fit a relationally informed model of the everyday food geographies of eaters from a wide range of socioeconomic, racial/ethnic, political constitutions. In so doing, this work also aims to bridge the theoretical stances of critical and instrumental research.

The Local Trap

Before discussing the arguments that are critical of localism, it may be important to briefly remind readers of the genealogy of localism in social policy and public health. Growing out of the early discourse on ecological sustainability and sustainable development of the 1960's and later codified in the 1970's epithet of small being beautiful, emphasis on relocalizing food systems captured enthusiasm for community participation, decentralization of power, and self-sufficiency (Feagan, 2007). During the 1980's, the term 'community nutrition' became a leitmotif in public health circles that supported shifting responsibility for creating healthier environments and policies into the hands of local communities and decision-makers (Yngve, Tseng, Haapala, McNeill, & Hodge, 2011). With growing concern over

economic globalization and its compact with neoliberal ideology and practice, localism as a discourse and political strategy was adopted by both liberals and conservatives. For liberals, the term continues to denote themes of community control, social and ecological sustainability, and is positioned as an antidote to globalization. For conservatives, the 'new localism' has been a rallying call for decentralizing authority and rolling-back the regulatory and social welfare regimes of the nation-state (Brenner & Theodore, 2002; Mohan & Stokke, 2000). Most recently, debates about the relative dominance of conservative and liberal applications of localism have worked their way into scholarship on food systems and health (Guthman, 2008; Sonnino, 2010).

The local trap refers to "the tendency of researchers and activists to assume something inherent about the local scale . . . [it] equates the local with the 'good'; it is preferred presumptively over non-local scales" (Purcell, 2006, p. 1923-1924). The term was fist coined by Purcell (2006) in his analysis of the development studies literature. Purcell (2006) further develops the argument as a logical but uncritical response to the conflation of globalization, neo-liberalism, and capitalism. Thus, localizing decision-making emerges as a logical response leading to improved democracy, social justice, and environmental sustainability. In the context of neo-liberal globalization and development the local trap is rooted in a series of assumptions outlined by Purcell. First, localization is conflated with democracy even though local scale government can also be oppressive. Second, local people are conflated with 'the people' at large when this view can in fact exclude the political interest and rights of non-local others. Similarly, conflating local community with 'the community' ignores that fact that communities exist at all scales and local community based development does not necessarily lead to greater popular participation. Finally, the local perspective assumes that devolution of political authority and power will lead to greater democracy.

Purcell (2006) draws on literature from political and economic geography to argue that scale is socially constructed. In so doing, he repositions scale as an analytic and political strategy rather than an ontological given. Scales and scalar arrangements emerge from socially and spatially situated struggles. As such the choice of which scales to consider always works to empower some agendas and stymie others. Finally, he reminds us that scales are both fluid and fixed. They are fluid in the sense that as historically and socially contingent relationships they are always in flux. At the same time, scalar

arrangements can be enduring; particular scales can dominate and even become hegemonic. Lastly scale is fundamentally relational in that particular scales only have meaning in relation to other scales. Purcell concludes this piece of his argument by returning to the local trap with the chorus of his analysis, "if there is nothing inherent about any particular scale, then in the long-term we cannot associate a particular scale with a particular goal" (Purcell, 2006, p. 1929).

Born and Purcell (2006) apply the local trap to food systems planning and highlight how discussions of food system localization inappropriately treat scale as an entity and end goal. They and Allen (2010) stresses that as a strategy localization can promote social, economic, and health justice or maintain the status quo of the global agri-industrial food system. Sonnino (2009) adds to this critique noting that the cultural diversity of cities complicates discussions of food system localization since ensuring adequate and appropriate food for urban populations may require global supply chains. While research and policy typically emphasize neighborhoods as the most appropriate unit of analysis and intervention, the local trap argument cautions against assuming that neighborhoods, or small-scale residential areas are the most meaningful scale of analysis and action (Born & Purcell, 2006; Cummins, 2007). Public health researchers further caution that this focus on neighborhoods may overlook other important routine contexts such as school and work (Cummins, 2007). Thus, two sides of the local trap emerge. One side focuses on localization of food supply chains. Another, more central to this study, addresses the geographic scale of food behavior and the scale of the governance structures and policies that shape urban food environments.

The local trap presents two key threats to the project of creating more democratic, socially just, and sustainable cities. First, by luring political actors into the belief that that by privileging the local, or by treating scale as an entity, the local trap can bring on unintended consequences. Secondly, by treating localization as an end unto itself, the local trap prevents researchers and activists from working toward their actual goals and prevents them from seeing other scalar strategies that may be more effective. Throughout this dissertation these two cautions continually serve as lenses through which the arguments of the local trap can be applied to critical analysis of food policy and governance.

Food Environments

The relatively new concept of the food environment is part of a broader shift in public health and health geography away from focusing on individual behavior and toward the social determinants of population health (Cummins & Macintyre, 2006; Galea, 2007). The food environment broadly situates research from multiple disciplines on contextual influences on diet and related health outcomes. The influence of the built environment on diet has been examined at multiple and mutually influencing scales, spanning the micro-geographies of 'platescapes' through international comparisons of retail provision as its is shaped by trade and agricultural policies (Cummins & Macintyre, 2006; Hawkes, 2006; Patel, 2008; Sobal & Wansink, 2007). Neighborhood food environments have two market-based pathways of influence: retail provision of food for home preparation and consumption; and prepared food for home or out of home consumption (Cummins, 2007; Glanz, Sallis, Saelens, & Frank, 2005). Other ways of understanding food in spatialized terms focus on social settings such as school, home, or work food environments (Glanz et al., 2005) and as networks and food supply chains (Cook, 2006; Jarosz, 2008; Pollan, 2006). Terms such as 'food desert' and 'food apartheid' describe geographies of nutritional exclusion and segregation whereby people, who are most often poor and of color, experience physical and economic barriers to accessing healthy foods (Beaulac, Kristjansson, & Cummins, 2009; Shaw, 2006). The phrase 'toxic food environment' has been used to describe how environmental influences such as food availability and marketing interact with human biology to promote obesity (Brownell & Horgen, 2003; Harris, Pomeranz, Lobstein, & Brownell, 2009). Thus, the loosely defined concept of a food environment attends to the ways that eating and health are influenced by a range of factors such as price, proximity to food retail locations, portion size, mass media, labeling, transportation, physical ability, and social setting. However, the social and symbolic dimensions of food and its distributions, temporal relationships, non-market production and distribution networks, and the ways that people perceive and navigate food environments are less well understood in this literature.

Researchers using geographic information systems (GIS) have identified somewhat consistent patterns of inequality in food environments in the US. At the neighborhood level associations between the food environment and diet are salient even when controlling for demographics. For example, proximity to supermarkets and grocery stores has been observed to have a statistically positive relationship with

healthier dietary habits, whereas living closer to convenience store statistically increases risk of obesity (Black & Macinko, 2008; Larson, Story, & Nelson, 2009). Where fast-food restaurants cluster around schools, there is evidence that as proximity of these establishments to schools increases so do obesity rates within those schools (Austin et al., 2005; Currie, DellaVigna, Moretti, & Pathania, 2009). Although many studies connect inequalities in food environments to disparities in diet and health, none have addressed the temporal order of exposure and effect thus failing to demonstrate causality (Moon, 2010). Studies in this area typically conceptualize food access as physical proximity to categories of food retail and overlook social factors that also shape how people use food environments. Similarly, they overlook how people come to inhabit these landscapes and how politically situated actors socially and materially produce them over time.

While it is clear that the environment plays a role in producing disparities in diet and health, our understanding of how to conceptualize the factors under-girding these associations remains limited. This has potentially negative implications for the efficacy of regulatory or programmatic responses rooted in such scholarly evidence. The studies cited above support a policy agenda that assigns positive value to supermarkets and negative value to fast food restaurants and small grocers without accounting for the meanings and social functions these food retail categories hold in the day-to-day lives of people who use them. For example, they neglect to consider the roles that fast food establishments serve as employers in low-income areas, as easy businesses for new immigrants to start, and as relatively welcoming places for people to gather and socialize (Bagwell & Doff, 2009; Kwate, 2008). Furthermore the interior details of food places such as food quality, variety, cultural tailoring, price, and cleanliness are often overlooked in research on food and health disparities even though they have obvious consequences for food access, behavior, and health. Additionally, because studies in this area have tended to be cross-sectional, they fail to capture and account for the dynamic nature of urban food environments and the links that social and economic neighborhood changes have with food environments. Research in this area also overlooks the recent ubiquity of food retail and the myriad of places where people can buy food. For example, mobile food vendors, informal food economies, drug stores, dollar-stores and big-box stores all also sell food and are largely ignored in the narrow policy agenda focus on supermarkets, small grocers and fast-food (Forsyth, Lytle, & Van Riper, 2010; Lytle, 2009). This dissertation addresses these gaps in the

literature by gathering information about categories of food places 'from the ground up' and also by taking a mixed methods approach and thereby linking direct observation data with human experiences of the food environment.

Qualitative studies of how people experience and use local food environments emphasize that the same resource environment structures accessibility for different types of people in different ways. For example, access to motor transportation can mediate proximity in the food environment so that the nearest place to buy food is not always the easiest to get to (Williams & Hubbard, 2001; Williams, Hubbard, Clark, & Berkeley, 2001). Bowlby (1985) distinguishes between potential and actual access, stressing the complexity of geographies of inclusion and exclusion. With respect to food shopping he finds that disadvantaged people may be physically proximate to supermarkets with healthy foods but may self-exclude by avoiding places associated with more advantaged consumers. Advantaged people, however, will go to shops associated with disadvantaged people if they feel they can save money. The relationship between income and the cost of food also affects access to health promoting foods. Low-income families may not use better quality retail provision because they do not have the financial resources to buy in bulk and instead shop more often and for smaller amounts of food from smaller stores (Dobson, Beardsworth, Keil, & Walker, 1994). Others find that people with low-incomes report being primarily concerned with eating enough, and feel that concern for the quality, or health promoting capacity, of foods is a luxury that comes with wealth (Lang, Barling, & Caraher, 2009). Shaw (2006) suggests three key dimensions of food access: *ability* to transport food; *assets* to buy, grow, cook, or store food; and *attitudes* such as fear of crime, lack of knowledge on how to prepare foods, or cultural bias against available foods. This dissertation explores the argument that the values policymakers and public health researchers assign to a variety of food retail and restaurant categories may be in conflict with the experiences and values of the same populations whose diets and health they aim to improve.

Scale and Food in Global Cities

Jane Dixon and colleagues (2007) argue that cities embody a bifurcated food system characterized by a fast food/ slow food divide. This divide is supported at the global scale by segregated zones of production where standardized processes emphasize efficiencies of scale and the production of

cheap, often unhealthy food while specialized processes produce more expensive food traded on its environmental, nutritional, and cultural value. Hawkes (2006) uses the term 'uneven dietary development' to theorize how global market integration in the food industry produces inequalities in health through dietary convergence among low-income groups and dietary divergence among high-income groups. While the data Hawkes uses to develop her theory come from middle-income nations, theorizing how the global food system and its regulatory policies produce uneven dietary development is useful in understanding how forces at the international scale are implicated in the production of local food environments, dietary patterns, and their affects on population health.

Hawkes' insights urge a reconsideration of the ways that public health and urban food policies position supermarkets and fast food as having respectively positive and negative impacts on health and health equity. More specifically, it advances a critical stance on supermarkets and argues that they may be drivers of dietary convergence in poor areas of global cities just as they are in middle-income countries. Similarly, it opens the possibility of viewing fast food as the most recent material articulation in a history of urban food innovations wherein cheap ready-to-eat foods fulfill particular social and material functions for poor and working class people (Turner, 2006). This critical stance suggests that public health and food policymakers should recognize this history and rather than moralize fast food, work to regulate it in ways that support changes in the food retail environment whereby the social and material functions of fast food exist while also delivering nutritious, delicious, convenient, affordable, and perhaps culturally relevant foods to people who rely on them. This dissertation seeks to understand to what extent the food environments in high- and low-income areas in global cities reflect and complicate the fast food/ slow food divide and how people who live and work in these areas perceive, navigate, and use these nutritional landscapes.

Advancing the understanding of how food environments at various scales shape disparities in diet and health is necessary for formulating policy interventions that fulfill the promise of promoting health equity. Recent research on cross national variations in food environments and their impacts on obesity finds that only in the US "observational evidence tends to support the idea that access to supermarkets and grocery stores is constrained for those who live in low-income or black neighborhoods, and that consequent price and choice disincentives to healthy eating might explain higher rates of poor diet and

obesity" (Cummins & Macintyre, 2006, p. 101). A number of published literature reviews focusing on food deserts, food access, race, obesity, and related interventions support this observation (Beaulac et al., 2009; Black & Macinko, 2008; Chow et al., 2009; Holsten, 2009; Story, Kaphingst, Robinson-O'Brien, & Glanz, 2008). Several authors suggest that this unique positioning is possibly the result of macrosocial forces in the US culture, economy, and food regulation infrastructure (Black & Macinko, 2008; Cummins & Macintyre, 2006; Chow et al., 2009). Other possible explanations focus on methodological issues within the evidence base such as the absence of standardized comprehensive instruments for linking the environment to diet, not adequately addressing the role of time in the environment-behavior-health relationship, varied and conceptually ungrounded geographic units of measurement, possible over reliance on indirect forms of measurement (ex. telephone directories and census data), a lack of studies using one research design to examine multiple environments, an over reliance on proximity as a measure of access, and variations in conceptualization of measurable dimensions of the food environment (Chow et al., 2009; Holsten, 2009).

These questions and critiques illustrate a need to improve the methodologies used to study food environments and health. They also suggest a need to investigate how whole cities, as well as neighborhoods, figure in the eating habits of people living in cities. With respect to global cities like New York and London, this perspective also suggests that researchers should further examine interconnections between food policies and environments across scales and in connection with other social policies related to the patterning of racial/ ethnic and income based segregation in cities such as housing policy, social welfare policies, policing and the range of factors influencing the flows of migration into and within cities. Relevant to this dissertation's focus on scale it is important to note that that many of these policies are formed and enacted across multiple levels of government.

Feminist geographers have a tradition of examining how forces of globalization structure and are structured by people's day-to-day lives (Wright, 2008). Katz (2001) uses the term 'counter-topography' to argue for documenting how forces at the global scale similarly structure environments and daily lives in divergent locales . These forces may be collectively responded to in divergent locations to support the development of "new political-economic alliances that transcend both place and identity and foster a more effective cultural politics to counter the imperial, patriarchal, and racist integumentation of globalization" (p.

1229). In the context of this study, the notion of counter-topography suggests a need to empirically examine the similarities in local availability of food for poor people and people of color in global cities and may indicate new intervention targets and political strategies for social change. Constructing counter-topographies of food in New York and London could support not only the sharing of strategies for changing local and municipal food policies, but also enable the creation of a cross-national urban alliance to advocate for policy changes at the international scale. A key challenge of this work will be to think critically about the use of scale as a strategy for change while avoiding the local trap.

Avoiding the Local Trap by Avoiding the Synoptic Error

Raul Lejano (2011) contrasts two views of the city, the synoptic view and the phenomenological view. He develops the idea of the synoptic view using Bourdieu's (1977) notion of the synoptic error. In short the synoptic view is an abstract view of the city. It is the view we see when we look at traditional Cartesian maps. This view is totalizing and supports urban analyses rooted in objectivism and abstract logics. Both Lejano (2011) and Corburn (2005) note that totalizing view of the map, the logical questions it allows us to ask about distributions of people and resources, and the technical science behind its production make it a useful and convincing tool in planning and policy. However, this is not how people experience the city, and herein is the crux of the synoptic error. Lejano (2011) writes,

> "citydwellers do not experience the city all at once. They do not directly, perhaps even indirectly experience what it means to have a city with a certain jobs–housing ratio, percentage of green space, etc. that one gets out of the synoptic view. Rather they experienced the city a place at a time. The city is not the whole universe of land uses as is–rather, to a resident, the city is where she or he is walking at this point in time, what she is seeing, who she meets along the way. And, most importantly, what the city is is more related to this actual, embodied experience of the city and the synoptic view of it."

From the perspective of environmental psychology, it is important to note that perception is deeply rooted in continuous movement through space, not just the experience of being in one place at one moment in time.

Lejano (2011) goes on to consider what it would take to remedy the synoptic error and be able to understand and view the city through the lenses of meaning, memory, and experience that exist beyond systems of objects and objective relations. He suggests two routes forward. One is mapping narratives. He argues that people create and use narratives to make sense of themselves and their place in the

social and material environments they move through and relate to. Another approach he suggests is mapping the relational city. From this relational view he suggests using cognitive mapping as a tool for making the invisible qualities of cities, their networks of relationships, and their phenomenological dimensions visible. These theoretical and methodological insights are applied in this dissertation's methodology and narrative structure. Mental mapping and semi-structured interviews are used to gain access to the phenomenological city. This perspective is contrasted against a synoptic view constructed from interviews with policymakers and food environment observations in New York and London.

This phenomenological perspective works synergistically with theories linking socially and materially situated practices like walking (Bourdieu, 1995; Certeau, 1984) and environmental perception (Gibson, 1950). Perception is important because it engenders consideration for environmental affordances (Gibson, 1977) and their connection to mobility. Yet, conceptual models linking the food environment to diet and health have tended to neglect perception (cf. Glanz et al., 2005; Lytle, 2009). In this literature, perception is addressed as a methodological issue about the degree to which perception-based measures mirror direct observation and large-scale GIS-based measures of the food environment (Giskes, Van Lenthe, Brug, Mackenbach, & Turrell, 2007). Freedman and Bell (2009) find that residents' perceptions of their local food environments accurately reflect objective measures and suggest that perception-based measures could be used in place of observation. Others find that GIS-based measures are significantly associated with perception-based measures, but that the strength of this association is varied across locations (Moore, Diez Roux, & Brines, 2008). Giskes and colleagues (2007) find that while perceptions of price and availability of health promoting foods do not match objective measures of the food environment, they are strongly associated with food purchasing behavior.

That perception may be more strongly linked to behavior than objective reality supports this dissertation's emphasis on understanding person-food environment interactions as they are situated in everyday contexts. This theoretical perspective highlights the importance of considering individuals' perceptions and psychosocial dimensions as relevant to how they use the urban food environment to meet their needs. It makes clear that regardless of whether or not perception, survey, or GIS-based measures are interchangeable or present researchers with a hierarchy of accuracy, understanding perceptions of the food environment is crucial for comprehending how environmental interventions may

affect food behavior and health. By using qualitative methods to explore perception in connection with spatial dimensions of food practices this study aims to theorize how perception could be added into current conceptual models linking food environments, diet, and health. This is important because we can only act on the affordances we perceive. For example, food environment interventions that add information to the environment like calorie labels will not afford the option of making a lower calories food choice to people who don't perceive what the information means, or who do not care.

Neighborhoods and Health

Connections between health and place have been observed since the mid 1800s (Engels, 1999; Farr, 1975; Krieger, 2001). Within the literature on health and place there has historically been a strong emphasis on using the neighborhood as a unit of analysis. Sociologist and health researchers have positioned neighborhoods as a unit of place where individuals and families come face to face with macro- and micro-level social and economic forces. Political, economic, social, and material forces interact to shape neighborhoods, which then go on to structure access to opportunities, resources, as well as harmful exposures (Kawachi & Berkman, 2003; Wilson, 1990), However, several conceptual and methodological challenges exist for researchers interested in neighborhoods and health. One problem is site and population selection, where it is essential but practically very difficult to disambiguate whether a place is impacting the characteristics of people there, or if people with certain characteristics are drawn to a place with particular features of interest to researchers (Osypuk & Galea, 2007). Another drawback is the problem of migration and residential mobility, which are more common within than between cities, counties, or metropolitan areas. Size and meaning also present further challenges for using neighborhoods as a unit of analysis because people often travel outside of these areas as part of daily life. Operationalizing their boundaries can be challenging as these may be different for different sub-sets of a local population and all together different than the administrative boundaries within which spatial data are often made available. Lastly, neighborhood analysis may be of little use to policy formation because neighborhoods most often lack authority over resource allocation (Osypk & Galea, 2007).

Recent literature from sociologists and urban geographers suggests that contemporary neighborhoods may have diminished saliency for communities and assert that networks and flows may

offer better models for conceptualizing settings for social life. Urban theorists have recently commented that traditional conceptions of neighborhoods and city have an approximation for life in the small village. These views may be out of touch with the plurality of spatial experiences people have in global cities at a time with unprecedented availability of tools for mediating, perhaps resisting, forces of space-time compression space-time expansion as they navigate the urban food landscape. Understanding the particulars of this disconnect in spatial logics - between the everyday and the political - is essential for an analysis of the potential missed opportunities and unintentional consequences of policy and intervention. By analyzing the role of home neighborhood in space-time food diaries this study will empirically examine the relationships among locality, residential neighborhood, diet and health.

Amin and Thrift (2002) argue that within contemporary cities the spatiality of urban communities is changing. They state, "all kinds of communal bonds still exist in cities [and that only] some of these are still localized" (Amin & Thrift, 2002, p. 43). This conceptualization of community can be applied to understanding the social spatiality of food in cities. For example, such insights about community formation and space can help theorize potential ways that food practices and food behavior in cities may be both localized and distanciated. 'Bunds' or highly mobile groups of enthusiasts who come together around particular emotional or cultural values are an example of non-localized communities. Urry (2000) names a number of contemporary examples of such communities, several of which revolve around food, for example vegetarians and locavaores. Cheap travel and the internet support such forms of sociality. 'Diasporic communities' are conceived in this literature as dialectically rooted in close-knit families and long distance flows of mobility and migration. Drawing on the work of Deluze (1997) and Lefebvre (1992) Amin and Thrift also theorize the community of 'everyday life' "as a kind of virtual commonality, one in which terms like far deep and distant are replaced by rhythms which fold time and space in all kinds of untoward localizations" (p. 47). This socio-spatial process of everydayness transforms people places and things (like food) from far and unfamiliar into near and normal.

A Relational Perspective on Health and Place

More recent thinking about how places structure opportunities for health echo the cautions against overemphasizing the role of neighborhoods found in the urban sociology and geography

literatures discussed above. A number of authors have written about place effects on health and highlight the challenges of conceptualizing and measuring their influence on spatial patterns of health inequality (Cummins, Curtis, Diez-Roux, & Macintyre, 2007; Diez Roux, 2004; Frumkin, 2003; Macintyre, Ellaway, & Cummins, 2002). Traditionally researchers studying health and place have attempted to distinguish and measure the relative contribution of compositional (people) and contextual (place-based) influences on health (Macintyre et al., 2002). Health geographers have called for a research agenda that take a relational perspective on health and place (Cummins et al., 2007). A relational understanding of person-environment relationships suggests that researchers should examine the dynamics of time, scale, and the reciprocity between people and the places they constitute and live in as well as movement through space and how the contexts of such mobility influence health (Osypuk & Galea, 2007).

The relational perspective is important to research on food and studies like this one because it presents a theoretical framework for linking environment and individual without ignoring the structural political forces shaping the environment or neglecting the capacity for individuals to resist environmental forces aiming to shape their beliefs and behavior, re-shape the environment to suit their needs, or use creative tactics to side step the behavioral determinism of the urban context. Lewin's (1951) ecological analysis of the psychological and environmental factors influencing diet predates the call for relational research, yet it highlights some key dimensions of this perspective on human environment interaction. Lewin's analysis brings psychosocial factors, social relations, and the environment into our understanding of why people eat the way that they do. His perspective supports both the importance of polices that shape food availability, but also recognizes that forces inside the individual are equally important to actual behavior. This theoretical framing creates an opportunity for understanding why some individuals eat in ways that may be perceived as harmful. An example of such behavior would be knowingly eating sugary, fatty, or processed foods while living with a health condition such as diabetes.

Murdock (2006) states that an ecological approach, like Lewin's, "shades neatly into the relational approach, that is, it emphasizes how heterogeneous relations link social actors in particular spatial domains" (p. 3). The complex interactions eaters have in and with the city reflects the heterogeneity and plurality of meanings, behaviors, and identities that the relational framework is developed to account for. In the context of health, the relational perspective emphasizes that health is produced through the

processes and interactions between people and places (Cummins et. al. 2007). Conradson (2005) argues that a relational view on landscapes and health should take a holistic view of well-being. This entails recognizing that person-environment interactions are both embodied and interpreted; and considering the immediate as well as ecological implications of these encounters. The social ecological framework posits that personal, social, and environmental factors interact to influence behavior and health. Both the social ecological and relational frameworks include an account of the individual that is multi-layered, socially situated, agentic, complex, and developing and dying over a life-course. Drawing on Kreiger's (2005) notion of embodiment I would add yet another constellation of layers to this conceptualization by asking that we consider the biology of the body (e.g. its size and mobility) and the relationship between the self and the body (e.g. nurturing or conflicted). Theorizing how factors operate within and across each of these layers of human experience and behavior is important for understanding the etiology of food environments and health disparities and for delivering contextually sensitive interventions.

Within the relational perspective on health and place, there is an emphasis on understanding how human-environment interactions that take place over lengths of time accumulate in the body, producing illness or well-being. The framework of embodiment over the life-course, and its attention to the biological aspects of human-environment interactions speaks to the need for theorizing the temporal dimensions of how food environments influence health. For example, Blakslee (2003) reports on an epigenitic study of mice which showed that supplementing the diets of pregnant obese mice with B12, folic acid, betaine, and choline affected the gene expression for obesity (and coat color) in their pups. This at least suggests that pregnant women living in poor food environments and eating poor diets could be enhancing the likelihood of having obese children, and that even without losing weight themselves, such women could reduce the likelihood of having obese children by improving their diets. Embodiment provides a framework within the relational perspective that looks to understand socially and biochemically how food impacts health over the life-course and across generations.

Using a Relational Perspective to Inform Food Policy

Sonnino (2009) argues that applying a relational perspective to urban food planning could help cities feed themselves by informing the development of policy infrastructures that effectively link global, regional, and local food systems in socially, economically, and environmentally just ways. A relational perspective on health and place research necessitates a rethinking and realignment of research methods and paradigms away from what Corburn (2009) terms the 'static, fixed, and variable view of place' and toward a multidimensional and multi-method approach to understanding the meanings of place in people's lives. Put differently, this entails taking a relational, rather than synoptic view of the city. One area where this shift is apparent is in the definition of geographic areas of interest to researchers and planners interested in promoting health. A relational perspective on place asserts that policymaking should take seriously the cultural meanings through which health interventions, and in this case food policy, are viewed and should address distributions of power within governance structures and institutions that shape places (Corburn, 2009).

Drawing from research on accessibility and mobility in urban environments and building on the relational perspective on person-environment interactions, the qualitative research methods in this study take a 'whole journey' approach to investigating how environments structure food access in New York and London. In the context of mobility studies, this approach takes a holistic account of an individual's door-to-door experience with the understanding that barriers to accessibility are different for different people and can occur at any point in the journey (Evans, 2009). Applied to food accessibility, this framework recognizes that food availability structures access for individuals in different ways and barriers to healthy eating can exist in any of the settings where people obtain food or eat in the course of their daily lives. In this study, the whole journey approach uses the lens of individual experience to examine how people interact with food environments and how these landscapes shape food access and health.

RESEARCH QUESTIONS

Rhetorically this study asks, have New York and London fallen into the local trap? Embedded in that question are several empirical concerns about the fit between the everyday geographies of food

behavior in cities and the geography of urban food policy as it is conceived, practiced, and perceived. To address these concerns, this study asks three sets of interrelated questions.

The first series of questions focus on accessing the synoptic view of the food environments in New York and London and their relationships with social and health inequalities and health.

1. Are there comparable inequalities in food environments of New York and London? How do the food environments in the highest and lowest income areas differ within and between the two cities? What kinds of food places exist in these sites? How do policymakers and public health practitioners perceive inequalities within food environments in these cities?

The second series of questions focus on the phenomenological perspectives of people who live, work, and eat in the highest and lowest income areas of New York and London.

2. How do individuals from different ends of the socioeconomic spectrum in New York City and London perceive, navigate, and use food environments in these cities? How do different types of food places fit into the daily lives of people living and working in selected study areas? How does local, or neighborhood, food availability influence access to food and health for eaters living and working the highest and lowest income areas of New York and London?

And, the third series of questions aim to triangulate the synoptic and phenomenological perspectives and generate new ways of conceptualizing the connections between food environments, diet and health as well as new ways of responding to the related problems of social and health inequality.

3. What do the whole journey narratives of eaters living and working in the highest and lowest income areas of New York and London suggest about how to conceptualize the ways that urban food environments shape inequalities in food access, diet, and health in global cities? How do the geographies of everyday food behavior fit with or contrast with the geography of urban food policy? What do these narratives indicate as potentially missed opportunities and unintended consequences of food policies in New York and London? What other locations or settings that could be promising sites for food environment interventions?

RESEARCH DESIGN

This research employs a cross-national, multi-sited, and mixed-methods study design. It uses direct measures of the food environments in the highest- and lowest-income areas of New York and London to compare availability of health promoting foods and messages within and across cities. This research also uses space-time food diaries and mental mapping interviews with people who live or work in the selected study areas to investigate how individuals from different social, cultural, and economic backgrounds perceive, navigate, and use the local and citywide food environment. These data are used to understand the daily journeys of these individuals and the placing of their food events as they move through the city and how local or neighborhood food environments factor into the food events in these individuals' daily lives. In this study mental mapping is used as a part of semi-structured interviews about individuals' space-time food diaries to gather data about the lived experiences that contextualize the food events in their diaries, how they perceive and use the citywide food environment, and what they desire of food and health interventions and policies. In addition, interviews with policy makers, advocates, and other key informants provide yet another perspective on the connections between food environments, diet, and health in New York and London. Finally, observant participation in food policy debates provides yet another layer of data for observing the spatial logics and assumptions about food and inequality in cities.

Methodologically, this dissertation takes a 'whole journey' approach to investigating how individuals encounter and use the urban food environment as they travel through the city during their everyday lives. By looking at how food and eating events fit into individuals' daily journeys, this research aims to ascertain how local areas, and neighborhoods, figure in the foodways of people in New York and London. Many other studies of food encounters take the approach of following foods through their production up the supply chain and to their eaters (Cook, 2006). This study approaches this encounter by asking not how the food got to the eater, but how the eater's experience brought them to their food.

New York and London

As global cities New York and London are economically, politically, and culturally linked and have the potential to become strategic locales for changing the global food system. Global cities are drivers of

innovation at home in their respective national contexts as well as internationally (Sassen, 2001). In London, local bodies of city government called borough councils have enacted land use regulations to limit the availability of fast food (Freudenberg, Libman, & O'Keefe, 2010). These policy innovations have initiated conversation about this type of legislation at the national level in Britain. New York was the first city in the US to require restaurants to provide caloric information on menus and menu boards. Its Department of Health and Mental Hygiene (DOHMH) prevailed through multiple years of legal battles in the state and at the national level. Its victory paved the way for other cities to take up calorie labeling regulation (Farley, Caffarelli, Bassett, Silver, & Frieden, 2009). Today, calorie labeling has been written into national health care reform (Nestle, 2010) and has created a discussion in London about how such action could be taken up there. Thus, in addition to spurring policy innovation domestically, global cities present both the opportunity and need to share strategies and knowledge internationally about how to change urban food systems so that they promote health and social justice within their jurisdictions and beyond (Sonnino, 2009).

New York and London both have large, diverse populations characterized by inequalities in income, education, access to resources and health (Freudenberg et al., 2010). Table 1 provides a demographic snapshot of these two cities. It demonstrates the similarities among their populations with regard to diversity and size. Both cities have the largest populations of any city in their respective countries. In addition, the population size of both cities makes them important players in the national and global food marketplaces. London is the largest single market in the United Kingdom (Reynolds, 2009). Both cities also house headquarters for major corporations in the food industry. And, as major centers of commerce, New York and London have the potential to work with employers at a large scale to improve the health promoting capacity of worksites and internal corporate polices. For all of these reasons these cities present opportunistic settings for examining how food environments are shaped by policies at multiple levels of government and how socially and economically diverse, and highly mobile populations, experience and use the urban food environment.

The selection of New York and London as sites for this study is also relevant to this research's focus on the local trap and questions about scale and the food environment. The first concern here is with how we conceptualize food related activities in relation to the scale and mobility of daily life in global

cities. New York and London have relatively similar population sizes, but have vastly different physical geographies. Because London is roughly twice the size of New York in area, it has a much lower population density, and a strong social housing sector that ensures a greater social and economic mixing across the city. This difference has a number of potential implications for this work's focus on inequality and the food environment. It affects the distances people travel in their daily lives and may enhance the importance of public transportation as a supporting infrastructure for food access. Also, residential density may correlate with the density of consumers and consumer spending to support food retailers. London's lower residential density may also translate into lower density of food places. As a city with medieval roots, London's streetscape is vastly different than New York's. At the foundation of New York's cityscape is a street grid. London does not have street grid as its foundation and instead has a winding network of streets overlaid with a limited number of straight roads connecting parts of the city. This difference is significant in that it relates to this study's focus on environmental perception, navigation, and mobility.

Table 1. Demographic Snapshot of London and New York

	London[1]	**New York**[2]
Area	1,579 square kilometers (610 square miles)	833 square kilometers (321.8 square miles)
Average population density	4,959people per square kilometer (12,836 per square mile)	9,814 people per square kilometer (25,404 people per square mile)
Total Population	7,830,000	8,175,133
Race/ Ethnicity	White 65.7% Black 13.9% Asian 16.3% Other 4.1%	White 44.0% Hispanic or Latino 28.6%[3] Black 25.5% Asian 12.7% Mixed race 4.0%
Foreign born	33%	37.2%
Poverty[4]	17%	20.1%[5]
Unemployment	13.0% (of households)	7.0%

[1] Source: Greater London Authority Datastore
[2] Source: 2010 US Census
[3] In the US census Hispanic or Latino is an ethnic not racial designation thus percentages do not add to 100.
[4] Poverty is defined differently in the US and UK. In the UK the poverty line is set at 60% of median income after housing costs. In the US poverty is measured using an annual income threshold set by the US Census. The current threshold for an individual is $10,830 and for a family of four is $22,050. Thresholds apply nationally.
[5] Of all people in the New York City whose income was below the poverty level during the year before the census.

A second concern is the role of scale in shaping political processes and policies related to food and health inequalities. There are significant differences in the structure of municipal government in New York and London and that have implications for the power structures that shape food policy in these cities. A major difference in the scale of governance in these cities is that London is a conurbation of 33 boroughs. As such, it takes a regional approach to municipal government. By contrast, New York has a strong Mayor with control over a wide range of centralized municipal agencies and a City Council representing 51 community districts. In practice, the regional structure of London's government invests more authority in the local scale borough councils. By contrast, community districts in New York have some control of local land use decisions but play a mostly toothless role advising the City Council on issues raised by their constituents and on budgetary decisions. As the calorie labeling example above demonstrates, these differences provide a useful context for this research because they enable analysis of the ways that policies deployed using different scalar strategies are embedded in the urban food environment, experienced by individuals across the socioeconomic spectrum, and over time operate across scales.

Site Selection and Sites

The site selection process for this research is rooted in the understanding that income inequality is the foundation of inequalities in access to resources and health. Income inequality within and between nations is associated with disparities in health and increases in social maladies such as mental disorder, drug use, violence, and mistrust (Marmot & Wilkinson, 2005; Wilkinson & Pickett, 2009). Looking at international data on social policy and health, Coburn (2004) finds neoliberal policies are associated with increasing inequalities in income and widening health disparities. He further finds that these effects are tempered by the presence of social welfare regimes. These state regimes include provisions for heath care, food, unemployment insurance, and housing. Building on this rationale, sites for this study were selected based on their ability to represent the scale of income inequality in New York and London. They should thus also be a useful foundation for examining how health promotion policies are playing out on the ground, in the stores, restaurants, and on the streets that people encounter in their daily lives in these cities. This study used a spatial analysis of income inequality as the conceptual foundation for its site selection strategy. The details of the site selection process are discussed in Chapter Two. In brief, GIS

were used to analyze census data and identify the highest and lowest income areas of each city as the primary foci of this study. The final sites selected in London are located in South Kensington in the borough of Kensington and Chelsea, and Clapton, in the borough of Hackney. In New York the sites selected are the Upper East Side in Manhattan and Brownsville, Brooklyn.

OUTLINE OF CHAPTERS

This dissertation is structured in four sections. The first section includes this introduction and a chapter detailing the research methods used in this study. The second section is comprised of two chapters that collectively present a synoptic view of the food policies and food environments in New York and London. The third section, presents a phenomenological perspective of eaters' perceptions of and interactions with neighborhood food environments. The fourth and final section returns to the local trap argument. It draws on previous chapters to identify unintended consequences and missed opportunities for action. The conclusions also interpret and apply these results in a series of recommendations for realigning the geography of policy and social action on food and diet-related health inequalities in New York and London with the experiences of eaters in these cities.

This chapter has provided a review of the theoretical, empirical, and political problems at the core of this research and detailed the questions it seeks to address. Additionally this chapter presented an overview of this study's design and settings. What follows is a description of the subsequent chapters of this dissertation.

Chapter Two: Research Design and Methods: A Multi-sited Approach to Understanding Food Journeys and the Spatial Logics of Food Policy in New York and London

This chapter describes in detail the multi-sited and multi-method approach used to understand the food journeys of eaters and the spatial logics of food policy in New York and London. This approach draws on the concepts of multi-sited and diagnostic ethnography and their commitments to looking at phenomena from shifting and varied perspectives (Duneier & Carter, 2001; Fine, Tuck, & Zeller-Berkman, 2007; Marcus, 1995). Building on Dunier's approach this research used policy maker interviews, key informant interviews, space-time food diaries and mental mapping interviews with diverse eaters,

observant participation in the social settings of this research and food policy arenas of New York and London, and food environment observation. The chapter also discusses how the relational theory that underpins this project informs the whole journey approach to understanding the social geography of the everyday food behavior in cities and sets up human-environment interactions as the key unit of analysis in this research. The site selection procedures for this work as well as the sampling and recruitment procedures, interview protocols, and analytic procedures used are described in detail.

Section Two: The Synoptic View

Chapter Three: The Synoptic Error: Food Policy in New York City and London

This chapter takes a synoptic view and provides contextual grounding in the food policies and related governance structures New York and London. Driven by this study's concern with the local trap, the spatial logics and assumptions embedded in these policies, programs, and governance structures are critically examined. I argue that the targeting of specific neighborhoods and devolution of food governance are rooted in overly simplistic spatial logics and are laden with assumptions that privilege the local, to the extent that even universal approaches can end up targeted in their implementation. Interviews with policymakers and public health professionals in both cities support this analysis.

Chapter Four: A Grounded Observation of Food Environments and Inequality in New York and London

This chapter presents the results of the direct observation and statistical analysis comparing the food environments of the selected study sites. These data collected were in the fall of 2010 and winter 2011. The chapter closes by summarizing and then contextualizing these results using the scholarly and grey literatures on food environments in New York and London.

Section Three: The Phenomenological View

Chapter Five: The Saliency and Scale of Neighborhood Food Environments

Chapter Five argues that neighborhood food environments are salient to eaters, but that this identification operates at a range of scales and that processes of globalization expand, and contract, the

everyday geographies of individuals in ways that reflect, and compound, their relative positions of privilege and disadvantage.

Section Four: Summary, Interpretation, and Applications of this Research

Chapter Six: Conclusion

The final chapter interprets this study's results in response to the question, have New York and London fallen in to the local trap? The results and interpretation are also used to propose a conceptual model for how food environments 'get into' the body and produce inequalities in health and make recommendations for enhancing the scope of food policy in New York and London. Finally, the chapter closes with a discussion of the study's significance, limitations and future research.

SECTION ONE: CHAPTER TWO

Research Design and Methods: A Multi-sited Approach to Understanding Food Journeys and the Spatial Logics of Food Policy in New York and London

RESEARCH AT THE GLOBAL-LOCAL NEXUS

Drawing on the concept of multi-sited ethnography (Marcus, 1995) and its commitment to looking at phenomena from shifting and varied perspectives, Fine, Tuck, and Zeller-Berkman (2007), discuss the methodological and ethical challenges of conducting research that is locally rooted and yet stretches globally; research that not only documents experiences and geographies of disadvantage and oppression, but also of privilege. They argue that the "work of critical scholars is precisely to document the classed, raced, gendered and sexualized turns that local oppression can take; to make visible the strings that connect global imperialism, racism, political economy and patriarchy to everyday life" (Fine et al., 2007, p. 18). One key challenge that they acknowledge is that as social scientists we "do not have easy methods for documenting the material, social and psychological circuits of privilege – policies and practices of hidden/denied/outsourced ownership, accumulation, exploitation, embodiment, and reproduction of privilege" (Fine et al., 2007, p. 15). In this dissertation generally, and most specifically in developing its research methods, I attempt to address the dual challenges of doing research that bridges the local and global while also examining the circuits of urban inequality as they are embedded in food environments, contested and reproduced in food policy and public health intervention, as well as lived through the practices of diverse eaters, and finally embodied in the form of diet-related disease disparities. Working across sites, within and between cities, is essential to this task because it enables theorizing across settings in ways that allow for identifying and examining the social and political structures and processes, within and against, which dietary choices are made (Katz & Monk, 1993).

Duneier and Carter (2001) use the term diagnostic ethnography to describe an iterative process of observing and gaining knowledge of the "'symptoms' that characterize my patient'" and then returning to the field, "aided by new diagnostic tools-such as photographs – and try to 'understand' these symptoms (which is some amalgam of 'explain' and 'interpret' and 'render meaningful')" (Duneier & Carter, 2001, p.

342). In this research my 'patient' is the synoptic error at the interstices of academic, political, and lay perspectives on food environments of New York and London, the spatial logic that such perspectives impart to the policy responses these cities mobilize to address inequalities in food availability and health, and the phenomenological dimensions and geographies of everyday food behavior of diverse eaters in each city. The methods used included to 'diagnose' this patient include direct observation of the food environment, interviews and focus groups with policy makers and public health professionals, key informant interviews with individuals having knowledge of the selected study sites, space-time food diaries and mental mapping interviews with diverse eaters living and working in these sites, and observant participation in the multiple settings of this research as well as the food policy arenas of New York and London. Individually each of these methods brings a balance of insight and limitation. By working iteratively across methods to gather data and triangulating its meanings, I hope to avoid the potential bias of perspective and possible misdiagnoses that could come from taking a narrower approach to this work.

In developing the research methods for this project I also drew on the noted strengths of previous work I have done with my colleague Desiree Fields and our mentor Susan Saegert. In a recent publication we take a moment to reflect on the strengths of our methodological approach to studying mortgage foreclosure. These included the interdisciplinary use of literature, rigorous site selection procedures, multi-site and segmented study designs, attaining adequate sample size, and including closed ended surveys for describing the sample, and working the liminal spaces between the empirical and theoretical. We also suggest that working collaboratively with a range of stakeholders, as we did using the advisory board for that study, sharpens the arguments that can be made using the data and can create opportunities for broader dissemination and ultimately increase the chances that research will fulfill some of its promise to inform social change (Libman, Fields, & Saegert, 2011).

Reflexivity and Observant Participation

This work is grounded in the epistemological stance that knowledge is lived, situated, imbued with assumptions, and produced through social interaction and critical reflection, as well as through the process of attempting to create social and environmental change (Weis & Fine, 2004). As such it enacts

the kind of critical reflexivity that Brenner (2009) calls for in his description of critical urban theory. Here I reflect briefly on how I situate this research at the intersection of my work as a scholar, advocate, and educator.

This dissertation extends two years of my work as a researcher and advocate for municipal policies to reduce disparities and the overall burden of childhood obesity in New York and London, the ObesCities Collaboration. The ObesCities Collaboration, a partnership between City University of New York and London Metropolitan University established in 2008, sought to examine the role of municipal policy in addressing childhood obesity, create an intellectual infrastructure for knowledge sharing between universities and policymakers, and inform responses to this global epidemic. Through that work I gained familiarity with food policies and governance of these two cities. I also had the opportunity to acquaint myself with relevant policymakers and hear their perspectives on issues related to food and health inequality. This experience in combination with my discovery of the local trap literature led me to identify scale and localization in food policy as a theoretically, empirically, and politically fecund area for me to undertake my dissertation research. Structuring my research as part of the ObesCities collaborative allowed me to integrate my research activities with teaching, advocacy, and more policy-focused research. This integration helped me gain access to students with whom to pilot and reflect on my methods, other scholars' work relevant to my interests and approach (e.g., Evans work on whole journeys and mobility), as well as the opportunity to interview policymakers. Through a combination of work on the ObesCities project and this dissertation I travelled to London approximately three times a year for three years. The longest of these visits was two months and the shortest a week. Most often I would stay for three weeks to a month at a time.

Methodologically I use 'observant participation' to incorporate these experiences into my data collection and analysis. Marte (2009) and Vargas (1999) replace the traditional research practices of participant observation with observant participation. The latter represents the decolonizing of observation as a research practice and emphasizes the ethical dimensions of conducting active fieldwork where as researchers we choose to privilege our subjectivity and entanglement within our research contexts over more detached stances. Examples of my entanglements in these places include: bringing policymakers and academics together in two international conferences about childhood obesity; speaking at and

organizing public discussions of food policy; interviewing policymakers, food activists, and academics in both cities; teaching about the food environment in both cities while using a pedagogy of collaborative research; providing expert testimony at a Greater London Authority hearing on childhood obesity; and participating in the design of a Brooklyn-wide community food assessment with the Brooklyn Food Coalition. My experience in each of these contexts informs my research questions, methods, and my plans for sharing and disseminating the results of this work.

A RELATIONAL APPROACH TO FOOD ENVIRONMENTS AND FOOD POLICY RESEARCH

Building on the introduction to relational theories of health and place from Chapter One, here I review some of the methodological suggestions other authors have offered about doing research that takes a relational approach to health and place. Then I apply this framework to the methods of this research; its units of analysis, barometers of validity, and articulations of populations, experience, and place.

The first two columns of Table 2 summarize and illustrate some of the distinctions between conventional and relational approaches to health and place research as they have been described previously (Corburn, 2009; Cummins et al., 2007). The third column summarizes how I adopt the relational approach in the ways that I operationalize across the practical and conceptual domains of *Eating the City*. As the tables and explication that follows show, the relational approach implies a fundamental shift in the units of analysis used in urban food environment and health research. The unit of analysis in a relational perspective is the interaction between the person and place, thus it necessarily includes individual experience. In this study, experience is operationalized as memory, story, political ideology, desire, and visceral reaction. Regarding barometers of validity, I assert that within a relational and social ecological framework research should aim to achieve 'resonant validity.' Here the criteria for resonance, and thus validity, should include ability to connect phenomena across scales, and in particular cross the person-environment interaction and life space. Following Table 2, are brief extended definitions of the terms and concepts that the relational and social ecological frameworks of this study reframes.

Table 2. Conventional and Relational Approaches to Health and Place Research: The implications of applying a relational stance to Eating the City

Drawing from: (Corburn, 2009, p. 95; Cummins et al., 2007, p. 1827)

	Conventional	**Relational**	**Eating the City**
Geography	Boundaries are at a specific scale	No a priori defined scales	Study-site boundaries are dynamic and multi-scalar
Distance	Fixed, physical	Physical and social; network distance; socio-relational	Journeys are analyzed using socio-relational approaches
Population	Static in time and space; cross sectional differences between; resident local communities	Contingent and mobile; longitudinal differences with and between; individuals are mobile daily and over their life-course	Looks at experiences of people who live and/or work in specific areas; attends to the history of places and how people come to be eaters in specific food environments
Health Resources	Physical and social in specific locations; culturally neutral	Physical and social plus culturally specific meanings assigned to them	Focus on the food environment and the meanings assigned to it
Political Power	Not explicitly addressed	Relations among populations in place and held by institutions that shape places	Viewed through social and healthy equity; attends to ideology and interaction between visceral experience and political views on food
Context	Contextual features are described systematically and consistently by different individuals and groups	Contextual features are described variably by different individuals and groups	Multi-perspective approach with policymaker, resident, worker, and researcher views on research sites; examines influences from local through global
Scale	Hierarchal and static	Dynamic, multi-scalar, nodes in networks	Dynamic, ontologically relational; journey as route through nodes and networks across scales
Territory	Culturally neutral territorial divisions	Territorial divisions, services, and infrastructure imbued with social power relations and cultural meaning	People and food environments imbued with historically constructed meaning, power relations, governance, and institutions
Perception	Relatively consistent among individuals and groups	Varies among individuals and groups; rooted in human practice	Varies among individuals and reflects their viscerally embodied and complex physical and psychosocial constitutions; rooted in practice and mobility

Geography

As the site selection and data analysis procedures will describe, the study-site boundaries in *Eating the City* are dynamic and multi-scalar. The boundaries were located through an iterative process using GIS, walking observation, and insights from study participants. When analyzing what food events occur in- and out-of-neighborhood the boundaries used are ascribed by individual participants. The mental mapping interview protocol includes questions asking participants to define the boundaries of the neighborhood as well as the sub-section of that area that they use most frequently. The geography of this study is multi-scalar in that it examines neighborhoods, whole cities, and includes international comparison across cities.

Distance

By examining the places of food in the everyday journeys of diverse eaters this study takes a socio-relational approach to conceptualizing distance. In so doing, it recognizes that the physical, cultural, socioeconomic, and psychosocial characteristics of individuals influence their physical mobility and perceptions of access to the city, food, and other resources.

Population

This study takes a multi-user perspective on the populations that inhabit, interact with, and thus take part in the transactions that make places. Its methods gather data on the everyday eating experiences of people who live and/or work in the selected study sites as well as the perceptions of policymakers and public health professionals whose work influences these areas. Also, the interview protocols attend to the influences of historical and personal factors shaping the populations in the study sites.

Health Resources

Eating the City focuses on the food environment as a resource for, and social determinant of, health. The study attends to the physical availability of food, nutrition information, social marketing messages about food and the meanings assigned to these.

Political Power

This study looks at political power through multiple perspectives as it bears on food policy and food environments in New York and London. It is viewed through the lenses of social and healthy equity in terms of discerning what forces shape the policies and environments of interest in ways that are more or less equitable. It also attends to the relationship between political the ideologies of food held by eaters in the selected study sites and how this is shaped by their life experience. Finally, the study also addresses political power through an analysis of scale and municipal governance.

Characterization of Context

Taking a relational approach to this work fundamentally means acknowledging that individuals will perceive, describe and use contexts differently. Thus it does not aim to present an "objective" view of context. Rather it gathers and looks across multiple perspectives on the food environment, neighborhood, and city contexts of interest. Specifically, policymaker, local area resident, worker, and researcher views on research sites are included. Through the focus on scale the study also examines influences that shape context from the local through the global.

Scale

In their discussion of conducting research on and through the local trap, Born and Purcell (2006) rehash Brenner's (2001) assertion that because scale is ontologically relational, analyses of scale must operate across a range of scales at once and attend to the interrelationships among scales. In this work I aim to conduct research on scale by using data from a range of perspectives on urban food environments and food policy in New York and London to describe the politics of where the interrelationships among scales become "fixed, unfixed, and re-fixed" (Born and Pucell, 2006, pg. 198); and examine how scalar strategies are deployed for specific goals. The relational framework for this research allows for the fluid observation and analysis across scales.

Territory

Area divisions and boundaries in this study are understood to be temporally dynamic, imbued by with historically constructed meanings, power relations, governance structures, and institutions.

Perception

Based on Lewin's concept of the life space, this study takes the stance that perception varies among individuals, reflects physical and psychosocial constitutions, and is rooted in everyday practice and mobility.

SITE SELECTION AND SITES

The site selection process used in this research had several aims. Drawing on the health and social inequalities framework, one aim is to ensure that the selected study sites represent both poles of income inequality in New York and London. Taking a critical perspective on scale, food environments, and food policy, another aim of this site selection process was to identify sites that ground an analysis of how food and social policy at multiple levels of government (local, municipal, national, and international) shape food environments and how these environments figure in the daily lives of people who live and work in these areas.

The site selection methods took an iterative approach to using GIS. This approach is relational in that it entails a shifting and layering of perspectives on place. GIS is used as a tool for visualizing across stages of the site selection process (e.g. cluster and buffer analyses, boundary maps). The mapping and visualization also facilitated grounded dialogue about the research with others. For example, in the following instance, an insight about site selection from a food policy advocate in London was sparked by a conversation over a map about the design of this research. This advocate[6] highlighted the significance of food environment and policy research that compares New York and London. She noted that because of its size, highly diverse and mobile population, she felt that there were no other cities in Europe that could provide useful comparison to London. In her eyes New York was the only city that London could

[6] Interview at Sustain on November 12, 2009.

reasonably be compared to for the purpose of knowledge sharing about food and health policy. In its iterative and qualitative approach to GIS, the site selection process aimed to avoid the synoptic error by continually looking back and forth across perspectives, lenses, and scales. In so doing, it draws together an array data and analytic techniques ranging from the institutional, to individuals' experiences, and provides a route for me as a researcher to actively engage with scale as a subject of study while engaging a praxis of deploying scale as strategy for (re)viewing and learning about food environments in New York and London.

Looking from Afar

An early step in the site selection process was to use census data from New York and London to take a distanced view of the landscape of income inequality in these cities. In New York this step in the process used census tracts and data, the London view used middle layer super output areas and census data. These data and geographic units were selected because they are of similar population size and enable a comparison of census data from the US and England. For example, census tracts contain between 1,500 and 8,000 people with an optimized size of 4,000 people and middle layer super output areas contain 5,000-7,500 people. Data and shape files were gathered for each city and analyzed with ArcGIS to identify the geographic areas in New York with the lowest and highest median household income and the areas in London with the highest and lowest average weekly household income. New York data were from the 2000 US census and London data were from the 2001 UK census.[7] This analysis identified that in London MSOA Kensington & Chelsea 10 had the highest average weekly household income and Hackney 13 had the lowest. In New York census tract 130 in Manhattan was identified as having the highest median household income and tract 910 in Brooklyn as having the lowest.[8] The selection of these units also represents a convention in health and place research of using these administrative units as proxies for neighborhoods. In this study, I use this conventional approach

[7] The UK census does not include questions about income. Instead the Office of National Statistics uses small area estimation methods to derive income estimates of known precision from variables in other national surveys. Average weekly income is modeled using 28 covariates that are significantly associated with income. The data for these variables come from the 2001 census, Department for Work and Pensions benefit data, local council tax data and regional indicators.

[8] Add here on population size as factor as well—implications for residential density and its impact on the food environment. Also, US census data include tracts with no or very low populations. Tract 910 was not the absolute lowest, but it was the lowest with a population above 500, making it more comparable to the other sites in this study.

as a starting point for placing this research in New York and London in a way that resonates both with the broader field of research that contextualizes this study and with this work's critical perspective on that field. For practical reasons such as limitations in time and human resources, these small areas were used for the systematic food environment observation with the NYLON FEAST instruments described later in this chapter.

Still looking from a far, GIS was used to explore the assumption that selected study areas were part of larger clusters with similar socioeconomic characteristics and are more likely to have food environments representative of poorer or wealthier areas than sites that are outliers of clusters. Outliers of the income distribution clusters may have food environments that are more representative of their neighboring areas (for example a low-income area that is an outlier in the cluster analysis because it is surrounded by higher income areas) than other areas with similar levels of income. In ArcGIS a cluster and outlier analysis was conducted to ascertain if the four areas identified were located within larger pockets of the city with similar incomes. Maps visualizing the results of the cluster and outlier analysis are included in Appendix A. The results of this analysis further supported the selection of these four areas.

Populating the Shapes

Still looking from afar, the next step in the site-selection process was to gather information about the sites. I needed to figure out, as places, what these sites were called. And I needed to learn more about who lived in these places. This knowledge of place was essential for practical steps like designing recruitment materials. My task was to learn the names of these places and begin fitting them into my own mental maps of New York and London. In New York I knew the names of the sites based on their locations on a citywide map. Tract 130 in Manhattan is part of the Upper East Side and tract 910 in Brooklyn is in Brownsville. This was more challenging for London where I am less familiar with the city's geographical nomenclature and history. From my workstation in New York I emailed contacts in London maps of the places and asked for help naming them. The response I received was that Kensington & Chelsea 10 was an area called Queen's Gate and that Hackney 13 was called Clapton. Using census and public health data sources I gathered information on the population size, residential density, demographics, diet-related disease outcomes, urban form, and local food policies for each area. This

data is presented in greater detail and in conjunction with a description of who participated in this study, later in this chapter. In short, this part of the process confirmed that these four areas fulfilled the site selection process aims of representing the economic inequalities in each city and thus became being locations to ground and root this study.

Table 3: Snapshot of Selected Study Site Characteristics Relevant to Eating the City

Administrative Area	Population (Density)	Income	Race/Ethnicity	Diet-related Disease	Food Policy	Housing Tenure
Hackney 13	41.4 people/ hec	400 GBP/ wk ($31,408 year in 2000 dollars)	White (British, Irish, other) - 44% Black (Caribbean, African other) – 42% Mixed – 5% Asian (Indian, Pakistani, Bangladeshi, Other) – 7%	Highest rates of childhood obesity in England and some of the highest rates of death de to heart disease and stroke. Data on adult level obesity are unavailable.	City and Hackney has a local healthy weight strategy released June 2009by the local council and primary care trust which includes an Assessment of food and physical activity related sites/ resources in the borough and recommendations for better utilizing these resources and filling current gaps is service provision to reduce obesity.	Social housing- 73% Private rental – 9% Own- 18%
Kensington & Chelsea 10	153 people/ hec	1400 GBP/ wk ($109,980 year in 2000 dollars)	White (British, Irish, other) - 80% Black (Caribbean, African other) -1% Mixed – 4% Asian (Indian, Pakistani, Bangladeshi, Other) – 7% Chinese – 8%	Rates of childhood obesity consistent with national averages and rates of heart disease and stroke that are significantly lower than national averages.	None	Social housing- 5% Private rental – 46% Own- 49%

Brooklyn Tract 910	177.4 people/ hec	$7,987	White - 6% Black - 80% Asian - 0% Mixed - 2% Other - 12% Latino - 25%	Brownsville is covered in the Central Brooklyn health profile. 29% of adults in the area are obese and 32% have high blood pressure. Heart disease hospitalizations have increased more than 25% in the past 10 years.	Area is designated as part of the FRESH supermarket siting initiative	Rent - 99.5% Own - 0.5%
Manhattan Tract 130	423 people/ hec	$171,146	White - 94% Black - 0.4% Asian - 5% Mixed - 0% Other - 0.5% Latino - 4%	The UES has lower than city average rates of obesity (8%) and diabetes (3%). But, cancer and heart disease are the two leading causes of premature death in the UES.	None	Rent - 36% Own - 64%

Zooming In

Operationalizing boundaries of the study area was an iterative process that enacted the relational stance of this research as it attempted to recognize and represent the dynamic, multi-scalar, and historically situated dimensions of the study sites. In successive boundary re-drawings, this stage of the site selection process integrated observations and interaction with the four study sites and the more distal view from maps. Starting the zooming process from this distal view, study-site boundaries were initially drawn while looking across the perspectives afforded by internet-based mapping applications and ArcGIS. Using ArcGIS, a quarter-mile buffer was added around the census tract and MSOA boundaries of the selected sites. This expanded the sites to approximately 1.0 to 0.5 miles in diameter. Other studies designating neighborhood boundaries have used distances ranging from 0.25 miles to five miles (Colabianchi et al., 2007; Gordon-Larsen, Nelson, Page, & Popkin, 2006). The goal of these adjustments was to designate an area that that approximated the size of a neighborhood, as someone living or working there might perceive it. Then these buffered zones of interest were redrawn and visualized in

internet-based mapping programs[9] where it was possible to use key word searches that locate food places in and around them. This step in the site selection process revealed that in general across sites, more food places locate on main roads and avenues than on side streets. Also, given this study's attention to mobility and its intersections with eating in the city, I noted the locations of transit hubs on the maps. The edges of the buffered zones were then redrawn to 'fit' to the nearest main roads and avenues and where possible include visible public transit hubs.[10]

Making Contact

Through the process of zooming in I began interacting with the study sites. For example, I bicycled over every block in the Brownsville study area in one day taking pictures and noting some initial observations. This step brought me into contact with a railway line that appeared to be a major barrier that could reasonably function as a natural barrier between neighborhoods- but existed in the middle of this 'study site.' The boundary was adjusted again. Similarly, on an initial attempt to walk the perimeter of the Clapton study site, I found myself alone and exhausted of walking all day in an oddly desolate area with no familiar buses. I had stumbled into the still-under-construction 2012 Olympic Village. I found my way to the Stratford station and took a bus 30 minutes home and realized that this site was much too large. Pragmatically it was too large to observe within my limited time, and that the broad physical geography of the site also made it too socially and politically complex. The impacts of the Olympics and related construction in Hackney could easily be a dissertation on their own. Again, I redrew the boundaries of this site, this time cutting out the Olympic Village, Stratford Station, and Hackney Marshes. These final boundaries were used to determine where participants were recruited and are depicted in Appendix B. The mental mapping interviews with eaters presented opportunities for ongoing observation and reflection on everyday conceptions of what a neighborhood is and the operationalizing of its boundaries through the perspective of study participants.

[9] Google Earth and Google Maps.
[10] I use visible here to acknowledge that some hubs (e.g. buses) may not show up on internet-based maps and this research strategy biases in favor of seeing train connectivity in cities.

DATA COLLECTION

A variety of research methods have been used to measure food environments and as of yet, there is no standard method for this area of research (McKinnon, Reedy, Morrissette, Lytle, & Yaroch, 2009). Recent methodological reviews in this area stress that developing strong food environment measures is important because they will advance our understanding of how patterns of food access, diet, and health are produced, improve public health interventions, document inequalities in food availability, inform policy responses, and enable the monitoring and evaluation of change (Lytle, 2009; Oakes, Mąsse, & Messer, 2009). Managing data complexity has been identified as a key challenge for researchers interested in the connections between food environments and health (McKinnon et al. 2009). In an effort to address the proliferation of food environment research instruments and support the development of a more coherent research agenda in the area of food access and health, the National Cancer Institute has compiled a database of articles on the food environment and instruments for measuring it.[11] A review of this database revealed that a wide range of indirect and direct measures of the food environment exist with varying strengths and weaknesses. Indirect measures use GIS and large spatially aggregated databases to visualize and analyze spatial distributions of food and their statistical relationships with demographics and health outcomes.

Feminist scholars have critiqued these measures for their epistemological grounding in positivism, disconnection from critical theories of justice, false sense of accuracy, and potential to promote technocratic solutions to complex social problems (McLafferty, 2002; Schuurman & Pratt, 2002). Still, knowledge produced through GIS underpins many policy responses to inequalities in food availability and health and is the most commonly used method of measurement (McKinnon et al., 2009). Although it has many limitations, a key strength of this methodology is its ability to speak convincingly to policymakers. Thus, a challenge in food environments research is responding to these critiques by using GIS in critically and socially grounded research without straying too far from its utility as an advocacy tool. As yet no studies have used a common site selection and measurement instrument to compare food environments internationally (Holsten, 2009). In this study I developed and piloted a food environment observation instrument and field methodology that aimed to measure and characterize inequalities in the urban food

[11] https://riskfactor.cancer.gov/mfe

environments of New York and London. This data will also support an analysis of how food polices from the very local (in the case of London, this would be at the borough level) up through the national, and perhaps international levels are shaping the foodscapes people encounter at the socio-economic poles of these world cities.

NYLON FEAST

The New York and London Food Environment Assessment Survey Tool (NYLON FEAST) is a checklist-styled research instrument designed to directly observe all of the food places in the core areas of the selected study sites as a way of piloting an internationally comparative and ground-truthed method. NYLON FEAST was developed based on a review of the National Cancer Institute repository of food environment measurement instruments, completion of an online training on using and modifying the Nutrition Environment Measurement Surveys for Restaurants and Stores (NEMS-R and NEMS-S) (Glanz, Sallis, Saelens, & Frank, 2007; Saelens, Glanz, Sallis, & Frank, 2007), and a review of the policies shaping the food environments in New York and London for policies that would have observable impacts, such as food labeling regulations. Instruments for directly measuring neighborhood food environments focus on observing stores, restaurants, or people's perceptions of these environments. Checklists have been identified as versatile survey instruments for collecting observational data on food availability, price, and quality. Checklists focus on indicator foods or categories of foods selected by researchers for conceptual reasons such as their clinical significance to specific illnesses. Following the model advanced by Glanz and Saelens (2007), NYLON FEAST is sub-divided into two parts. The "Eat Now" checklist is used for observing restaurants and other venues for purchasing food that is ready to eat or eaten en situ. The "Eat Later" checklist is designed for observing food retail places selling food requiring some treatment or preparation and intended for being eaten later and elsewhere.

NYLON FEAST collects information on the availability of healthy promoting foods such as fresh fruits and vegetables, whole grains, low-fat dairy products, the presence of nutritional information at point of purchase, and food advertising visible in restaurants and stores. These factors have been identified as critical for assessing environmental influences on diet and health (Saelens & Glanz, 2009). The NEMS-R and NEMS-S measures were developed for use in the US and observe specific food items and brands

of food that are most common in this context. In order to have utility as an international observation tool, NYLON FEAST was designed without the use of specific brands, and so that it can document the variety of fresh produce available in multiple-local contexts without privileging the inclusion of foods that may be more common in one place or the other, and thus introducing bias. NYLON FEAST does not collect information on food price because pilot experiences highlighted the fact that this data is not always visible or reliable and is extremely time consuming to collect, manage, and analyze, especially across monetary currencies. Calorie labels, health and safety certification, place or origin labeling, and social marketing messages are some examples of elements of the information environment these tools were designed to document.

The NYLON FEAST instruments were piloted in both New York and London with the help of students. In these pilots it took between 1 and 25 minutes to complete the checklist depending on the type and size of the food place observed. Subsequently the instruments were simplified to include an overall count for fresh fruits and fresh vegetables whereas the original instrument collected data on these by botanical category (e.g. roots, leaves, fruits). Using those categories made the observation slow and introduced variability in response as different individuals categorized these food items differently. Also after piloting the categories of food places and food types were revised to better reflect those observed in the field. A list of the final measures included in the NYLON FEAST checklists is presented in Appendix C.

The NYLON FEAST data collection in this dissertation was conducted as a pilot in preparation for future research comparing the food environments in New York and London. Data were collected for the two census tracts and two MSOAs identified in the early stages of the site selection process, herein referred to as the food environment observation areas. In both cities the data were collected between November 2010 and January of 2011. In order to address temporal effect bias, while collecting data in two places, students collected the New York data while I was in London collecting data there. The students in New York had previously been trained to use the NYLON FEAST checklists and were part of the piloting and revision of these instruments. In addition to collecting data they wrote field notes describing the areas they observed.

In the food environment observation areas, food places were enumerated from the ground up. Observers walked and bicycled each street in these areas looking for all places that sold or served food.

The food environment observations gathered were recorded using handheld touch screen computers formatted with software that displayed the checklists, locally saved the data entered, and then exported it to an online database once the devices were in range of wireless internet. Other researchers discuss the utility of handheld computers in research involving systematic field-based observations (Gravlee, Zenk, Woods, Rowe, & Schulz, 2006). They note that although pen and paper forms have been traditionally used in studies that include neighborhood observation, handheld computers offer field researchers a number of advantages including reductions of missing data, and eliminating the costly and error prone steps of data entry and coding. Also, anecdotal evidence from community groups in Brooklyn, NY conducting food environment surveys as part of their advocacy and education projects suggests that handheld computers may also have the advantage of helping researchers disguise their activity and thus enable more complete survey coverage of the areas under observation.[12] When using a pen and paper survey in stores observers report being asked to leave by storeowners and staff. In some cases, observers report this taking place in as many as four out of five food retailers. Clearly, these accounts raise a number of ethical, methodological, and practical issues. Methodologically and practically speaking, any data collection tool that creates adverse reaction strong enough to generate a 1-in-5 response rate will ultimately have a negative impact on the validity and usefulness of the data collected. Using common hand-held devices, such as mobile phones, allows observers to go unnoticed by food storeowners and staff improving the response rate and completeness of the data collected.

The NYLON FEAST data were analyzed using methods consistent with those used in food environment studies with similarly sized datasets (Glanz et al., 2007; Saelens et al., 2007). Consistent with previous studies, data collected with the checklist were used to calculate and compare the number of food retail places and categories for each of the food environment observation areas. Chi-square analysis was used to compare dichotomous variables between study areas within each city as well as across cities. T-tests were used to analyze continuous variables between study areas within each city as well as across cities. Ordinary Least Square Regression was used to assess the presence and strength of interactions between effects for establishment type, city, and area income level. The food

[12] Based on observant participation at Brooklyn Food Coalition Research and Mapping Group meeting held on August 30th 2010.

environments for each study area were also described using descriptive statistics for each category of food retail place observed.

Using the Journey to Understand How Food Environments Fit in Everyday Life

The whole journey approach used in this dissertation applies a relational perspective to understanding both how the food environments of selected areas in New York City and London figure differently in day-to-day lives of people that live and work in these places, as well as how neighborhoods figure into the full geographies of where people go to eat in these cities. The final selected areas articulated through the site selection process are the catchments within which study participants are everyday eaters.

Space-time food diaries and semi-structured mental mapping interviews were used to gather data that capture details about both the eating events and the flow of everyday experience surrounding and seaming these in the daily journeys of individuals living or working in the selected study sites. Space-time food diaries collected information about the settings and locations where participants buy or otherwise obtain food and eat. Three-day food diaries are a traditional method for recording dietary intake and have been shown to produce more accurate records of what people eat than other methods such as food frequency questionnaires and 24-hour recalls (Johnson, 2002). In this study participants kept three-day food diaries that will also include recording where and when they eat as well as reflective notes about the social and environmental influences on these events. Participants were asked to record their food events for three consecutive days with two of these days being workdays and one being a resting day in order to get a fuller picture on the diversity of food places and events that are part of participants' lives.

As stated, participants for the semi-structured and mental mapping interviews were recruited from the pool of space-time food diary participants. After completing their food diaries 92% of participants also elected to be interviewed. These semi-structured interviews lasted from 30 minutes to 2.5 hours. Interviews were conducted at a time and location of the participant's choice. Interviews took place in homes, cafes, pubs, pizza parlors, schools, and libraries. During the interview participants discussed their perceptions of the selected study area, its influence on their diet, how they interact with this area in

their day-to day activities, and what facilitators and barriers to good food they experience in their day-to-day lives. They were asked to narrate the activities and journeys surrounding selected eating events from their food diaries. All interviews were recorded and transcribed. During this phase of the research a closed-ended survey was also administered to participants to gather data demographic data that was later used to characterize the sample and support a segmented data analysis. This survey included questions about race, ethnicity, income, educational attainment, income, employment status, profession, gender, age, marital status, housing tenure, household size, as well as self-reported height and weight. These were later used to calculate body mass index and ascertain weight status using medical definitions for underweight, healthy weight, overweight, and obesity.

Cognitive maps spatially represent information about personal, social, and perceptual experiences and memories (Tolman, 1948). Mental mapping is a type of cognitive mapping methodology used to elicit contextual information about how individuals perceive and use the environment in their everyday lives (Lynch, 1960). Lejano (2011) has suggested that this method is particularly useful for gathering data on the phenomenological dimensions of spatially situated experiences and thus avoiding the synoptic error. With this research method participants draw, or visually annotate maps, with information about a given phenomenon of interest. As an insert in their food diary, participants received a base map of the selected study area they live or work in that included street names, major landscape features such as parks and monuments, as well as train stations. The mental mapping portion of these interviews was conducted using the pre-printed base maps in the diaries. Participants were asked to annotate these maps of their with the locations of food places that figure in the diary, and later in the semi-structured interview to further annotate the maps with information about their neighborhoods boundaries, the parts of the neighborhood and nearby areas that they frequent, and food places that they would go to regularly.

The research protocols for the food diary and mental mapping interviews were piloted in both New York and London before commencing data collection. Individuals participating in the piloting of these instruments were part of a convenience sample and did not live in the selected sites. In New York, two students, one master's level public health student and one advanced and more mature undergraduate, participated in piloting the food diary, mental mapping, and interview protocols. In

London three individuals living just outside the Hackney study site participated in the pilot. After testing the instruments a few minor changes were made to the semi-structured mental-mapping interview protocol. For example, initially the base maps used for the mental mapping were made using ArcGIS and street network shape files for each city. However these proved challenging for participants to interpret and so these were replaced with photocopies from street atlases.

Participants for the food diary and mental-mapping portion of this research were recruited through a variety of channels. As part of the walking observation of the selected study sites fliers inviting participation in the study were posted in public places. These included store fronts, libraries, bus stops, senior centers, and parks. In the South Kensington and Upper East Side study sites, public spaces were more tightly maintained with regard to preventing fliering and posting of unsolicited material in public space. In all areas, door-to-door fliering was also conducted. No fliers were placed on cars because this might have biased the sample toward including more individuals with access to this kind of transportation that may have bearing on their food shopping behavior. In New York, I also attended community board meetings in each of the study sites and left fliers in the locations that hosted those meetings. In Brownsville I also guest taught two classes on the subjects of diet related health inequalities and conducting research in a public high school. Students from these classes were given fliers to take home to their parents. I used snowball sampling to increase my pool of participants beyond those that responded to the initial fliering efforts. Only individuals who were 18 years of age or older and lived or worked in one of the selected study sites were eligible to participate. The recruitment fliers for this study directed people interested in the study to contact me by telephone or email for more information. I responded to each contact and reiterated the eligibility requirements, estimated time commitment, and purpose of the study. I would then arrange to meet with those still wishing to participate and. During these initial meetings I obtained informed consent from participants, reviewed the protocols for the space-time food diary, and answered any questions the participants had about the study. Often these initial meetings were conducted over food or drink of some kind. It became clear to me that many participants perceived me as someone with an interest is healthy eating and I became concerned that this might bias their data reporting. To counteract this potential bias I often made a deliberate effort to order and consume unhealthy food and beverage items whenever I was with participants (e.g. milkshakes,

chocolate croissants, soda). In some cases this interaction was prolonged and enhanced by an extended and open-ended introduction between the participant and me. Some such meetings lasted an hour, some took place in homes, and others occurred over email and snail mail. This variation is not ideal for producing comparative data. But, in trading off uniformity in execution of research protocols, this work gains capacity to include a wider range of eaters. In all cases I took notes on the interactions and where appropriate used these opportunities to observe the food behavior of participants to triangulate other data for that individual. Participants maintained their food diaries in a booklet I provided. Participants received a $25 (£15) incentive for completed food diaries. Most often participants also took part in the interview portion of this study, and I would bring the incentive to the interview and give it to the participant in person before beginning the protocol. If they did not participate in the interview I gave them the incentive when we met for me to collect the diary.

SAMPLE

Eaters

The sample of eaters that participated in this study is somewhat representative of the populations in the four study sites. Table 4 provides a detailed description of the sample of participants who completed and returned space-time food diaries. The data in this table was collected using a closed ended questionnaire and were self-reported by participants. Regarding the accuracy of the data, it should be noted that it is common for individuals to under report the weight and exaggerate their height when asked for such biometric information. No effort to correct these potential inaccuracies was made in preparing the table. In addition to the 36 completed diaries that are included as data in this study, seven diaries were distributed and never returned. Through contact with key informants and individuals who put me in contact with the recipients of the unreturned diaries, I was able to glean some information about the circumstances surrounding these potential participants. In Brownsville, there were four such diaries. Of these, one non-return remains a mystery. I learned that two were distributed to individuals with known histories of drug and alcohol abuse and who had no permanent telephone numbers through which to stay in contact. Also in that area, one diary was distributed to an individual whose partner had lost their job, leading to the loss of their housing. All of these individuals were black or Latino and one had discussed

with me that they had diabetes. In Clapton, three diaries were unreturned. Two of these diaries were distributed to young women of color wearing hijabs that I had met in a public park in that area. The third diary was mailed to a woman with whom I was never able to find a mutually agreeable time to meet. The last of these diaries was given to a older white male who lived on the Upper East Side in New York. His girlfriend was also a participant in the study and expressed to me that she thought he might have been too embarrassed about his diet and body weight to return the diary and be interviewed. In their own ways, each of these mini-narratives reveals something about the limitations of this study's sample and how those limitations are reflective of both the life circumstances of people who lived in the low-income study areas, as well as the challenges of collecting such personal data.

This study's sample of eaters carries several strengths and limitations that bear on the ability of its findings to accurately resonate with the experiences of eaters in the food environments and cities of interest. The South Kensington site has the fewest participants and thus, the greatest limitation to resonate with the full range of experiences in that area. In particular, residents that reside in social housing are missing all together from this sample, although public health professionals working in that area described elements of those residents experience in interviews. Also missing from the South Kensington sub-sample, are newer residents representing a more globalized wealthy class whose wages are set to international standards of competiveness. One long-time resident described this population as, "the Russian millionaires that keep homes here that they hardly visit," and the "young people that make more money than they should, who spend it on cups of coffee that cost four pounds." In Clapton, the sample for that area is whiter than the area is in reality. Missing are the voices of the West African, Caribbean, Turkish, and Polish communities that exist in Clapton. In New York, the sub-samples are more resonant and representative than those in London with regard to capturing the range of racial and ethnic diversity in those areas. The full sample of eaters is disproportionately female. Still, when assessed as a singular whole, the sample has several strengths with regard to its ability to resonate with the experiences of a wide range of eaters. Some assets of the sample include having participants from the very poor to the very wealthy and at every increment in between as well as including people from a wide range of racial and ethnic backgrounds and with a great variety of educational and professional experiences.

Table 4. Food Journey Participants

Entire StudyN=36													
Neighborhood		Count	Percentage	Data By Neighborhood									
	Clapton	11	32.4%										
	South Kensington	5	14.7%										
	Brownsville	10	29.4%	Clapton		South Kensington		Brownsville		Upper East Side			
	Upper East Side	10	27.8%	N=11		N=5		N=10		N=10			
Race													
	White	25	69.4%	11	100%	5	100%			9	90.0%		
	Black	7	19.4%					7	70.0%				
	Latino	1	2.8%					1	10.0%				
	Asian	1	2.8%							1	10.0%		
	Mixed	2	5.6%					2	20.0%				
Gender													
	Male	12	33.3%	4	36%	4	80%	2	20.0%	2	20.0%		
	Female	24	66.7%	7	64%	1	20%	8	80.0%	8	80.0%		
Income	Up to $10,000	9	25.0%	3	27%	2	40%	4	40.0%				
	$10,001 to $30,000	3	8.3%	1	9%			2	20.0%				
	$30,001 to $50,000	8	22.2%	5	45%			1	10.0%	2	20.0%		
	$50,001 to $70,000	4	11.1%	1	9%			1	10.0%	1	10.0%		
	$70,001 to $90,000	2	5.6%					2	20.0%	1	10.0%		
	$90,001 to $125,000	4	11.1%							4	40.0%		
	$125,001 and above	6	16.7%	1	9%	3	60%			2	20.0%		
Education Completed													
	Compulsory	1	2.8%					1	10.0%				
	High School/GED	12	33.3%	4	36%	1	20%	6	60.0%	1	10.0%		
	Bacheolors Degree	14	38.9%	6	55%	3	60%	1	10.0%	4	40.0%		
	Masters/Professional Degree	8	22.2%	1	9%	1	20%	2	20.0%	4	40.0%		
	Doctorate	1	2.8%							1	10.0%		
Marital Status													
	Single	17	47.2%	6	55%	2	40%	5	50.0%	4	40.0%		
	Married	9	25.0%	3	27%	2	40%	1	10.0%	3	30.0%		
	Lives with Partner	3	8.3%	2	18%	1	20%						
	Divorced	6	16.7%					3	30.0%	3	30.0%		
	Widowed	1	2.8%					1	10.0%				
Housing													
	Owns	13	36.1%	5	45%	3	60%	1	10.0%	4	40.0%		
	Private Rental	18	50.0%	5	45%	2	40%	5	50.0%	6	60.0%		
	Public/Social Housing	3	8.3%	1	9%			2	20.0%				
	Lives with Family/Friends	2	5.6%					2	20.0%				
Car													
	Owns	10	27.8%	2	18%	3	60%	3	30.0%	2	20.0%		
	Does not own	24	66.7%	9	82%	2	40%	6	60.0%	7	70.0%		
	Does not own but has access	2	5.6%					1	10.0%	1	10.0%		
Weight Category													
	Healthy	24	66.7%	10	91%	2	40%	4	40.0%	8	80.0%		
	Underweight	1	2.8%			1	20%						
	Overweight	8	22.2%	1	9%	2	40%	3	30.0%	2	20.0%		
	Obese	3	8.3%					3	30.0%				
Employment													
	Full-time	14	38.9%	4	36%	2	40%	3	30.0%	5	50.0%		
	Part-time	3	8.3%	2	18%					1	10.0%		
	Self-employed	4	11.1%	2	18%					2	20.0%		
	Retired	3	8.3%			1	20%	1	10.0%	1	10.0%		
	Unemployed	12	33.3%	3	27%	2	40%	6	60.0%	1	10.0%		
Age													
	<20	1	2.8%					1	10.0%				
	20-29	8	22.2%	2	18%	1	20%	2	20.0%	1	10.0%		
	30-39	11	30.6%	4	36%	3	60%	3	30.0%	4	40.0%		
	40-49	5	13.9%	2	18%			2	20.0%	1	10.0%		
	50-59	4	11.1%	3	27%			1	10.0%				
	60-69	4	11.1%					1	10.0%	3	30.0%		
	70 and older	2	5.6%			1	20%			1	10.0%		

Policymakers and Public Health Practitioners

Interviews with policymakers and public health practitioners were conducted in connection with the ObesCities project. These semi-structured interviews were conducted during July and August of 2011. The interviews followed a standard protocol and addressed the professional roles that these individuals had which would have brought them in contact with policies and programs related to obesity and chronic disease prevention, the forces that they perceived as supporting and/constraining action on obesity, thoughts about the future of policy programing in this area given the climate of economic austerity and the shifting structure of public health governance in London, the role of research, evidence, and evaluation in the policy development and implantation processes, and to tell the story of the genesis of a policy or program with which they were involved. These interviews were conducted in the participants' offices, audio recorded, and professionally transcribed. The interviews lasted between 45 and 90 minutes. In this research they provide a context for analyzing how scale and social and health inequality figure in narratives about the politics and processes of creating food policies in New York and London. Data collection with policymakers and public health practitioners also included two group interviews. In total, 21 policymakers and public health professionals were included in this segment of the research.

DATA ANALYSIS

The analysis used triangulation across data types to corroborate themes and findings and enhance the comprehensiveness with which this research approached the task of addressing its driving questions (Barbour, 2001). This analytic strategy also aimed to guard against biases produced by the strengths and weaknesses of any one method. Specifically, triangulation worked across food environment data, mental mapping, policymaker and eater interview data, field notes from observant participation, and the qualitative fields of the food diaries. This analysis was conducted using a web-based qualitative analysis application[13] that is designed to integrate qualitative and quantitative data where the quantitative data describe the cases or participants whose qualitative data are included. In this study the application was used to conduct a thematic analysis segmented by city, study site, and other relevant socio-demographic categories.

[13] The application is called Dedoose. More information about it can be found at: www.dedoose.com

Thematic analysis is used to identify and report on patterns within data; its procedures aid in the organization, description, and interpretation of these patterns. Braun and Clarke (2006) offer a guide to thematic analysis in qualitative research that gives definition and quality assessment criteria to this often used but poorly defined analytic method. They highlight that several strengths of thematic analysis are relevant to this research. These include the method's flexibility, ability to work across theoretical positions, provide thick but succinct descriptions of large data sets, draw out unanticipated insights, as well as inform policy development.

In their guide to thematic analysis they use the term 'data corpus' to describe all of the data collected for a particular research project, 'data set' refers to the data used for a particular analysis, and a 'data extract' is an individual coded chunk of data. A theme is defined as "capturing something important about the data in relation to the research question, and represents some level of patterned response or meaning within the dataset" (Braun and Clarke, 2006, p. 82). The authors describe six steps for conducting a rigorous thematic analysis. This process was used to guide the analysis in this research. The first step was to familiarize myself with the data by listening to interview recordings while reading and cleaning transcripts and taking notes on my initial ideas about possible codes, themes, and patterns in the data. Next, I reviewed these notes and generated list of initial codes and then systematically coded the entire data set and then used the web-based qualitative analysis application to collate data relevant to each code. Third, I reviewed these groupings of data extracts holistically and again segmenting them by city, study site, and demographic category. This step also included collating codes and segmented clusters of data extracts into potential themes. The fourth step in my thematic analysis was to reviewing these potential themes and looking for internal homogeneity within themes and external heterogeneity between themes. The fifth step entailed revising, defining and naming themes to reflect insights gained in the previous step and to clarify and enhance the overall story told by the analysis. Finally, the last step of this process was to select examples from data extracts, connect the analysis back to my initial research questions and literature, and write up these findings.

The journeys described in the food diaries and interviews were be used to interpret where people obtain food and eat, how residential neighborhoods and settings such as work or home figure in these journeys, what types of environments facilitate or present barriers to healthy eating; and how participants

encounter inequalities in urban food environments through their daily lives. In addition, food diaries and mental maps were analyzed to determine the number and percentage of in/out of neighborhood food for each participant. This analysis used the neighborhood boundaries ascribed by participants in their mental mapping of the selected study sites to determine which food events occurred inside/ outside the neighborhood. In/out of neighborhood food events were also analyzed using segmented samples for each city and study site.

SECTION TWO:

The Synoptic View

Section Two of this dissertation presents a synoptic view of food environments, policies, and governance in New York and London. This provides the groundwork for later chapters that present phenomenological perspectives on how eaters living or working in the four selected study sites experience the food environments of these cities. These two perspectives, the phenomenological and synoptic, are subsequently explored in the conclusions of this work regarding the fit between the spatial assumptions and logics that motivate and characterize the food policy and governance, alongside the everyday geographies of food behavior in these cities. The argument I develop is that in both New York City and London food policy and governance take socially and spatially targeted approaches to addressing food and health inequalities, and in unique ways privilege the local scale. In doing so, they create unintended consequence and overlook opportunities at other scales for actually promoting health and social equity through food.

The first this section of Part Two, *The Synoptic Error of Food Policy in New York City and London,* describes the food policies and governance structures that shape food environments in New York City and London. In keeping with this dissertation's theoretical concern with the local trap, this section draws on interviews with policymakers and public health professionals who work in these cities to assess how localization and assumptions about the ways neighborhoods figure in food behavior have informed the policies of each city. The second section of Part Two, *A Grounded Observation of the Food Environments in New York and London*, sketches the food environments of the selected study areas using the data from the NYLON FEAST pilot in the context of scholarly and gray literature on the food environments of these cities. Section Two addresses the first research questions of this dissertation: *what kinds of food places exist at each end of the socioeconomic spectrum of New York City and London? How do the food environments of the highest and lowest income areas differ within and across the two cities? In addition, are there comparable inequalities in food environments in New York and*

London? The findings presented in Section Two also set the stage for answering the research question: *what do these narratives indicate as potentially missed opportunities and unintended consequences of food policies in New York and London?*

SECTION TWO: CHAPTER THREE

The Synoptic Error: Food Policy in New York and London

THE SYNOPTIC ERROR OF FOOD POLICY AND GOVERNANCE IN NEW YORK CITY AND LONDON

What follows is a brief presentation of the salient historical and political contexts of this research. I begin with a broad stroke portrait of the contemporary global food moment in which this work was conducted and move on to highlight similarities and differences in the food policy, governance, and politics of the United States and England. Given that the geographic focus of this study is on New York and London, polices and forces operating at the scale of the city receive more detailed treatment in this review. The discussion of national and international context is followed by an overview of the food governance and policy in these cities. Finally, an analysis of policymaker interviews highlights the intentional and incidental deployment of synoptic vision and localization in the conceptualization, development, and implementation of food and health policy in these cities.

HISTORICAL CONTEXT: THE CONTEMPORARY GLOBAL FOOD MOMENT

The policy analysis portion of this research that is presented here was conducted in several stages starting in 2008 and continuing through 2011. During this period, New York, London and their respective national governments were transformed by the elections that shifted political power, the global financial crisis, the advancement of a neoliberal social policy agenda, and the social movements precipitated in response to these changes. Most recently, the Occupy Wall Street movement has brought income inequality and its numerous negative impacts on society to the forefront of popular discourse in both New York and London. While food and public health policy may appear distant to these concerns, they are in fact deeply interconnected.

Recent articles in the New York (Pollan, 2010) and London Reviews of (Harding, 2010) crystallize the ways that global forces acting in recent decades have had the similar effect in these cities of enhancing public awareness and political concerns over food. Morgan and Sonnino (2010) use the term the ‘new food equation’ to bring together several of the dimensions of our contemporary context that have

propelled food to the forefront of so many minds and political agendas. These include rapid urbanization, food industry consolidation, climate change, concerns about food and national security, increasing food prices, social unrest, and growing social and health inequality. Across levels and sectors of government affecting both New York and London there is increasing recognition that the "multifunctional character of the food system means that it has profound effects on a host of other sectors - including public health, social justice, energy, water, land, transport and economic development" (Morgan & Sonnino, 2010, p. 341). In practice, the multifunctional character means that even though at the global level food policies in New York City and London are shaped by similar factors, locally they are created at the crux of several issues and political constituencies, making them challenging to enact, implement, and evaluate (Libman, Freudenberg, & O'Keefe, forthcoming).

In their recent book, Lang, Barling, and Caraher (2009) use five levels of governance to structure their multi-disciplinary and multi-level analysis of food policy. These five levels are global, supra-national regions, national, sub-national regions, and the local. I use their framework to structure the following overview of the policies shaping food environments in New York and London. Table 5 presents an overview of polices and related programs that shape the food environments of these cities. It illustrates that although cities and local authorities have some ability to shape the availability of food as well as nutrition information and messages, strong and complex forces beyond the scale of the city also play a strong role and may limit the intervention capacity of cites. The table also begins to highlight some of the similarities and differences in the scales of food governance operating in these cities.

Table 5. Policies and Programs Shaping Food Environments in New York and London[14]

Governance Level		New York	London
	Global	General Agreement on Tariffs and Trade The Washington Consensus	General Agreement on Tariffs and Trade The Washington Consensus
	Supra-national regions	North American Fair Trade Agreement	Common Agricultural Policy

[14] This table focuses on the community food environments in New York and London and thus excludes policies and programs that shape other types of food environments, such as schools.

	National	Supplemental Nutrition Assistance Program (SNAP) Women, Infants, and Children Farm Bill Federal Drug Administration regulation of food labels Let's Move! United States Department of Agriculture "My Plate"	Food Standards Agency front of package red, amber, green food labeling Scores on the Doors scheme Change 4 Life Voluntary salt reduction New Localism Labeling of genetically modified or 'novel' foods Origin labels on foods 5-a-day Responsibility Deals
	Sub-national regions/ States	Healthy Food/ Healthy Communities (Failed) SSB Tax	
	Municipal (Citywide)	Menu board calorie labeling Food Policy Coordinator Nutrition standards on food served by public agencies Food safety scores for restaurants Proposal to eliminate sugar-sweetened beverages from SNAP eligible purchases Green Thumb support for community gardens FoodWorks NYC	London Food strategy and implementation plan Good food on the public plate Capital Growth
	Local (Spatially or socially targeted)	Food Retail Expansion to Support Health (FRESH) Healthy Bodegas Green Carts District Public Health Offices Health Bucks	Eatwell Buywell 47 "healthy-weight projects" in the borough of Hackney, funded by the NHS , Hackney Council, and Corporation of London Various nutrition education and food access initiatives within London's 31 Primary Care Trusts

CONTEXTUAL SIMILARITIES: NEOLIBERALISM, GLOBALIZATION, AND URBANIZATION

While there are of course many important differences in political and cultural forces shaping the food environments of New York and London; both places are also embedded in a shared global political economy guided by largely unified ideological frameworks (Albritton, 2009; Guthman, 2011; Patel, 2008). Beyond the specifics of any national or local policy, both nations share a commitment to the neoliberal ideology. Three major tenants of the neoliberal stance are: the creation and protection of free markets, the rights of individuals to make meet their needs by making choosing and consuming goods and services form such markets, and the protection of rights to private property (Harvey, 2007). Regarding

food and public health, these have had impacts on international trade liberalization, welfare reform, and reform of agricultural subsidies. The neoliberal ideology is also evident in the discourses of free will and consumer responsibility for the health consequences of their food 'choices' (Guthman, 2011; Lang, Barling, & Caraher, 2009). Both the United States and the England also have privileged standing in international food policy circles. For example, the General Agreement on Tariffs and Trade (GATT) has structured a global food market where these nations are privileged in that they can afford to subsidize their farmers and subsequently benefit from selling off surplus production on the world market. These subsidized food commodities push down global prices for similar goods and negatively impact farmers in poorer countries who are unsubsidized.

Both countries also have food policy histories rooted in urbanization and the transition from agricultural to industrial economies. Today both countries also struggle with balancing the legacy of these decisions as their cities transition once again- now into postindustrial economies. For example, the 1846 repeal of England's Corn Laws marked the beginning of a transition in food policy that saw the production of cheap food for the urban working class as its goal. Similarly in the US in 1933 The Agricultural Adjustment Act encouraged farmers to increase outputs and consequently lower consumer food prices by introducing commodity price supports. During the 1970's the US commodity price supports would transition into the farming subsidies we still have today in the form of the Farm Bill that continue to keep food prices low relative to other similarly developed nations in the global north (Lang, Barling, & Caraher, 2009).

The US and England also have similar food safety infrastructure at the national level. In the United States, the Food and Drug Administration (FDA) and the United States Department of Agriculture (USDA) handle food safety and labeling oversight. The FDA oversees food labeling and food safety for all foods except meat and poultry. The USDA oversees policy and programs pertaining to agricultural infrastructure, nutrition assistance, and the labeling and food safety of meat and poultry. It also certifies food as organic. Food labeling in England is overseen by the Food Standards Agency (FSA). The FSA is an independent agency that has its roots in the bovine spongiform encephalopathy (a.k.a. mad cow disease) outbreaks of the 1980s and mid 1990s. In short, the outbreaks caused a major shift in food policy focus away from agriculture and concerns about food production and into concerns about food

distribution and food safety (Lang, et al., 2009). Mirroring the division between the FDA and the USDA, England created the FSA and Department for Environment Food and rural Affairs (DEFRA). The FSA oversees research, policy development and implementation regarding the consumer food environment toward the goal of ensuring food safety and hygiene. In England neither the FSA nor DEFRA certify foods as organic. Rather, a number of different certification standards exist.

CONTEXTUAL DIFFERENCES

While there are many similarities with regard to the forces shaping food policy, governance, and politics in New York and London, there are also important contextual differences to bear in mind while considering the results of this study. These differences pertain to the social policies, food labeling regulations, political discourses, food retail typologies and their consequent social representations in the United States and England. As in the discussion above of contextual similarities, this presentation of contextual differences will be made in broad strokes.

(Food) Poverty

The US and England take very different approaches to measuring and addressing the nutritional dimensions of poverty. The US uses 'absolute' measures of income to determine poverty status. England applies the European Union's relativist approach to measuring poverty and defines it as "persons families and groups whose resources (material cultural and social) are so limited as to exclude them from the minimum acceptable way of life in the member State to which they belong" (Lang, et al., 2009). In practice, this means that the US uses income cutoffs to determine poverty status. Currently in the 48 contiguous states, this is set at $10,830 for an individual and $22,050 for a family of four (U.S Department of Health & Human Sevices, 2010). In England, poverty is defined as having income below 60% of the national average (Knight, 2005).

In the United States, the nutritional dimensions of poverty are addresses separately from the overarching lack of resources that define such living conditions. Thus, in the US food specific social welfare programs such as the Supplemental Nutrition Assistance Program (SNAP) and Supplemental Nutrition for Women, Infants and Children (WIC) provide financial resources that can only be used for

food to people with low incomes with special income levels set for women with children and the elderly. These programs are federally funded and administered at the state level.

In England, food poverty is understood to be living on an income far enough below the national average to potentially impede upon one's ability to eat. Thus, there are no food specific social welfare programs – rather it is assumed that income support will be used at the beneficiaries' discretion to secure an adequate diet. This perspective is rooted in thinking from the 1930's that took a social determinants perspective of food. This perspective asserted that nutrition was influenced by social inequality and therefore the best way to promote equitable food access was with welfare as income support (Lang et al., 2009). This difference is important to this study because these ideological and policy differences have consequences for the food environments in each city. In New York for example, many stores have signs in their front windows indicating that they accept "food stamps" and WIC. Stores not accepting these benefits place barriers to food access in the way of people who could otherwise not afford to eat. Additionally, both of these forms of social welfare have implications for local food retail environments to the extent that they facilitate cash flow into businesses that sell food. The USDA estimates that $5 in SNAP benefits generates $49.20 in community spending and that every additional dollar of SNAP benefits generates between 17 and 47 cents in additional food spending (USDA, 2010).

Food Safety and Labeling

In both countries, front-of-package food labels have precipitated friction between consumers, regulators, and the food industry. Marion Nestle has argued that these labels are more important to industry marketing efforts than they are to promoting healthier food choices on the part of consumers. This is because the labels by definition only apply to packaged foods, which are most likely to be processed and laden with unhealthy added sugar, fat, and salt (Nestle, 2011). The front-of-package labels differ in the United States and England. England uses a "red, amber, green" color-coded or "traffic light" scheme to indicate foods that should be eaten more or less cautiously based on how their nutritional content reflects the recommended daily allowances for sugar, fat and salt. The United States has had a more fraught history with front-of-package labels. The food industry created a voluntary "smart choices" label to indicate health-promoting foods. Unfortunately, the label was used on foods that were obviously

unhealthy (e.g. sugar sweetened cereal) and was pulled off the market. Most recently, the Institute of Medicine and the FDA conducted research to determine the most easily interpreted front-of-package label. Again, before issuing an official policy the industry again created its own system now called Facts up Front.

This brief story illustrates an important difference between the United States and England with regard to food labels. The independence of the FSA enabled it to create an official and consistent labeling policy where the United States has failed because of industry intervention. Unfortunately, England's latest Secretary for Health, Andrew Lansley, is moving food policy in a direction resembling the friction fraught scenario in the United States. Lansley created the "Responsibility Deal" scheme which attempts to bring the food and alcohol industries into the policy making process. The Responsibility Deal model promotes voluntary action as a cost effective alternative to government regulation and enforcement. The scheme has been widely criticized and mainstream health organizations are refusing to participate (Boseley, 2011).

Food Justice

While there are both professional (e.g. Jaime Oliver and Michael Pollan) and lay food activists (e.g. Brooklyn Food Coalition and numerous food growing projects in London) in both countries, the discourse of food justice and cohesion of a social movement focused on food is unique to the United States. The American food justice movement has its root in social justice movements such as the environmental justice movement and a wide range of alternative food practices such as urban agriculture (Freudenberg, McDonough, & Tsui, 2011; Gottlieb & Joshi, 2010; Taylor, Poston, Jones, & Kraft, 2006). In England food activism similarly brings together a broad range of political foci, but the focus is more centered on ecological sustainability and changing the public's taste toward re-appreciating traditional and regional foods such as bread and ale (Andrews, 2011). In both countries, the collective capacity of social action on food is challenged by tensions and conflicting positions on specific issues as well as the wide diversity of topics and initiatives to be addressed with somewhat limited resources (Freudenberg et al, 2011; Andrews, 2011). In his commentary on food activism in Britain and the United States, Andrews (2011) notes that in the food movement in America has grown to take on political significance as it

influences policy and is embraced by policymakers whereas food activism in England has yet to achieve such sway.

Food Retail Landscapes

In addition to the contextual distinctions described above, there are observable differences in the food retail landscapes of the United States and England and how their publics perceive some types of food places. For example, supermarkets take on different forms and political meaning in these countries. In the United States supermarkets are commonly viewed as drivers of local economic development that create jobs, attract other businesses to commercial areas, and retain at least some of the benefits of consumer spending (Kornfeld, 2011). However, in England supermarkets are viewed in a less positive light. There, they are seen as drivers of retail blight and the consequent demise of local character, diversity of goods and services, reduced quality of life, as well as marshals of en ecologically unsustainable global food system (Steel, 2008).

While both countries have large-format supermarkets, England has seen the recent emergence of new small format, "express" or "local," supermarkets meant to operate in places where retail space is at a premium and stores need reduced footprints. Tesco, the largest supermarket chain in England, attempted expanding into the United States with these small-format stores, but failed to stake a profitable claim on that market (Lowe & Wrigley, 2010). In New York, a dearth of suitably large retail spaces has been cited as one of several factors contributing to declining numbers of supermarkets citywide (Lang & Manon, 2009).

Farmer's markets are another type of food retail venue where public perceptions differ widely between the US and England. In the US farmer's markets are seen as places where consumers can participate in consumption that is environmentally conscious and which promotes social equity (Alkon, 2008). Farmer's markets in this context sometime also reflect and reproduce racial divisions in society and privilege whiteness (Alkon & McCullen, 2011; Slocum, 2008). In England, farmer's markets strongly reflect and reproduce class divisions. There, working class people believe that these markets are overly expensive and are "suspicious of farmer's markets and organics" (Bowyer et al., 2009, p. 461).

MUNICIPAL FOOD POLICY IN NEW YORK AND LONDON

Below, is a brief overview of the governance infrastructures and policies of New York and London that pertain to this study's focus on food, inequality, and health. The section starts with a brief overview of each city's governing structures and then describes their approach to food policy.

Urban Governance in New York and London

As demonstrated by the discussion above both cities have municipal governments embedded in regional, national, and international systems. The particularities of these configurations shape each city's potential for action (Freuenberg, Libman & O'keefe 2010). While an exhaustive review of each city's governance structure is beyond the scope of this project, the characteristics of each that structure the arenas of food and health policy in New York and London are discussed.

At the center of New York's governance is a Mayor with broad authority over municipal agencies that oversee the delivery of a wide range of public services such as public transportation, urban planning, education, sanitation, some health care, as well as law enforcement and corrections. The city also has 51 community districts represented by Community Boards and officials elected to the city's legislative body, the City Council. Community Boards have limited authority over land use and provide a forum for voicing public concerns and advising their representatives on local needs and priorities. New York also has a relatively large and proactive DOHMH that oversees delivery of public health services, informs public policy, and conducts epidemiologic research and surveillance. In an effort to address health inequalities, the DOHMH has three District Public Health Offices (DPHOs) located in upper Manhattan, the south Bronx, and central Brooklyn. These areas of the city are hardest hit with burdens of mortality and morbidity. The DPHOs bring additional resources and on the ground coordination of programs and resources to improve health in these areas. The DPHO areas are contiguous with several programs and policy targets discussed below. For now, it is worth emphasizing that this strategy for addressing health disparities targets specific social groups and spatial areas.

In addition to these potential levers of change, New York has a unique and powerful tool in its health promotion arsenal – the city's Health Code. Created in 1866, the Health Code codifies municipal regulations that protect the public health of the city and is enforceable with legal recourse. Most

importantly, it is maintained and amended by an independent body, the Board of Health. This creates a non-legislative avenue for public health regulation, thereby reducing the potential influence of private industry or other special interests on health policy.

By contrast, London has a relatively weak Mayor with limited authority over spatial planning, economic development, transportation, air quality and culture. The Greater London Authority (GLA) includes the Mayor and 25 elected members of the London Assembly. The GLA coordinates the development and implementation of strategies pertaining to his areas of authority. Public health in London has traditionally been overseen through collaboration among the national Department of Health, the London Health Commission, local Primary Care Trusts (PCTs), and a small (3-4 person) health policy team at city hall.

Also unlike New York, London has a policy coordination and advisory body dedicated to food. The London Food Board was created in 2006 to coordinate the development and implementation of the London Food Strategy. Convened under the authority of then Mayor Ken Livingston, the Board includes a Mayorally appointed chair, members of the GLA health policy team, food industry representatives, academics, and public health experts. Although being constituted by the Mayor gives the Board more clout, it also restricts its power because the Mayor has no chartered authority over food and thus the London Food Board has no regulatory authority.

In London, there are 32 Local Authorities, also known as Borough Councils. These elected bodies set and collect local taxes and oversee the delivery of public services such as education, social housing, sanitation, leisure services, as well as environmental health and safety. Much of what is considered municipal food policy in London takes place at the Local Authority level. Borough Councils have authority over planning decisions that impact community food environments as well as the health and safety regulations that ensure food safety. PCTs are part of the National Health Service and coordinate delivery of health care and public health services such as nutrition education. There are 31 PCTs in London, contiguous with Local Authorities (the less populated financial center, called The City is served by another PCT).

During this research, the National Health Service and most other public service delivery structures in England were undergoing a controversial process of decentralization under the Localism Bill

of 2010. The bill was passed alongside steep spending cuts approved at the national level and aimed at Local Authorities. The Localism Bill grants Borough Councils "general power of competence," effectively giving them control over public spending, services, and planning (Purt, 2010; Sawford, 2010). Even though the legislation claims to champion community-led governance, progressive leaders, local officials, civil society groups and citizens have voiced concerns about the negative impacts this radical decentralization. These include fears that fragmented governance will exacerbate inequalities in the delivery of important services (e.g. education), position local leaders as the hand maidens of national government's fiscal policies, allow dominant voices at the local level to become even more powerful in shaping policy and planning, and prevent coordination of services and policy enforcement at the regional level (Beecham, 2011). This political context of 'new localism' in England and the already decentralized structure of London's governance provide a useful contrast to the centralized authority that characterizes the government of New York City. Together these elements of London's governance support this research's use of the local trap as a lens for critically evaluating municipal food and health policy.

Food Policy in New York and London

Both New York and London are pioneers in food policy and food systems planning. New York's approach to using food policy to address diet-related health inequalities uses a combination of universal and targeted approaches and aims to make healthy food more available and accessible, especially to residents of its poorest neighborhoods. Conceptually, New York has shifted its focus on food from policies that view food safety as protection against food-borne contaminants to one that also addresses chronic health conditions such as obesity and diabetes (Bassett and Silver, 2008). Its public health officials have focused on using the Health Code and other policy instruments to improve nutrition citywide. London's approach to food policy focuses on addressing the intersections of public health and environmental sustainability. The London Food Board and London Food Strategy rely on the voluntary cooperation of private industry and the willingness of local authorities to participate in its programs. In addition to nurturing the alternative food sector, the city has become a testing ground for land use policy that aims to limit access to, and improve the nutritional quality of, fast food. Once again, the differences in context

provided by both municipal approaches to food policy and health inequality supports a comparative analysis of the relative benefits and drawbacks of targeted and universal scalar strategies.

Several municipal actions serve as evidence of New York's use of policy and Mayoral authority to improve the nutrition of the city's most vulnerable residents. For example, in 2007 Mayor Bloomberg and the City Council created the Office of the Food Policy Coordinator, charged with promoting access to affordable, healthy food for low-income New Yorkers. The Health Code was used in 2006 to eliminate transfat from all restaurant food and again in 2007 to require chain restaurants to post calorie counts for their products on menus and menu boards. Later in 2008, the Mayor announced an executive order setting nutritional standards for all food purchased or served by city agencies. These standards apply to the approximately 225 million meals served annually in public schools, jails, hospitals, as well as senior and child care centers. These standards ensure that the food served or sold in municipal agencies does not exceed specified proportions of fat, sugar and salt. This focus on food served in, and by, public agencies effectively targets these policies at low-income New Yorkers, even though they might otherwise appear to be universal. Similarly, the calorie labeling regulation effectively targets down-market eaters because up-market restaurants tend not to be affiliated with chains, and are thus exempt from this law.

A number of New York's policy and program initiatives focus on increasing the availability of healthy foods in DPHO areas where there are high concentrations of diet-related disease and more limited food retail options. Through the Healthy Bodega initiative the DOHMH staff work with owners of small corner stores in these areas to improve the quantity, quality, and display of fresh foods while reducing the promotion of alcohol and tobacco. The city has also issued 1,000 new licenses for Green Carts, street vendors who sell fresh produce in DPHO areas. Also focusing on making health promoting foods like fresh vegetables more accessible to low-income residents, the city is working to ensure that vendors at farmer's markets are equipped to accept electronic benefits transfers from SNAP and WIC recipients. In addition, the Health Bucks program provides financial incentives for SNAP and WIC recipients to purchase produce at farmer's markets by giving them $2 bonuses for every $5 they spend.

In yet another endeavor to improve the diets of the city's poorest residents, New York City proposed a demonstration project that would exclude sugar sweetened beverages from the list of allowable purchases under the SNAP and WIC programs. The city submitted the proposal to the USDA

in October 2010. The proposed trial would have lasted for two years and included evaluation of its effects on benefit recipients' diets and health. This prompted a vigorous debate within the food movement about the appropriate role of government in constraining consumer choice – and especially the choices of low-income consumers (Poppendieck, 2011). The proposal also raised questions about the relative benefits of restrictive and incentive-based policy solutions to address inequalities in diet and health. Citing hesitation about the logistical difficulties of implementing and accurately evaluating the proposed policy change, the USDA rejected the proposal in August 2011 (McGeehan, 2011). Although this proposal never became policy, it provides further evidence of the social targeting that characterizes much of New York's food policy.

On May 16, 2009, New York City presented a plan for promoting supermarket development in areas with high rates of diet-related disease and limited food retail, again covering the three DPHO areas. The plan, FRESH, includes both zoning and financial incentives for supermarkets. Zoning changes give developers the right to build larger buildings in exchange for including a grocery store on the ground level, reduce requirements to provide parking, and eliminate land use restrictions on locating supermarkets in light-manufacturing areas. To qualify for these incentives, supermarkets must dedicate at least 30% of their retail space to perishable goods and meet minimum requirements on square footage devoted to fresh produce. The city estimates that the program will help create 15 new grocery stores. Critics argue that the plan helps developers more than area residents and that it may fuel processes of gentrification (Angotti, 2011). Food worker unions and civil society groups unsuccessfully advocated to attach living-wage standards and local-hiring requirements to these financial incentives (Kornfeld, 2011). To date, FRESH has supported the creation of one new, and the re-opening of two previously defunct supermarkets. In total, it has created 93 new jobs and retained 90 existing jobs. FRESH is another example of a socially and spatially targeted food policy intervention and one more obviously rooted in the assumption that eaters are constrained by food availability in their local neighborhoods.

In the context of London, the local focus of food policy takes on a different meaning. After extensive public consultation, the London Food Strategy (LFS) was launched in 2006. It outlined a 'farm to fork' vision for the city's food system and adopted a responsible procurement plan for agencies under

the Mayor's authority, such as the Metropolitan Police. The plan emphasizes procurement of locally produced foods, improving conditions for the food workforce, celebrating London's diverse food cultures, reducing the city's ecological footprint, and promoting health.

Unlike the New York's food policy, the LFS does not focus as directly on nutrition or intervene in the mainstream food sector. Instead, it identifies problems with the food sector and opportunities to address them using a holistic sustainability driven approach that prioritizes the health, economy, culture and the security of London's food system. Priority actions of the strategy are grouped under six areas: ensuring commercial vibrancy, securing consumer engagement, leveraging the power of procurement, developing regional links, delivering healthy schools, and reducing waste. The LFS looked to the London Plan and to London's planners to help meet some of its objectives. Ultimately its recommendations were never incorporated into the GLA's planning and development strategic frameworks. For example, the LFS suggested that The London Plan, the Mayor's primary tool for influencing the city's planning and development, be amended to address threats to small businesses from supermarkets as well as provision and protection of land for growing food.

Between 2006 and 2009, £3.5 million were budgeted to the London Food Board for implementation of the strategy. Examples of the implementation projects further demonstrate that the character of these initiatives was outside the status quo for urban food policy, and focused heavily (although not exclusively) on the alternative food sector. For example, projects included: the Good Food Training for London provided free training to cooks working for schools, prisons, hospitals and care homes; the Local Food Infrastructure project aimed to increase the sustainability and availability of locally produced food in London again via procurement policies in public institutions (schools, prisons, etc.); reducing emissions produced in food transport; promoting access to local fresh foods in poor areas; and working to brand 'local-to-London-produce'. Even with the LFS and its successes, the private market still overwhelmingly shapes the foodscape in London and the food policy in this city lacks the regulatory strength to influence private industry. As Ben Reynolds of the food advocacy organization Sustain notes, "the Food Board and corresponding strategy have identified the problems that have arisen as a result of the of the current food sector, and they have initiated programmes to address these issues, but it is not their intention to control the food sector" (Reynolds, 2009, p. 422).

In line with the LFS, an urban agriculture scheme called Capital Growth aimed to create 2012 new food growing spaces in London by the year 2012. By getting Londoners to grow more of their own food Mayor Boris Johnson hopes to make fresh and culturally relevant produce more accessible throughout the city. The program makes use of the city's abundant green spaces by matching partners who have space for growing food with people who would like to garden but have no access to green space, promotes school gardening projects, and supports the reclamation of derelict lands, and the development of roof top food gardens. Although Capital Growth is a Mayoral initiative, the civil society group Sustain oversees its implementation.

The Healthy Catering Commitments (HCC) initiative aims to improve the nutritional profile of fast food in London. As of July 2011, 21 boroughs have signed on to the program. The Chartered Institute of Environmental Health, Greater London Authority, and London Food Board collaborated to develop this program, which trains environmental health officers to deliver brief interventions to small business owners encouraging them to improve the healthfulness of the foods they sell. The program asks businesses to commit to meeting standards for a range of operating practices with impacts on nutrition and health such as reducing fryer oil temperatures and using saltshakers that reduce salt output. In exchange, businesses receive a variety of benefits ranging from free promotion on HCC maps issued by boroughs to free health exams for owners and their families provided by PCTs.

On another front of London's fight against fast food, two boroughs have used their planning authority to limit access to fast food. The borough of Waltham Forest developed a supplementary planning document that aims to reduce the negative impact of fast food on the local economy, public health, and environment by limiting their density to 5% of all retail units and 'resisting' them near residences or within 400 meters of parks and schools. The borough of Barking and Dagenham has argued that it is already over saturated with fast food retailers. Its planning guidance imposes a £1000 tax on new fast food establishments, creates exclusion zones around schools, parks, and places where young people congregate, makes it illegal to have more than two contiguous fast food establishments, and also limits the density of fast food to 5% of the retail establishments in a given area and fast food restaurants. Like the policies that New York uses to enhance fresh fruit and vegetable availability,

London's anti-fast food policies assume that people do most of their eating near home and school. In this way, both take targeted approaches to local food environment intervention.

THE LOCAL IN NEW YORK AND LONDON FOOD POLICY AND GOVERNANCE

"Boris understands very instinctively that the thing about survival in the big city, not just survival but about thriving in a big city is that you have to have your own sense of your own village within the city. You have to have a bit of the city to which you feel you belong, people you know or place you know, and then you can cope. It doesn't matter it seems to me what city you're in. It might in your apartment block. Might be in your street, it might be at your work. This [growing food] is one of the ways you do it."

- London policymaker

Policymakers' geographic imaginations of the city and perceptions of how cities shape the lives of their residents inform their work. In the statement above, we learn that Boris Johnson, the Mayor of London, believes that thriving in the city depends on ones' ability to "have your own sense of your own village within the city" and that food growing is one way to create a sense of belonging. This mayor applied this belief to the food policy landscape of London by creating Capital Growth, a campaign to create thousands of new food growing spaces throughout the city.

What follows is an analysis of interviews with policymakers in New York and London that elaborates how their spatial assumptions and synoptic vision have shaped food policy in New York and London. In it, I show how the synoptic view of the city promotes a seductively simple logic with regard to food policy. As highlighted earlier, New York and London have significant differences in the treatment of scale in their food governance structures and policies. These differences provide fodder for analyzing the relative strengths and weaknesses of targeted and universal approaches, as well as the potential for actions to jump scales and create change at other levels. Keeping with the initial cautions offered by the local trap, I organize this discussion by describing some of the *unintended consequences* and *missed opportunities* each city faces because of its scalar strategy. The conclusions offer a critical appraisal of the benefits and drawbacks of geographically and socially targeted and citywide scalar strategies with respect to the broader project of creating healthier, more socially just and sustainable cities.

Allen (2011) develops the concept of power-topologies to describe a relational analysis of the contemporary dynamics of power, space, and time. Power-topologies "come into play, when the reach of actors enables them to make their presence felt in more or less powerful ways that transcend a

landscape of fixed distances and well-defined proximities" (Allen, 2011, p. 291). Understanding Topological thinking can uncover geographies of power and how it operates in a globalized world where space-time relationships are both shrinking and expanding. Power-topologies are important because they enhance strategic thinking about action, power, and scale. Thinking strategically in this way can enable actors to "register their presence through quieter less brash forms of power than domination and overt control and, in so doing, allow some actors to exert an influence and reach way beyond their means and resources" (Allen, 2011, p. 283). My interest in power-topologies stems from a desire to inform policy and civic action on food that succeeds in promoting equity and reducing health disparities in cities. Thus far, my research on the food policy frameworks of New York and London indicates that forces operating across several scales of space and power shape the food environments in these cities, and that policy responses at the local and citywide levels can sometimes push back and also create change on multiple levels. Power-topologies provide a language and lens for specifying how agents can dissolve geographic distance and exert themselves strategically across scales.

Synoptic Visions of Feeding the City

In both New York and London GIS research conducted by municipal agencies shapes the ways that policymakers literally see, and spatially imagine, the systems and structures that feed their cities and potentially produce inequalities in health. The following excerpt from an interview with a policymaker in New York makes evident that the totalizing view and spatial logic of the synoptic view presented in a study conducted by the Departments of Health and City Planning informed this city's policy response to the geographic correlation of disparities in food availability and health.

> *"We've identified the food desert issue, and New York City's undertaken an assessment really to look at (food) access. Which you're probably familiar with the Going to Market study of 2008 and that was an interagency effort really headed up by planning, but that resulted in part in the creation of the FRESH program, which is an interagency effort also."*

In the logic of the synoptic view of the city and policy, it follows that if you have an area without as many supermarkets as other areas and high rates of diet-related disease then putting a supermarket there will improve what people eat, and make them as healthy as people in other parts of the city. This assumes that people shop for food near where they live, that they will not travel far for food shopping, and that

making fresh foods more available will result in people eating more of them. The targeted approach that FRESH takes to supermarket siting also assumes that the degree of supermarket access in the high income parts of the city, where there are lower levels or diet-related disease, should be the benchmark goal citywide. While the synoptic logic of FRESH at first appears sensible, drilling down through some of its core assumptions shows that beyond some of the critiques mentioned earlier, its success may be vulnerable to unexpected realities about eaters and supermarket operators.

In London, we see similar synoptic vision and logic supporting the idea that land use policies should be used to limit fast food around schools. However, because food and local land use planning are governed at the borough – rather than city – level, mayoral action on fast food zoning is impossible. As one London official notes:

> *"We looked at mapping where schools were in the borough compared to where fast food outlets were, and it showed how there was a correlation between the two. I know the Mayor of London has publicly said that he wants fast food outlets to be restricted, although it's not something he has power over."*

However, several local authorities have been able to restrict fast food using land use restrictions that impose minimum distances from schools and maximum saturation as percentage of retail outlets per block. In these cases the authority of governance at the borough level enabled action that would have been impossible at the citywide scale.

Both of these examples illustrate that studies mapping particular components of the food environment (supermarkets in New York, fast food in London) in relation to social factors of interest to policy makers and researchers, have framed food policy problems and generated solutions that are logical when viewing the city synoptically. The totalizing view of the city afforded by these studies and the social and material correlations they draw attention to are privileged as sources to inform policy. The logical next steps – put a supermarket where the map shows a gap – or – create a policy to interrupt the agglomeration of fast food outlets around schools – in both cities became policy even though there was little other evidence supporting the likelihood that these strategies would produce the desired effects of redistributing food resources and promoting health.

Fumbling Scale: Unintended Consequences

Examples from New York and London demonstrate that the unintended consequences of localization in food policy can be both positive and negative with regard to their potential for promoting health and social equity. In New York the citywide ban on trans fats produced positive unintended consequences effecting fast food across the US. As food policy officials from New York note:

> *"Trans fats show up in fast food and industrial food, which are often also high calorie, and in fact, when Starbucks reformulated to eliminate trans fat, they also reduced their portion size and calorie content."*

> *"They didn't reformulate French fries for New York City alone, for example. McDonald's does that nationally."*

As these two examples show, the unintended effects of this policy were that it spurred other health promoting changes in the product design of fast food in terms of fat composition as well as portion size and that these changes were implemented beyond the borders of the city whose regulations initiated them. I argue that the multi-scalar impacts of New York's trans fat ban were enabled by the citywide natural of the regulation, the fact that the New York City market share is of significant size and consequence, even for international food companies. The scale of the trans fat ban's impact was also enabled by the broad reach and great resources transnational food companies like McDonalds and Starbucks have for the research, development, and marketing of new and, in this case, healthier products.

Almost at the same time in London, the citywide Healthy Catering Commitments program enabled one local authority to provide outreach and access to health care to people working in unfranchised local fast-food outlets. The program is an effort to educate local fast food retailers on how to reduce the negative health effects of what they sell. As an incentive to participate in the program, the local authority provides free health checks to business owners and their families. In this example, an action that is small scale but positive for reducing health inequalities was made possible by the power held by local authorities over the details of implementing a food policy strategy coordinated and promoted from the municipal level. The positive unintended consequence of a citywide initiative took place at the local level.

On the other hand, a negative consequence of localizing food governance is that it can erode the effectiveness of policy. For example, the following statement from a London official illustrates that the

small geographic area of most boroughs, and their perimeter-to-area ratios, make anti-fast food policies that target areas around schools, ineffective without coordinated enforcement effort across boroughs.

> *"In London, it's got so many schools that are close to borough boundaries. So if you say we're not going to have a new fast food restaurant within 200 meters of a school, well there is, you know, 10 schools in [this borough] less than 200 meters away from the borough border, probably more, actually, if you go down the list."*

When considering the potential unintended consequences of food policy localization, there is also the possibility that such targeted intervention would exacerbate rather than reduce health and social inequity. For example, some urban planners critique New York's FRESH program for accelerating forces of gentrification and displacement not just of residents, but also of local businesses. Considering the trade-offs of creating positive change in the food environments of poor areas against the likelihood that this will lead to at least some degree of displacement is a challenge for actors in the food policy arena. One New York official commented that:

> *"Gentrification and displacement are negative potential unintended consequences of the FRESH initiative. I mean without gentrification we hope more supermarkets open and everybody stays the same, but they just need more – they need more supermarkets; it's unfortunate."*

This person's stance on this practical and ethical dilemma is that it is better to act on the perceived need for more supermarkets in poor areas and possibly promote gentrification than to use this possibility as cause for inaction. Wherever one stands on this dilemma, this example emphasizes the importance of considering the broad and sometimes negative effects that changing the food economy of targeted areas can have.

In the context of gentrification, local land use decisions about the food environment in London's Clapton area presents a similar dilemma. There, two food environment changes were underway and tied into processes of gentrification. There was a campaign to bring back a weekly street market on Chatsworth Road. By mobilizing the memory of a previous weekly market at that site, newer whiter, and wealthier residents organized planning permission for a trial market. The market did sell food, but was far from representing the diversity of the area and sold products that would be inaccessible to the area's large population of people with low incomes. At the same time, a group of mostly white and middle class residents organized a campaign to stop a Tesco Express from opening on Lower Clapton Road for fear that it would drive out small businesses and diminish the independent character of their high street. In

opposition to these campaigns, stands the perspective that the majority of long-term residents in the area are effectively excluded from the new street market because of economics, and that for these same residents the Tesco would provide the lowest prices and the ability to purchase small amounts of food using a debit or credit card without surcharge. When an area is in processes of social and economic change, the new mix of residents can complicate decisions about the best course of action for promoting health and social equity.

Dropping the Ball on Scale: Missed Opportunities

By treating localization as an end unto itself the local trap prevents researchers and activists from working toward their actual goals and prevents them from seeing and coordinating other scalar strategies that may be more effective means to their desired ends.

That city policies aimed at improving the food environment, like FRESH, are not being implemented in Brownsville illustrates how social and geographic distance can create missed opportunities by creating gaps in the implementation and take up of this targeted, market-driven approach. One New York official said:

> *"There's these zoning incentives in place and how do we get this information between our agencies out to the community. Sometimes I think it's because we're so far out here that, you know, information kind of trickles in different ways and if people aren't part of that network, they won't know. So I mean that's kind of our office's role is that we know things hopefully centrally, and we make sure that everybody that we think can make it actionable knows it in these communities."*

Interviews with other policymakers revealed other potential reasons for this gap in implementation. These included physical distance, performance mandates of city agencies, limited outcry from the community, and gaps in information dissemination. This example illustrates how space and time expand the gulf between city officials and the business communities in the poorest areas, and that this has the potential to create missed opportunities for targeted approaches.

The local authority focus of London's food policy and governance means that as a city, it has missed out on opportunities to coordinate action at the municipal level to intensify the impacts of some of the successful interventions created by local authorities. In particular, it was noted by London interviewees that the London Plan is the Mayor's spatial development strategy for the city. Even though several local authorities have successfully implemented anti-fast food land use regulations, and even

though the Mayor is statutorily mandated to address health inequalities and has publically declared war on fast food companies, the London Plan fails to include any explicit actions on food and diet-related health inequalities. Localized authority of food policy in London prevents the city from leveraging the power of its market share to influence corporate practice.

When food governance and policy take a strong turn toward geographic and social targeting, they miss opportunities to bring together a broader constituency of eaters; and also fail to address the full gradient of health inequality – not just the lower end of the city's gravest disparities. In this statement from an official in New York, we learn about the strong connection between policies that address food and poverty.

> *"[The position of food policy coordinator] was created out of the Mayor's initiative on poverty and is part of the center for economic opportunity. This role is really part of the Mayor's anti-poverty and poverty reduction strategy. The core of [their work] concerns underserved populations. And, it's really about reducing disparity and access, and – and bringing together, opportunities to both make sure everybody has access to foods and then make sure those foods are healthy."*

Even though the speaker ends by saying that food policy in New York aims to ensure that everybody can have access to healthy food, the earlier comments and this analysis of that city's policies on food suggest that many sub-populations of the city that could benefit from programs and policies targeted elsewhere. Examples of such groups that exist citywide include low-wage workers and the elderly.

Policies deeply rooted in the synoptic view of the city may overlook strategies to address the problems of inequalities in urban food environments and health that other cities develop out of more phenomenological perspectives. For example, based on a community survey of its poorest residents, San Francisco addressed the issue of disparities in food availability by intervening in its transit systems to improve connectivity between eaters and major food retail establishments. Interviews with several policy makers in New York confirmed that such mobility-based strategies have not been seriously considered. Thus, the opportunity to use a municipal resource and service, the public transit system, to address issues of food access is missed.

By focusing on the local, policymakers miss opportunities for intervention at broader scales. One official in New York commented that the problem with supermarkets was that they "don't do what McDonalds does." They then went on to elaborate that McDonalds has strong emphasis on training franchise owners on how to run establishments that maintain rigorous brand standards for cleanliness,

customer service, as well as food preparation and safety. In this professional's view, supermarket chains in New York were failing to support franchise owners and store managers in ways like these that set standards for both brands and service provided to customers. It would follow that citywide regulation of supermarkets' wages, cleanliness, and fresh food quality might have a greater impact on improving food availability in poor areas. This strategy might be more effective at reducing disparities in the price, quality, and availability of fresh food across areas of the city than targeted incentive programs that ultimately rely on market forces.

Scaling Up: Avoiding the Local Trap

The scale of food governance and the placement of food decision-making power within a city's legal structure have implications shaping the public health and social justice impacts of food policy. As with any scalar strategy localization has advantages and disadvantages. I will not attempt to summarize this work into a prescription for how to best use localization as a political strategy for promoting health and social equity. Doing so would contradict the central premise of this work; namely, that scale is fundamentally relational and thus it should be enacted strategically and with sensitivity to particular social, historical, and economic contexts. To conclude, I'll offer some overarching points that emerge as strong themes that may inform strategic uses of scale in the context of food and health policy.

Localization offers the advantage of allowing local authorities to tailor policy implementation to the needs and motivations of their particular populations. Still, localization has its drawbacks. These include excluding people and places beyond the targets of intervention. As the examples from London demonstrate, localized food governance structures make coordinated citywide action difficult. As this London official confirms, having:

> *"33 London boroughs makes it very difficult to kind of have something because one area will do something really good but the scalability is quite difficult."*

Jumping scale from the local to the municipal is more challenging (if not impossible) in London than jumping scale from the city to the national level has been for New York. The absence of food policy levers at the municipal level in London is a crucial constraint on the extension of the city's ability to leverage its size to advance policy innovations across broader scales.

As a scalar strategy for food policy and governance, localization and targeting may operate antithetically to the goals of reducing social and health inequality. This approach has the potential to increase social and economic segregation of neighborhoods and municipal services, especially when food environment changes take place in tandem with gentrification. The local strategy by definition naturalizes uneven applications of policy approaches and uneven health and social outcomes by attributing these as part of local variation. For example a London official observed that, “all the boroughs have their own policies. Yeah, I mean you don’t get everything. Some boroughs are better.”

Municipal level levers enable citywide food policy and food environment regulation. As discussed earlier the citywide ban on trans fats has led to product reformulation at the nation scale by large food companies. As a scalar strategy, concentrating authority at the municipal level may enable cities to leverage their size to create change in other sectors of society and at other scales.

SECTION TWO: CHAPTER FOUR

A Grounded Observation of Food Environments and Inequality in New York and London

The NYLON FEAST portion of this study used direct observation to measure and compare food environment attributes in two sites selected in each New York and London. These data support an analysis of the how urban food environments are linked to income inequality. Specifically, this chapter answers the following questions: Are there comparable inequalities in food environments of New York and London? How do the food environments in the highest and lowest income areas differ within and between the two cities? What kinds of food places exist in these sites?

The chapter starts by addressing the first of these questions using descriptive statistics on the NYLON FEAST data collected to describe the full composition of food places observed overall and in each food environment observation area. The second section presents comparative analyses of the Eat Now and Eat Later Data. A combination of statistical tests identifies inequalities in food environment attributes, both between cities and high-and low-income food environment observation areas. The last section of the chapter summarizes and then contextualizes these results using the scholarly and grey literatures on food environments in New York and London. This work addresses several gaps in the international literature on food environments and health. There is a need for studies using a common site selection, instruments, and observation protocols to compare food environments internationally (Holsten, 2009). Finally, this description of the food environment observation area food environments forms a foundation for later chapters that explore how individuals who live and work in the selected areas perceive and use these environments.

NYLON FEAST: DESCRIPTIVE STATISTICS

Two instruments were used to collect data on the within and between city availability of healthy foods and health promoting food environment attributes, Eat Now and Eat Later. Both instruments and the process of their development are described in detail in Chapter 2. A total of 110 food establishments

were observed in the census tracts and MSOAs identified in the site selection process and the included in this analysis. Table 6 shows the number of establishments per study area observed and the division of observations across instruments for each site and in total.

Table 6. Number of Establishments Observed Per Study Area by Data Type[15]

Food environment observation area	Eat Now: Frequency	Eat Now: Percent	Eat Later: Frequency	Eat Later: Percent
Brownsville	4	44%	5	56%
Upper East Side	10	83%	2	17%
Clapton	6	55%	5	45%
South Kensington	67	81%	11	19%
Total	87	79%	23	21%

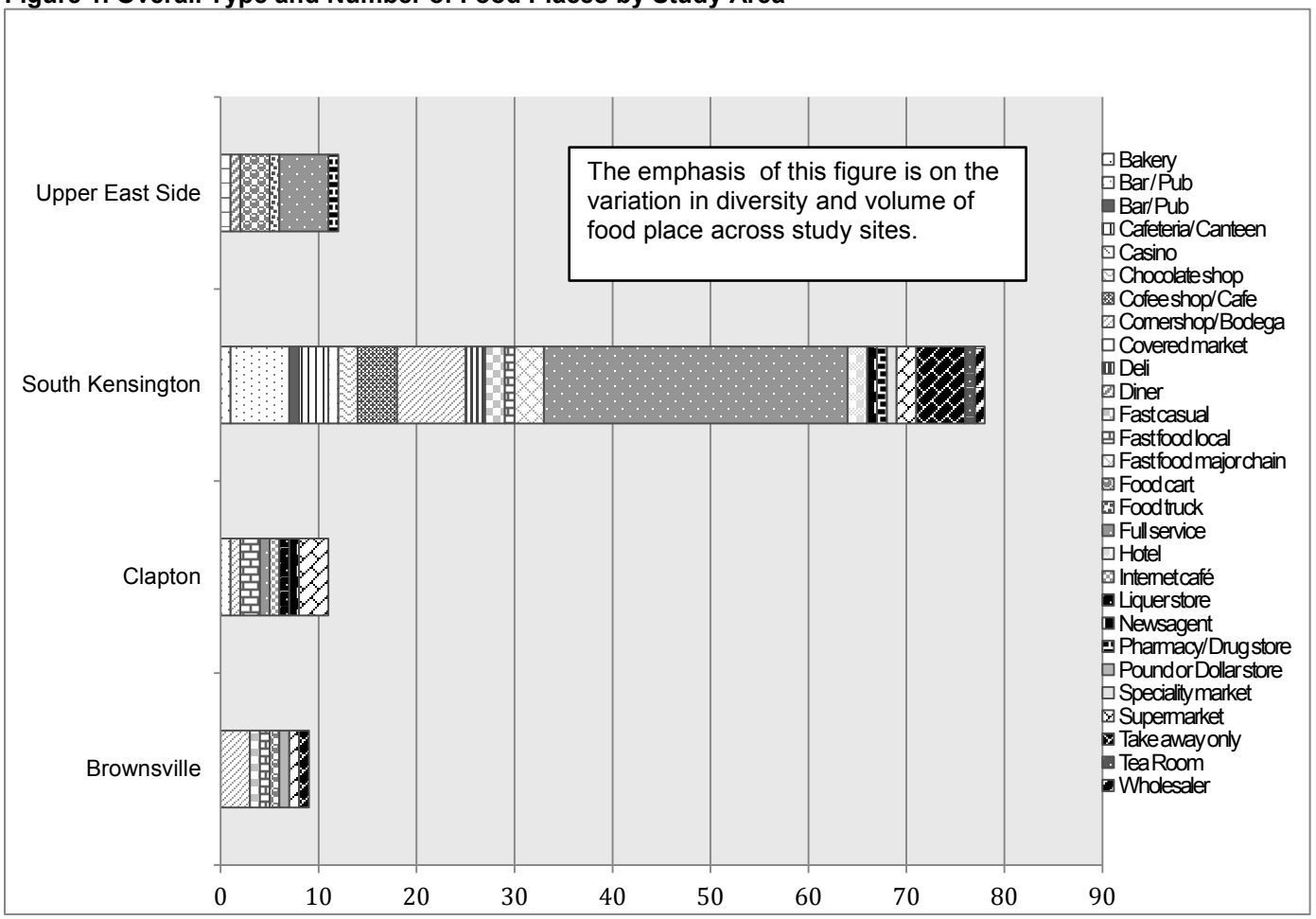
The combined data show that there are fewer establishments overall in Brownsville and Clapton, the two low-income sites, and that these areas have a balance between Eat Now and Eat Later places (44% and 55% Eat Now, 56% and 45% Eat Later, respectively). By contrast, both the Upper East Side and South Kensington, the two high-income sights, have greater percentages of Eat Now as compared to Eat Later establishments, (83% and 81% Eat Now, respectively). The South Kensington food environment observation area has the greatest density and diversity of food places. It is worth noting that this site is not geographically larger than Clapton or the New York food environment observation areas. Compared to the segment of the Upper East Side observed, the South Kensington study area is less residential and this may account for its high density of food places. The data presented in Table 6 suggests that within local area food environments the number and type of food establishments reflect the income level of residents and the overall availability of dollars or pounds for food spending. The relative percentages of grocery and convenience shopping to dining and food service may also be determined, at least in part, by area income. Logically, it holds that in areas where people have more money to spend on food they may choose to spend more of their money eating out or eating prepared foods, than purchasing groceries and preparing food at home.

Figure 1 below, shows the full composition of food places observed for each food environment observation area included. As with Table 6, the combined Eat Now and Eat Later data provides a picture of the overall food environment in each area. Due to its complexity, the figure may be challenging to

[15] The distribution of data across food environment observation areas and instruments is highly varied. As will be discussed in greater detail later in this chapter, this impacted the statistical tests used to analyze these data.

decode on a category-by-category basis. Still, it clearly illustrates the wide range of food place categories observed and that the overall distribution of food outlets varies across food environment observation areas. Food environments in London appear to be more complex in terms of the diversity of types of food places. Local fast-food outlets make up an important component of the Brownsville and Clapton food environments, and hardly figure at all in either of the high-income areas.

Figure 1. Overall Type and Number of Food Places by Study Area



COMPARATIVE ANALYSES OF EAT NOW AND EAT LATER DATA

Starting with the Eat Now data set and then turning to the Eat Later data, this section presents results from statistical tests used to identify significant inequalities in food environment attributes as examined between cities, high-and low-income food environment observation areas, and establishment

types. The results of this analysis describe the inequalities in food availability and food environment attributes exist between the high- and low-income areas in New York and London.

A total of 87 food places were included in the analysis of Eat Now food environment data. Several analyses of this data were conducted. Chi-Square analysis was used to compare the types of food places observed in each site. This was first done using 12 categories of Eat Now food places that were enumerated from the ground up during the walking observation of the food environment observation areas. Following methods described in the food environments literature (Saelens, Glanz, Sallis, & Frank, 2007), the analysis was repeated after recoding this data using two categories, fast food and full service. Comparing these analytic methods is an empirical examination of the relational framework shaping this study. Specifically, it enables a test of the impact of using a fuller, and arguably more representative, range of categories in comparative food environments research against the strategy of imposing more simplistic categorical and conceptual models.

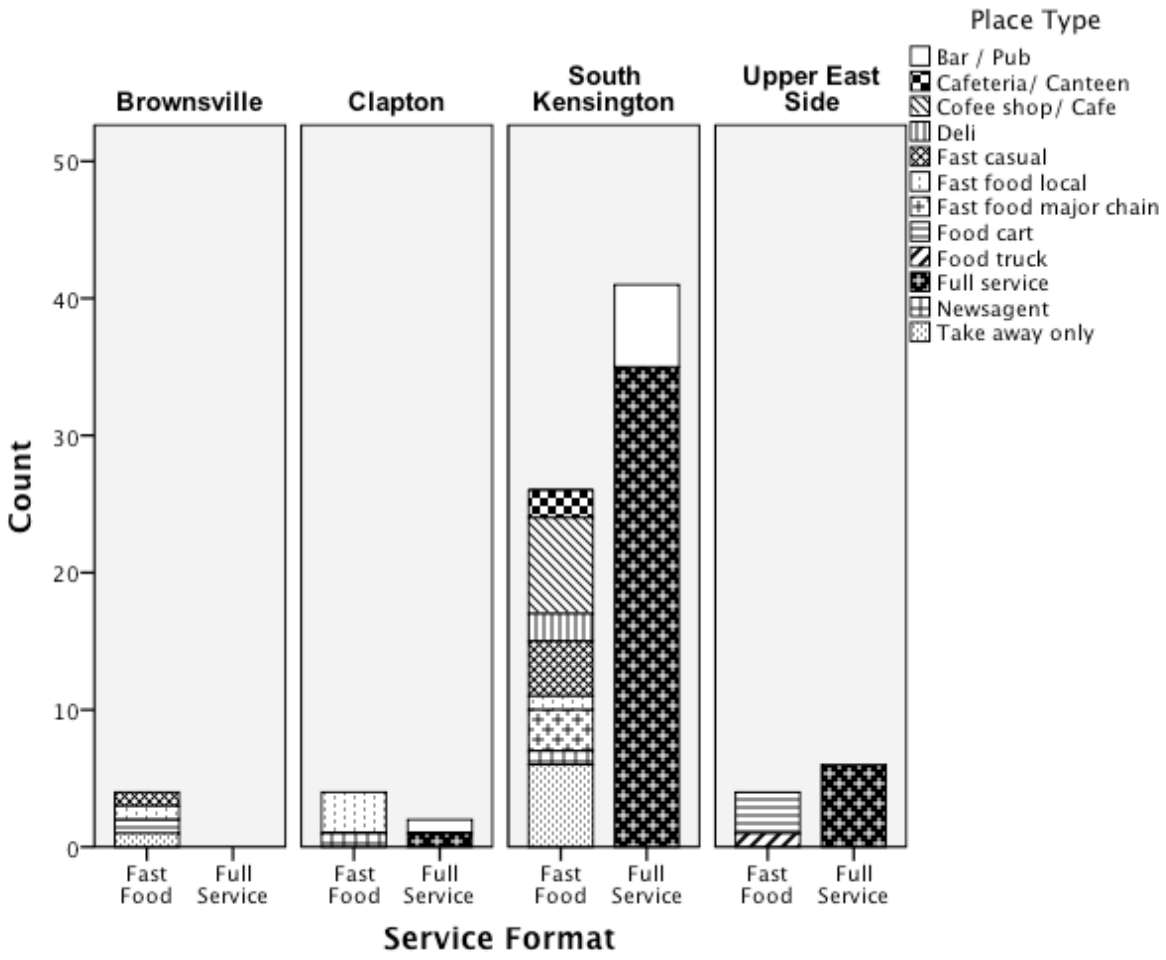
Eat Now: Place Types

Using the 12 categories observed, significant differences were found between food environment observation areas with regard to the types of food places observed. [Pearson Chi-square value 76.216, df 33, 2-sided sig .000]. Figure 2 shows the distribution of place types in the four study areas and how the 12 place types observed were categorized into fast food and full-service for the subsequent analysis. The South Kensington site has the greatest diversity of place types. This may be a function of this site having a higher density of food places than the other three. There is little difference between the absolute number of fast food outlets in Clapton, Brownsville, and the Upper East Side. However, full-service restaurants make up a small portion of the food places in Brownsville (0%) and Clapton (17%). By comparison full-service restaurants account for more than half of the food places in each of the high-income food environment observation areas (52% in South Kensington and 60% in the Upper East Side).

Following the place type categories used in other studies of similar size and design (Saelens et al., 2007) place types in this data were recoded into full service and fast food categories. The recoded full service and fast food place type variable was examined in relation to neighborhood income (eg. grouping Clapton and Brownsville data). Significant differences in types of food places found across

high-and low-income food environment observation areas were also found [Pearson Chi-square value 6.059, df 1, 2-sided sig .014].

Figure 2. Eat Now Place Types by Food Environment Observation Area



Regarding the comparison between the analyses with the fuller and restricted range of categories, these results indicate that in addition to expanding the conceptualization of categories representing the composition of food places so that it better reflects the reality of those place, using a wider range of categories appears to strengthen the capacity of the chi-square to detect differences between areas [sig .000 vs. sig .014]. This is simply because the additional categories create more degrees of freedom in the analysis. Enhancing the utility of this analytic technique in this way is important because often this

type of observational food environment research examines small areas where the number of observations may be low. These results also have implications for conceptualizing food environment and health interventions, especially those focusing on fast food. They indicate that fast food centered interventions are likely to have greater presence in low-income areas where fast food makes up a greater proportion of resources available. This is further addressed, in relation to the observation that independent fast food establishments are highly prevalent in the low-income food environment observation areas, in the conclusion of this chapter.

Eat Now: Food Types

No statistical analysis was conducted comparing the types of food across food environment observation areas. Instead, these data are used to describe the range of foods available in each of the food environment observation areas. Table 7 below illustrates the range and relative percentage of food types by food environment observation area. The food-type categories reflected here are again based on grounded observation of food places and recording the kinds of foods available at each place based on the self-presentation of each establishment in its signage and menu. These results are similar to those comparing place types. The high-income food environment observation areas have greater diversity of food types available than the low-income food environment observation areas. I argue that the types of foods present reflect a combination of the demographic and food-place type compositions of each site. For example the foods available in the Brownsville food environment observation area, fried chicken, Caribbean, and Chinese reflect both the exclusive presence of fast food places and the black and Latino composition of the area's population. The types of food available in the Clapton food environment observation area reflect that the area's food environment is dominated by fast food places and that these establishments serve a mix of global fast food items such as fried chicken, along with foods particular to the British context, such as fish and chips. The presence of a juice-and-smoothie place may reflect the area's mixed economic composition and that it is in a process of gentrification. The foods available in the high-income areas reflect that both of these areas are part of urban centers for tourism in their inclusion of hot dog stands, coffee shops, and foods like ice cream and baked goods that are typically eaten as

snacks. The wealth of the areas' residents is reflected in the presence of cuisines that are typically more expensive (especially when compared to fast food) such as French, Italian, and Continental.

Table 7. Food Types by Food Environment Observation Area

UPPER EAST SIDE		**SOUTH KENSIGNTON**	
Hot Dog	30%	British	16%
Italian	20%	Italian	14%
Ice Cream	10%	Bakery	13%
American	10%	Coffee and Tea	9%
Continental	10%	Continental	8%
French	10%	Indian	6%
Coffee and Tea	10%	Salad, Thai, Tapas, Russian, Pizza, Patisserie, Pan Asian, Moroccan, Mediterranean, Lebanese, Juice and Smoothie, Japanese, Hamburger, Fried Chicken, French, Cupcakes, Chinese	=>5%
BROWNSVILLE		**CLAPTON**	
Fried Chicken	25%	British	40%
Chinese	25%	Fish and Chips	20%
Caribbean	50%	Fried Chicken	20%
		Juice and Smoothie	20%

As with the place type analysis, Eat Now data tracking the presence of health promoting and policy relevant food environment attributes were examined using two analytic methods. Again based on the literature in this area, one analysis used chi-squares to compare the presence and absence of individual food-environment attributes of establishments across three dimensions: by city (grouping all New York and London data into two groups), by income (grouping data from high- and low-income sites), and by place type (using the fast food and full service categories). These data were also examined using a composite variable representing the healthfulness of each Eat Now establishment, called *Healthfulness-N*. *Healthfulness-N* includes all of the food-environment attributes examined on a variable-by-variable basis using chi-square tests and was analyzed using ordinary least squares regression to understand the relative contributions of these three dimensions on the overall distribution of healthfulness across the 87 Eat Now establishments observed. Ordinary least squares regression was used in this analysis because it is mathematically equivalent to analysis of variance (ANOVA) but is robust to the different proportions of data for each site noted earlier in Figure 1.

Table 8 shows the results of this chi-square analysis. Significant results are in bolded text. For example, there was no significant difference between food environment observation areas in visibility of

food safety scores for restaurants. This finding bodes positively for policy and programmatic responses that use environmental health and food safety workers to deliver messages to restaurant workers about modifying food preparation and retail strategies to prevent chronic disease. Similarly no significant differences were found between food environment observation areas in the presence of calorie labels. This finding is surprising because New York City requires chain restaurants to post calorie counts on menus and menu boards, whereas London has no such regulation. However, in London a number of chain retailers voluntarily include this information on prepared and packaged foods, such as sandwiches. When food places observed were recoded into fast food and full service there was a significant difference in the presence of calorie labels between these two types of places. Fast food establishments were found to be more likely than full service restaurants to have this information available (sig .045). Significant differences were found between sites in the availability of vegetarian-meal options. Vegetarian food was less present in Brownsville and Clapton (sig .002). While there was no significant difference across food environment observation areas in the presence of side vegetables included with main dish menu items, across sites the majority of establishments (69%) did not include vegetables with their entrees.

Table 8. Eat Now Chi-Square Analysis

Variable	High Income	Low Income	Sig.	Fast Food	Full Service	Sig.	New York	London	Sig.
Unhealthy promotions	28.6%	40%	.458	**18.4%**	**38.8%**	**.04**	35.7%	28.8%	.603
Health promoting messages	31.2%	20%	.468	**42.1%**	**20.4%**	**.028**	28.6%	30.1%	.907
Health and safety grade/ score on door	16.88%	20%	.806	10.53%	22.45%	.144	21.43%	16.44%	.651
Calorie labels	3.9%	n/a	.525	**7.89%**	**0**	**0.45**	7.14%	2.74%	.408
Vegetarian option	**88.31%**	**50%**	**.002**	76.32%	89.8%	.090	78.57%	84.93%	.553
Entree comes with vegetable	33.8%	10%	.126	**15.79%**	**42.86%**	**.007**	28.6%	31.5%	.828
Alcohol	**51.7%**	**20%**	**.027**	**13.16%**	**83.67%**	**.000**	35.7%	56.2%	.16
Whole grain bread	20.8%	0%	.111	31.6%	8.2%	.005	7.1%	20.5%	.236
Whole grains	5.2%	10%	.539	10.5%	2%	.092	7.1%	5.5%	.806
Un-fried potatoes cost extra	2.6%	10%	.227	2.6%	4.1%	.111	7.1%	2.7%	.408

Eat Now: Messages and Incentives

Data collected on the promotional incentives and messages in these 87 food outlets was used to describe these qualitative food environment attributes and determine if there were significant differences in types of promotions and messages by service type, area income, or city. Messages and incentives were categorized as unhealthy or health promoting. Unhealthy messages and incentives observed included meal deals, financial disincentives to eating vegetables, and price incentives to increase portion sizes and add a sugar sweetened or alcoholic beverage to meals. One fast food restaurant menu in Clapton even included a section for tobacco products. Unhealthy messages and incentives were observed in all study areas. Meal deals and price incentives to increase portion size were more common in low-income food environment observation areas. Price disincentives to eating vegetables were mostly observed in high-income food environment observation areas. Health promoting messages and incentives observed included price incentives to share, reduced portion menu options, healthy and vegetarian options highlighted on menus, choice editing, and visible nutrition information. As an example, one chain of pubs in London encourages vegetable consumption by charging £1 to substitute chips in place of a salad as the side dish for their sandwiches. Table 9 provides examples of each type of healthy and unhealthy promotion observed. All but one of the health promoting messages and incentives were observed in high-income food environment observation areas. As highlighted in Table 8, significant differences in the presence of both unhealthy and health promoting messages were found between fast food and full service establishments (sig. 0.04 and 0.028, respectively). Somewhat surprisingly fast food places had significantly more health promoting messages and incentives than full service restaurants, and full service restaurants had significantly more unhealthy messages and incentives than fast food places. This suggests that social and political efforts to lessen the impacts of fast food on public health have perhaps succeeded in influencing the industry and local franchise holders to provide and promote healthier food options and to make information about the nutritional quality of their products more available to consumers. This finding also suggests that the food environments researchers should move toward including more measures of the actual nutritional quality of foods served in establishments and weighting this more heavily than informational food environment attributes.

Table 9. Examples of Healthy and Unhealthy Messages and Incentives

UNHEALTHY MESSAGES AND INCENTIVES	
Meal deals	Fast-food meals including soda, fries/chips, pizza, hamburgers, fried fish, or fried chicken
Price disincentives to eating vegetables	Vegetables not included in entrée and cost up to £5.90 or $9.25 extra when ordered as a side dish
Price incentives to increase portion sizes	Large-size portion of Sunday roast available for £2
Price incentives add sugar sweetened and alcoholic beverages	Add an alcoholic drink to your lunch for £1
HEALTH PROMOTING MESSAGES AND INCENTIVES	
Price incentives to share	Half-size and half-price portions available for most menu items
Reduced portion menu options	500 calorie meal deal
Healthy and vegetarian options highlighted on menus	Light meals menu section, vegetarian items marked with a “v”
Choice editing	No white bread available
Nutrition information available	Calorie labels, front-of-pack nutrition labels on pre-packed foods

Significant differences were also found between food environment observation areas in the available preparations of potatoes [Pearson Chi-square value 25.472, df 9, 2-sided sig .002]. Table 10 describes the distribution of potato preparations by food environment observation area. The availability of un-fried potatoes is greater than the availability of fried in both high-income neighborhoods, fried options were equally as available as un-fried in Brownsville, and fried were more available than un-fried in Clapton.

Table 10. Food Environment Observation Areas and Potato Preparation

	Potatoes fried or un-fried				
	No potatoes served	Fried	Both fried and un-fried	Un-fried	Total
Brownsville	2	1	0	1	4
Clapton	3	2	0	1	6
South Kensington	47	3	3	14	67
Upper East Side	4	0	4	2	10

Next, the composite score *Healthfulness-N* for each establishment was used to describe and determine if significant differences in the health promoting attributes of food Eat Now places exist across the city, income, and place type categories. Table 11 describes the *Healthfulness-N* variable. Table 12 presents mean scores for *Healthfulness-N* by income of area, city, and place type. High-income areas have a mean score for *Healthfulness-N* that is more than twice that of low-income areas (.989 compared

to .417). As discussed earlier the high-income areas had more health promoting messages than low-income areas. The mean score for *Healthfulness-N* in New York is much higher than it is for London (.944 compared to .593). The results of the chi-square analysis in Table 8 may indicate that this difference results from New York's food safety regulations such as requiring calorie labels on chain restaurant menus and requiring all restaurants to post their food safety grade publicly, and having a smaller percentage of establishments serving alcohol. Finally, the mean for *Healthfulness-N* was higher for fast food than full service establishments (9.47 compared to 0.417). As discussed above, this is likely the result of these restaurants including more health promoting information in their restaurant environments and not the result of the healthfulness of the food served.

Table 11. Healthfulness-N Description of Variable

	N	Min.	Max.	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Healthfulness-N	87	-1.00	4.00	1.0345	1.07236	.393	.258	-.424	.511
Valid N	87								

Table 12. Mean Healthfulness-N Scores by Income of Area, City, and Place Type

City	Hi Income		Low Income		City Means
	Fast Food	Full Service	Fast Food	Full Service	
New York	1 (n=4)	.833 (n=6)	1 (n= 4)	(n=0)	.944 (n=14)
London	1.53 (n=26)	.585 (n=41)	.25 (n=4)	0 (n=2)	.593 (n=73)
Area Income Means	.989 (n= 77)		.417 (n= 10)		

Fast Food Mean = .947
Full Service Mean = .473

Ordinary least square regression was used to determine which if any of the mean differences in *Healthfulness-N* described above were statistically significant and measure the degree of variance in this measure explained by each of these three factors (city, place type, and income). Table 13 reports the significant results of this analysis. Place type and area income were the only two dimensions were significant differences were found. As indicated by the adjusted R-Square for this model, together these two variables account for 17% of the variance in *Healthfulness-N*.

Table 13. Healthfulness-N Regression Model Summary and Coefficients

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
					B	Std.Error	Beta		
(Constant)	.435	.189	.170	.88991	.666	.284		2.344	.021
Place Type					-.832	.199	-.425	-4.170	.000
Income					.789	.310	.259	2.545	.013

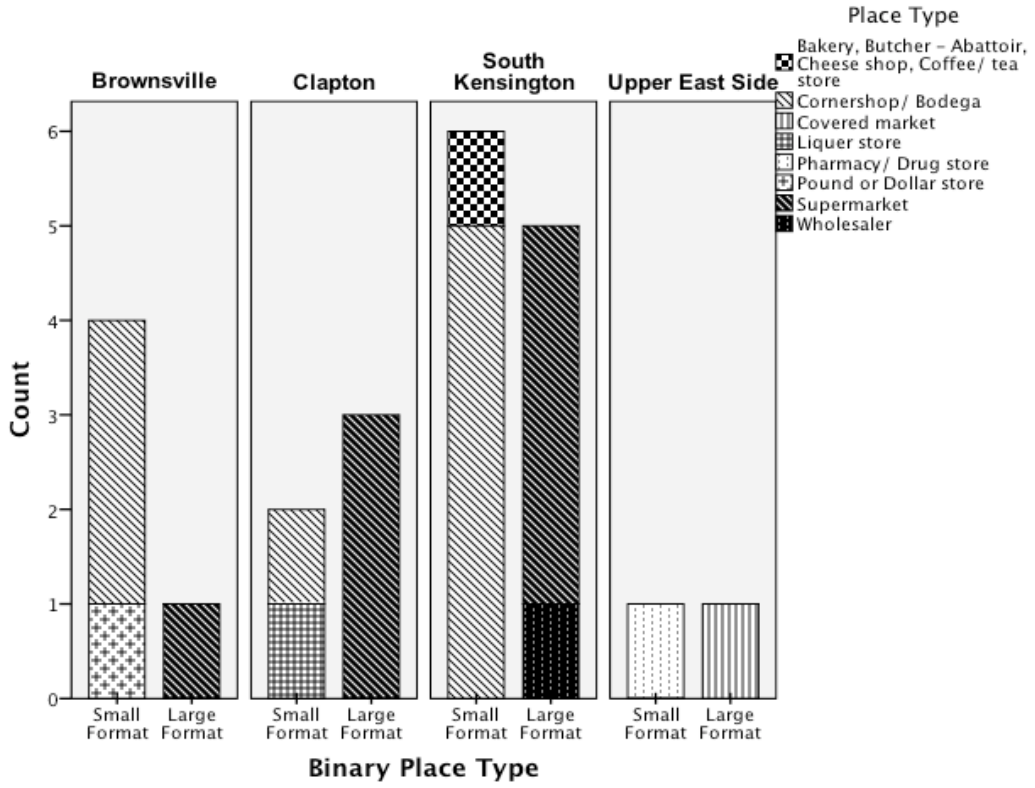
Eat Later

Following the strategy used with the Eat Now data, Eat Later data were analyzed using both methods established in the literature and developed specifically for this research. As illustrated earlier in Table 1, 23 Eat Later establishments were observed and included in this analysis. These establishments were differentiated from those observed using the Eat Now instrument because their primary business was selling groceries, or foods requiring some preparation before being eaten.

Eat Later: Place Types

There were eight types of Eat Later food places identified during data collection. Figure 3 shows the distribution of place types across the four food environment observation areas and how these were grouped into small and large format categories. Consistent with findings from the Eat Now data, South Kensington had the greatest diversity of place types. Figure 3 illustrates that there is considerable less variation between sites in the quantity and diversity of establishments selling groceries than observed within the Eat Now data. Still, it is noteworthy that there were no supermarkets observed in the Upper East Side study side. A chi-square comparison using the eight categories found significant differences between food environment observation areas in the types of Eat Later establishments observed [Pearson Chi-Square value 34.233, df 21, 2-sided sig .034]. However, when analyzed using the two categories typically used in the literature, small and large format, no significant differences were found between food environment observation areas [Pearson Chi-Square value 1.729, df 3, 2-sided sig .631]. This difference in results further supports the use of the relational framework for food-environments research. Specifically it demonstrates that using ground-truthed data that reflect the diversity of food environment attributes observed is advantageous in terms of category and construct validity as well as avoiding Type II statistical error wherein a test fails to reject the null-hypothesis, or simply put produces a false negative.

Figure 3. Eat Later Place Types by Food Environment Observation Area



Eat Later: Food Environment Attributes

Again based on the literature in this area (Glanz, Sallis, Saelens, & Frank, 2007), one analysis used chi-squares to compare the presence and absence of individual food environment attributes across food environment observation areas. As with the Eat Now data ordinary least square regression was used to compare the mean number of fresh fruits and vegetables available in each establishment and across three dimensions (city, income, and store size/ format). Logistics regression was also used to understand the relative contributions these three dimensions on the distribution of a composite score for each establishment, *Healthfulness-L*. *Healthfulness-L* included all food environment attributes examined on a variable-by-variable basis using chi-square analysis. The scoring protocol for this variable is described in Chapter 2.

The chi-square analysis of the Eat Later data revealed significant differences in the availability of whole grain, meat alternatives, low-fat meats, and visible signage indicating that establishments would accept electronic benefits transfer (EBT) from recipients of SNAP and WIC. Table 14 presents the results

of the chi-square analysis. Somewhat surprisingly whole grains were significantly more available in low income than high-income areas (80% compared to 15.4%). This reflects the high proportion of small format stores in Clapton that carried a range of fresh foods and whole grains and that the Brownsville food environment observation area included a large format store with a very comprehensive range of dried goods, such as grains and beans. Meat alternatives such as tofu, quorn, tempeh, seitan, and vegetarian-alternatives to hotdogs, sausages and hamburgers were significantly more available in large-format than small-format stores. This may reflect that large stores have more shelf space and serve a broader range of customer tastes than small stores. Low-fat meats were significantly more available in New York than in London (85.7% as compared to 25%). This may reflect differences in the labeling regulations, availability of, and demand for these products. Visible signage indicating that establishments would accept (EBT) from SNAP and WIC recipients was only found in New York. Within that city such signage was only found in Brownsville. Individuals receiving food-based social welfare that live or work in the Upper East Side, or similarly high-income areas, may be excluded from using the food retail resources in those areas. Even though it contains the census tract with the highest median income; according to a one study participant who worked for an elected official representing the Upper East Side, the area also has one of the highest proportions of subsidized housing of any neighborhood in New York City. Thus it may be that this exclusion is experienced by a significant number of individuals in that area

Table 14. Eat Later Chi-Square Analysis

Variable	High Income	Low Income	Sig.	Small Format	Large Format	Sig.	New York	London	Sig.
Whole grain bread	53.8%	60%	.768	53.8%	60%	.768	85.7%	43.8%	.062
Whole grains	**15.4%**	**80%**	**.002**	38.5%	50%	.580	71.4%	31.3%	.074
Low-fat dairy	76%	50%	.179	53.8%	80%	.192	57.1%	68.8%	.591
Dairy alternative	223.1%	40%	.382	23.1%	40%	.382	57.1%	18.8%	.066
Alcohol	69.2%	70%	.968	53.8%	90%	.062	71.4%	68.8%	.898
Meat alternative	15.4%	10%	.704	**0%**	**30%**	**.034**	28.6%	6.3%	.144
Prepared food/ ready meals	61.5%	50%	.580	46.2%	70%	.253	71.4%	50%	.340
Pulses, nuts, and seeds	69.2%	80%	.560	61.5%	90%	.123	100%	62.5%	.059
Eggs	46.2%	80%	.099	46.2%	80%	.099	71.4%	56.3%	.493
Low-fat meats	38.5%	50%	.580	46.2%	40%	.768	**85.7%**	**25%**	**.007**
Organic dairy	38.5%	20%	.340	30.8%	30%	.968	57.1%	18.8%	.066
EBT WIC	**0%**	**50%**	**.004**	30.8%	10%	.231	**71.4%**	**n/a**	**.000**

Star or healthy bodega	0%	0%	n/a	0%	0%	n/a	0%	0%	n/a
Green cart	0%	0%	n/a	0%	0%	n/a	0%	0%	n/a
Change for Life	0%	0%	n/a	0%	0%	n/a	0%	0%	n/a
Eat well Buy well	0%	0%	n/a	0%	0%	n/a	0%	0%	n/a

Eat Later: Fresh Fruit and Vegetable Availability

The availability of fresh fruits and vegetables in Eat Later establishments was compared by city, area income, and store format. During data collection the fresh fruits and vegetables in each establishment were counted. Means were calculated for each of the three dimensions of comparison. These means are presented in Table 15. Ordinary least square regression was used to test the statistical significance of these differences and the relative contribution of each dimension to explaining the overall distribution of fresh fruit and vegetable availability. The results of that analysis are presented in Table 16. Mean fresh fruit and vegetable availability differed only slightly between high- and low-income areas (42.275 compared to 50.937). Mean fresh fruit and vegetable availability differed between cities with New York (59.737) having greater availability than London (33.775). The only statistically significant difference was found between large- and small-format stores (84.15 compared to 9.092). The adjusted R-square of this analysis indicates that store size accounts for 43.3% or the variance in fresh fruit and vegetable availability.

Table 15. Fresh Fruit and Vegetable Variety by Income of Area, City, and Store Size

City	Hi Income		Low Income		City Means
	Small Format	Large Format	Small Format	Large Format	
New York	4(n=1)	80 (n=1)	14.75 (n=4)	139(n=1)	59.737 (n=7)
London	17.5 (n=6)	67.6 (n=5)	0 (n=2)	50 (n=3)	33.775 (n=16)
Area Income Means	42.275 (n=13)		50.937 (n=10)		

Small Format Mean = 9.062
Large Format= 84.15

Table 16. Fresh Fruit and Vegetable Variety Regression Model Summary and Coefficients

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
					B	Std. Error	Beta		
(Constant) Place Type	.677	.459	.433	32.555	-44.854 57.777	20.787 13.694	.677	4.219	.000

Eat Later: Healthfulness-L

In the second analysis of these data, the composite score Healthfulness-L for each establishment was used to describe and determine if significant differences existed in the health promoting attributes of Eat Later food retail establishments across the dimensions of city, income, and store format. Table 17 describes the *Healthfulness-L* variable. Table 18 presents mean scores for *Healthfulness-L* by these three dimensions. The results of the regression analysis for this data are presented in Table 19. The mean scores for *Healthfulness-L* vary little between the high- and low-income areas (9.792 compared to 9.271). Statistically significant differences in *Healthfulness-L* were found between cities and between small and large format stores. New York had a mean *Healthfulness-L* score of 13.175 while London had a mean of 5.875. Large format stores had a mean *Healthfulness-L* score of 13.333 while small format stores had a mean of 5.729. The adjusted R-square value for the regression model including city and store format indicates that these two variable together account for 33.2% of the variance in *Healthfulness-L.* The results of the chi-square analysis presented in Table 14 indicate that the significant between city difference found in *Healthfulness-L* may reflect greater percentages of Eat Later establishments in New York selling whole grain bread, whole grain, dairy alternative, meat alternatives, eggs, low-fat meats, organic dairy as well as pulses, nuts, and seeds.

Table 17. Healthfulness-L Description of Variable

	N	Min.	Max.	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Healthfulness-L	23	-1.00	21.00	7.91	6.052	.52	.481	-.006	.935
Valid N	23								

Table 18. Healthfulness-L Scores by Income of Area, City, and Store Size

City	Hi Income		Low Income		City Means
	Small Format	Large Format	Small Format	Large Format	
New York	10 (n=1)	14 (n=1)	7.75 (n=4)	21 (n=1)	13.187 (n=7)
London	5.17 (n=6)	10 (n= 5)	0 (n=2)	3.33 (n=3)	5.875 (n=16)
Area Income Means	9.792 (n=13)		9.271 (n=10)		

Small Format Mean = 5.729
Large Format = 13.333

Table 19. Healthfulness-L Regression Model Summary and Coefficients

Model	R	R Square	Adjusted R Square	Std. Error of Estimate	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
					B	Std. Error	Beta		
(Constant)	.627	.393	.332	4.946	2.500	3.308		.756	.459
City					-5.625	2.287	-.437	-2.460	.023
Place Type					6.500	2.123	.544	3.062	.006

SUMMARY, CONTEXT, AND CONCLUSIONS

Next, the results presented above are summarized and contextualized by city and food environment observation area using the scholarly and grey literatures on food environments in New York and London. There is more limited literature on food environments, diet and health in London than there is for New York. Literature on the food environment in London is largely constituted by planning and advocacy studies. Much of the research on food environments in the UK published in scholarly journals geographically focus on the cities of Glasgow, Scotland and Leeds, England. A review of scholarly and grey literature found no studies that took a comparative approach to examining disparities in the food environments of high- and low-income areas of London. Thus, this study also contributes to the literature in this area by offering a comparative empirical look at London's food environment.

New York

Unlike London, the food environment in New York has been linked to obesity in several studies. Obesity prevalence in New York City is significantly associated with neighborhood-level factors such as the availability of supermarkets and food stores (Black, Macinko, Dixon, & Fryer, 2010). Rundle et al., (2009) found that increasing density of fast food restaurants, convenience stores, meat markets, pizzerias, and candy stores were not significantly associated with BMI or obesity, but that access to supermarkets, fruit and vegetable markets, and natural food stores was associated with lower BMI and lower prevalence of obesity in New York.

New York: Brownsville

The Brownsville study area had the fewest food places overall of any site in this study. Similar to Clapton, the low-income study area in London, Brownsville had a relative balance between Eat Now and

Eat Later food places. Among Eat Now food places observed it was striking that this area had no full-service restaurants and no bars or pubs. All of the Eat Now places were categorized as fast food and were mostly independent or local brands, rather than franchises of major international brands. Lack of full-service establishments and bars may indicate that selling food in this area is more about efficient and economical feeding than dining experience or providing space for leisure and consumption. The study area included a very large and comprehensive supermarket, Food Bazaar. This presence of this store may have weighed heavily in the Eat Later analysis because there were relatively few establishments included in that segment of the data. Still, the store represents a significant aspect of this food environment and offers an important counter-example to studies that characterize Brownsville as having too few supermarkets and food retail outlets (New York City Department of City Planning, 2008; Gordon et al., 2011). Although urban agriculture places were not included in NYLON FEAST data collection, several food-growing gardens were found in Brownsville. Finally, although Brownsville is an area targeted for food environment intervention by several municipal policies and programs, no evidence of the majority these initiatives was found. Specifically, no Green Carts, Healthy Bodegas, or supermarkets incentivized to open through by the FRESH program were observed.

New York: The Upper East Side

The Upper East Side had fewer food places than expected given that this site had the highest population density, high income of residents, and serves as a tourist destination. As found in the high-income area of South Kensington, there were more Eat Now places than Eat Later places observed in the Upper East Side. Of the Eat Now places observed, more than half were full-service restaurants. Still a surprisingly high number of fast food establishments were found. Most of these establishments were mobile food vendors located on the border with Central Park. It is worth noting that the several of these mobile food vendors appeared to be affiliated with the Parks Department and included calorie counts on their menu boards. In a surprising contrast Brownsville, a Green Cart branded umbrella was observed on a hotdog cart. There were no supermarkets observed in this area. The residential character of the blocks observed may have had a limiting effect on the number of food places observed.

The NYLON FEAST findings somewhat contradict other studies of the New York food environment in finding no significant differences between high and low income areas with regard to the healthfulness of Eat later establishments, but finding significant difference in the healthfulness of Eat Now establishments by area income. A recent study conducted by the New York DOHMH comparing food environments in the Upper East Side, Harlem, and Central Brooklyn found that census block groups with higher proportions of black residents and lower median area incomes scored lower on an areas based measure of the healthfulness of food establishments. Census block groups with high proportions of white residents and higher incomes and areas with high proportions of Latinos have more small format stores with better variety of fresh foods than found in predominantly black neighborhoods (Gordon et al., 2011). Other researchers have compared the availability of foods recommended for diabetics in East Harlem than the Upper East Side. They found that although the low-income area of East Harlem had more small format stores that The Upper East Side, significantly fewer East Harlem stores carried food items recommended for diabetics and that these items were more than twice as likely to be available in stores in the Upper East Side than in East Harlem (Horowitz, Colson, Hebert, & Lancaster, 2004). It appears that although the Upper East Side may have few large format supermarkets, small format stores in that area carry an adequate range of fresh and health promoting foods. It should be noted that this difference in findings could be a result of differences in methodology and/ or food environment observation area size.

London

Overall, the food environments in London were found to be more complex that those in New York with regard to quantity and diversity of food place. Only one study with an empirical focus on London's food environment was found in the academic literature (Bowyer, Caraher, Eilbert, & Carr-Hill, 2009). It reported on a mixed method study of the food environment and residents' shopping experiences in the borough of Hackney, which includes Clapton. Four ethnically tailored shopping basket instruments were used to observe food stores in three small areas of this borough. The authors note that all of the shops observed were family owned. Results showed that only eight percent of stores carried all of the basket items. Only the "white British" food basket could be purchased in a one-stop-shop fashion, whereas the three "ethnic baskets" required trips to at least two shops to acquire all items. Price data showed

considerable variations in the overall price of each shopping basket and that in several cases small shops sold fresh produce at lower prices than supermarkets, but that these larger chain stores had consistently better prices for meat and fish. Importantly, they conclude that their findings do not support classifying these three areas in London's most deprived borough, Hackney, as food deserts.

London: Clapton

The Clapton food environment observation area shared several similarities with the Brownsville study area. For example, Clapton also had a relative balance between Eat Now and Eat Later places. Similarly the majority of Eat Now places were also independent or local brands of fast food. Clapton's Eat Later establishments were mainly small format stores. But, in contrast to small format stores observed in the New York, most of these shops sold a wide variety of fresh foods and dried staples such as whole grains. Many of these small stores reflected the racial and ethnic diversity of the area and catered to specific ethnicities of shoppers.

London: South Kensington

The South Kensington food environment observation area had the highest density and diversity of food places of all sites observed, both for Eat Now and Eat Later types of establishments. Like the Upper East Side, more than half of the Eat Now food places were full-service restaurants. This site was the only area in this study where major international brands of fast food were found. Among Eat Now establishments, here is a mix of restaurants serving non-British cuisine, but this mix is different than that of Clapton. Although large format supermarkets were observed in South Kensington, the majority of Eat Later places observed were small format convenience and specialty stores.

Global Cities, Income Inequality, and the Food Environment

This final section discusses the findings from the NYLON FEAST pilot considers some of the ways that this work contributes to advancing food environments research and methodology as well as policy. The NYLON FEAST pilot found that within local area food environments the number and type of establishments reflect income of residents and overall availability of money for food spending. The types of

food available reflect the place-types present as well as the demography of local areas. With regard to the overall healthfulness of Eat Later food places, significant differences between were found between cities. The mean *Healthfulness-L* score for New York was higher than for London. This may reflect the significant association between store format and healthfulness and the higher proportion of small format stores in London. Place type and area income were the only dimensions where significant differences were found in *Healthfulness-N*, representing the overall healthfulness of Eat Now establishments. *Healthfulness-N* scores for restaurants are higher in high-income areas, fast-food establishments, and in New York.

These results support a social determinants perspective on health inequalities in that they demonstrate income inequality as a salient influence on the healthfulness of the food resources available in local areas within these global cities. Hawkes (2006) uses the term 'uneven dietary development' to theorize how global market integration in the food industry produces inequalities in health through dietary convergence among low-income groups and dietary-divergence among high-income groups. These data on the types of food places found in high- and low-income areas within New York and London support the view that uneven dietary development may also operate at the scale of the city. For example, Eat Now places in high- income areas have higher mean score for healthfulness than low-income areas and that high-income areas have a greater diversity of place and food types, and greater density of food places than low- income areas. Theorizing uneven dietary development is useful in understanding how forces at the international scale are implicated in the production of local food environments, dietary patterns and their effects on population health. Gaining such understanding is essential for crafting effective strategies for countering the forces that produce inequalities in food environments and health. The last chapter of this dissertation will consider the political and policy implications of this research.

Fast and Fresh Foods

Significant differences between food environment observation areas and income areas were found with regard to Eat Now place types. Significantly more fast food was found in low-income areas. And, as opposed to fast food in high-income areas, these establishments were mainly independent local brand fast food retailers and may also be important economic supports for marginalized groups. These NYLON FEAST results are consistent with research on racial and socioeconomic correlates of fast food density in New York that found predominantly Black areas had higher densities of fast food than predominantly white

areas regardless of income and that national chains were most often found in commercial areas (Kwate, Yau, Loh, & Williams, 2009). Kwate (2008) argues that race-based residential segregation is a fundamental cause of fast food density in Black neighborhoods. Segregation shapes neighborhood population and economic characteristics, physical infrastructure, and social processes in ways that make urban Black neighborhoods hospitable to fast food restaurants.

These issues raise questions about how to conceptualize the role of fast food in the creation of urban health inequalities as well as how to address them. The independent branding of fast food in low-income areas has implications for food environment policy and regulation. Different levers may be necessary to influence these small independent fast-food retailers than used for major national and international fast food brands. Because these small independent businesses are not operated in branded chains with 15 or more outlets they would fall outside the scope of menu calorie labeling regulation in New York. The concentration of local or independent fast-food retailers in low-income areas should also be considered when imagining the broad effects that anti-fast-food policies may have on health and social equity in these cities. Research connecting racial segregation and fast food in the US, and on small fast-food operators in London, suggests that such responses may negatively impact income and wealth accumulation for already socially and economically disadvantaged groups (Bagwell & Doff, 2009; Kwate, 2008). It also means that universal policies such as New York's calorie labeling regulation may have diminished impact in areas with some of the highest concentrations of fast food and diet-related disease.

Researchers studying the influence of menu calorie labels on fast food choices find mixed results. Some report that among adult customers of fast food restaurants located in low-income communities just under a third of people who read the labels also report using the information in their purchasing decision. However when receipts for purchases were compared between study areas and controls, no significant differences in the calories purchased were detected (Elbel, Kersh, Brescoll, & Dixon, 2009). In a similar study, the New York City Department of Health found that over one third of customers at restaurant with point of purchase calorie labeling reported that this information affected their purchase. An examination and comparison of receipts from customers that did and did not report viewing calorie information found that people who saw the calorie labels purchased an average of 52 calories less than people who did not (Bassett et al., 2008). Even though the impact of menu calorie labeling on diet may be modest, it seems

important to ensure that the largely independent fast food establishments in low-income areas are included in this type of regulation. Absent such action, the policy stands to have diminished influence in areas where fast food makes up a significant portion of the overall food available and where diet-related disease rates are highest.

Area income disparities in the availability of fried and un-fried potatoes were found indicating that high- income areas had more un-fried options available than low-income areas. This suggests that working with menu designers and cooks to encourage more vegetarian options, the inclusion of vegetables with entrees, and un-fried preparation of potatoes could be an opportunity for intervention. This kind of intervention has been employed in institutional contexts. But, there is less experience trying to conduct such intervention in the private market, especially few such interventions work across all food serving establishments in a city. The Healthy Catering Commitments and Good Food on the Public Plate Programs are examples of this strategy, but which limit their public health impacts by having a small scale implementation.

Finally, there was less variation across sites in Eat Later places, their scores for healthfulness, and the types of foods these establishments make available than there was for Eat Now establishments. This indicates that action to influence the healthfulness of Eat Now establishments may be a greater priority for public health intervention than focusing on Eat Later establishments. Still, these findings do seem to validate the importance of supermarkets.

SECTION THREE:

Phenomenological Views of the City

The third section of this dissertation, *Eaters in the City*, draws on the whole journey data from individuals living and working in the highest- and lowest-income areas of New York and London to present a phenomenological perspective on the food environments of those study sites and cities. Organized in two chapters, this section address the following research questions: How do individuals from different ends of the socioeconomic spectrum in New York City and London perceive, navigate, and use food environments in these cities? How do different types of food places fit into the daily lives of people living and working in selected study areas? How does local, or neighborhood, food availability influence access to food and health for eaters living and working in the highest-and lowest-income areas of New York and London? Chapter Five, *The Saliency and Scale of Neighborhood Food Environments*, argues that neighborhood food environments are salient to eaters, but that this identification operates at a range of scales and that processes of globalization expand, and contract, the everyday geographies of individuals in ways that reflect, and compound, their relative positions of privilege and disadvantage. Chapter Six*, Food Gestalts: A Typology of Eaters*, describes five thematic orientations of eaters with regard to individual complexity, the experience of having a body, food environment perceptions, and food geographies. It provides insight as to why some people travel for food, while others do not. In addition to explaining variations in food geographies, the food gestalts suggest ways of diversifying food environment interventions in ways that speak more directly to each of type of eater.

SECTION THREE: CHAPTER FIVE

The Saliency and Scale of Neighborhood Food Environments

Building the preceding chapters, this one starts by describing the four neighborhoods selected for inclusion in this study, from the perspective of their eaters. Then, using data from mental maps, space-time food diaries, and interviews, I examine how eaters operationalize their neighborhoods in the context of these study sites. By using these data to empirically understand the proportion of food events happening in or out of the neighborhoods people perceive and define for themselves, this chapter begins to address the question of fit between the geographies of food policy and the everyday geographies of eaters' journeys.

Before describing each of the study sites in this research, it is worth noting a few relevant concepts that are reflected in the experiences eaters describe with these places. These concepts also provide insight into why those experiences often differ from more popularly held perspectives on these sites. First, Fields (2011) draws on literature from community psychology to remind us that assumptions about the social homogeneity of neighborhoods and their deterministic powers over the lives of residents ignore human agency and fail to acknowledge the complexity of people's relationships with places. These assumptions also fail to accurately reflect how material, social, economic, and historical dimensions of person-place relationships converge to produce emotions of belonging or exclusion. Thus, as social scientists interested in experiences of place and their relationships to health, we must continually bear in mind the socially fluid and historically shifting meanings of place. The importance of this intellectual stance is likely to take on enhanced significance in cities where neighborhoods tend to be more rapidly dynamic in their social and material transformations.

Second, drawing on the work of Harvey (1996), Feagan (2007) reminds us that capitalist social relations fluidly structure places, and that the 'local' of today is impermanent. It appears that capital's

mobility and drive to accumulate is more constant than any of the people or places encountered in this study. This is a reminder that such macro-level forces and their impacts on urban formations, including food environments, may be less apparent to the short-term or uncritical observer. Yet, these forces may be the strongest determinants of neighborhood change and the circumstances surrounding the lives individuals and communities.

Finally, as discussed in Chapter One, the spatialities of community and urban life are theorized and observed to be shifting in sometimes surprising ways. For example, the notion of spatial polygamy asserts that within the complex of experiences held by individuals over the life-course, and over the time span of a single day, most people have intimate relationships and everyday attachments to, and with, many and sometimes far reaching places (Matthews, 2011). Others would argue that macro-level forces such as technological innovation and globalization, again, structure these polygamous relationships with space and place (Castells, 1996; Katz, 2004). Thus in the place descriptions that follow, I attempt to show readers what study participants have shown me about these places. I also use these critical and theoretical concepts to draw social-historical linkages between sites.

PHENOMENOLOGICAL PERPECTIVES ON THE SELECTED STUDY SITES

The semi-structured interview protocol used in this study included questions about how participants would describe their neighborhoods to someone who had never been there. After gleaning more general descriptions of the area, they were asked to describe the foods available there. Answers from these as well as other interview questions, and anecdotes from my field notes were used to construct the neighborhood characterizations below. Across sites, a major theme is that things are not always what they seem. In an effort to highlight some of the dimensions through which income inequality is expressed and embedded in these places, their descriptions are paired by city.

New York: Brownsville and the Upper East Side

While some of the macro-level forces described above were certainly at play shaping and reshaping Brownsville and the Upper East Side, the social and economic polarizing of the global city was much more apparent here than in London. Similarly, the pace and depth of urban change in these areas

was less extreme than in London. These neighborhoods held their history in a way that was perceptible to those that regularly inhabited them, and me.

Brownsville Brooklyn, and census tract 910 specifically, is home to a disproportionately high density of public housing projects, and one of the highest violent crime rates in the city. It is one of the only areas of New York were such crime has not been reduced in recent years. Brownsville also has a notoriously tense relationship with the 73rd police precinct that serves it (Baker & Roberts, 2010). Recent articles in the New York Times report that unlike so much of Brooklyn, Brownsville remains untouched by the borough's recent resurgence in popularity and economic development (Bellafante, 2012). And, as discussed in the previous chapter, the area has been characterized as a food desert. However, these themes, tensions with police over the areas safety and dissatisfaction with food availability, play out in interviews with eaters in Brownsville in surprising ways.

The interrelated issues of safety, crime, and community-police relations were high on the agenda at a meeting of Community Board 16 that I attended in the summer of 2011. Most of that meeting was dedicated to an item not on the official agenda, an incident described by meeting attendees as a police incited riot that took place during a funeral. The incident's details are less important to this story than the overwhelming sense that I perceived of fear, and anger about that fear, of police that was felt by this community. Mulling over this incident's relationship to food access, I concluded that if mothers would not let their children ride bicycles outdoors because they were afraid they would be stopped, frisked, and even brought into the precinct over infractions as small, if not smaller than forgetting to wear a helmet, they most likely would not send them to the store on their behalf, or on their own.

I explored this issue with study participants and found that, yes, safety was a concern but mostly with regard to feeling unsafe from police. The following interview excerpts illustrate the ways that residents of Brownsville portrayed these points.

> *"It's friendly, if you know people, but if you don't, it may not seem that way. If you don't know people, it's kind of bad, because people won't look out for you. I stay out of other people's business, I mind my own, I go where I need to go and I come back and I'm safe. However, my cousin who lives in the area as well is involved in everything. Not a bad kid, a great kid, but he knows everybody. So, that's kind of good and bad, because he might know some bad people who were involved in something, put his name in there and then it's bad."*

> "*Some parts of Brownsville, you can walk when the sun's up with no problem. But when the sun goes down, it's no-man's zone. The neighborhood precinct, the 7-3, they know this very well. Do*

they put police presence there at night? No. What reason? I don't know. They don't. Of 100 difficult individuals, I'd say 20% of them got pushed out by their community, church, residents. I'd say 30% got pushed out by NYPD, by incarceration, or fear tactics. I'd say about another 25 to 30% were executed. The other 20 and 30% moved on because they got smarter. This is from a street-eyed vantage point."

"So yes, a lot of these mothers are afraid to send their teenaged sons and daughters out at night to go to the store. Like a month ago, a young man came from Plaza. That's the projects right over here, Mother Gaston and Hegeman. He goes to the store to get a pack of pampers. He was shot. But it wasn't by a cop though. It was a hate crime because another guy shot him over a girl. So between the police harassing your children or another child envious because your child, now you understand the type of violence you're dealing with."

The comments above emphasize that contrary to the popular media portrayals of the neighborhood, Brownsville is a largely perceived as a safe place for people who are part of its community and who keep themselves out of interaction with gangs, drug dealers, and other potential sources of trouble. These residents also emphasized that the police were more a part of the problem of neighborhood crime than they are part of the solution. Some even went so far as to intimate that, along side the high-profile stop-and-frisk tactics, the local precinct was turning a blind eye to at least some of the area's crime.

Popular media accounts like those cited above also portray the area as monolithically poor with regard to income and educational attainment. Indeed, the census data used to select this study site affirmed this position. However, resident perspectives again reveal a different picture.

"*I think everyone lives in Brownsville. But you don't really see everyone that lives in Brownsville, because like the people who typically live in Brownsville, who are people who like are outside, you know, sitting on their steps and not working and no school or education. However, there's people like me who graduated from school, I worked every day, but you don't see me a lot, because I work or I'm in school."*

"Okay, Kim, let me tell you like this, Kim. The mentality of living between an African-American, say and an Italian or European-American, is totally different. For example, this gentleman I'm speaking of now. That's just his average nightly take on a slow night is $3,000. He makes about $10,000 a week. $40,000 a month. $400,000 a year. . . . You walk into his apartment - flat screens, plasmas, $10,000 stereo equipment. He drives a little BMW X5. But he lives in the projects."

"You take a friend with a car and drive through the parking lots in most of the projects in Brooklyn, and you'll see cars that you'll be like, "I can't afford that." But this is in the projects. Is he a drug dealer? No. What is he? He works for Transit. He works for Con Edison. He works for Merrill Lynch. Why? He's third generation projects, meaning that his mother got it from her mother and then when his mother died, he kept it."

The interview excerpts above reveal that Brownsville is an area where there may be much more educational and economic diversity than official sources report. The details of the very wealthy 'bootlegger' living in public housing while making nearly half a million dollars a year, and the more middle-

class residents of those buildings who stay through the generations made me wonder why there weren't more, or any, full-service restaurants in the area to serve this clientele. The comment about the different mentalities between African- and European-Americans led me to consider that beyond cost, taste, and proximal availability, there are apparently other and perhaps more deeply ingrained aspects of neighborhoods and their food cultures that shape eaters' tastes, desires, and preferences.

Indeed, residents' comments about the food environment in Brownsville gave the impression that they were satisfied with the fast food dominated restaurant landscape, but felt that the supermarkets in the area could be improved with regard to their cleanliness, size, and pricing. For example, this car owner said,

> *"There's a Chinese restaurant that stays open until like 1:00 a.m. There's the corner stores -- they're actually open all night, they just have like a drive-thru window, but it's like a walkthrough window, which you can go through all night. There's a pizza shop, there's a McDonald's, there's like West Indian food. Like, you can always get something to eat, no matter what time it is . . . But food shopping, I don't really do it here, because I'm not -- there's really nowhere for me that I really like in this area, but there's a big Pathmark about ten minutes from here that I usually go to. I always just think like there's better deals there. And it's cleaner, it's bigger, so that's the one I choose to go to."*

But, when asked about the potential benefits of urban agricultural projects, some residents claimed that such efforts would be fruitless in the context of the area's crime and would likely be vandalized. It is worth noting that of the four sites included in this study, a few Brownsville residents were the only people to disagree with the assertion that municipal governments should support urban farming.

> *"No, because unless you have security, no. They would destroy it. First-hand witness. When they first started in Red Hook, the neighborhood community garden, the first couple of days they woke up and found it destroyed because the hoods like to go in there and urinate and smoke their marijuana. Yes, it was a beautiful idea, but no."*

Still, as the following quote from a worker in the area illustrates, non-residents agreed with the popular portrayal of Brownsville as a food desert and felt that there are not "nice" places to eat and order food from in the area. It also re-emphasizes the links between perceptions of safety, policing, and barriers to food access.

> *"I did not want to buy any Chinese food. And, you know, I felt upset that — well, not really upset but kind of frustrated that I couldn't find — there was nowhere in the neighborhood that I could've called to even order something. I did call a place out of the neighborhood. They said they would come in and deliver. The man came with the food. He was talking on his cell phone. The police saw him and was pulling him over. Because he didn't want to have an altercation with the police, he drove off with the food."*

The concerns about safety in Brownsville also seemed to have an impact on the ways that men, specifically black men, in that neighborhood experienced their bodies. Several of the men I spoke to there described experiencing violence from police as well as from other sources over the course of their lives. In response, some took up activities like boxing. Relevant to this study's concern with diet-related health disparities, others maintained intentionally large bodies. As the following quotes show, in this socio-material context losing weight to protect one's health from threats such as hypertension and diabetes were perceived as making oneself vulnerable in other ways.

> *"Now I weigh two twenty. I lost over 150 pounds. I was put on a very strict nutritional diet because I'm a diabetic and I've got hypertension. And I have a severe clogged right artery. So no fried food. No meats. Small portions. Small portion of rice. No. sugar. No salt. No fats."*

> *"I feel that I cannot defend myself, I feel unattractive, because when I was a heavy - a big man, I wasn't sloppy if you get to understand. I was not sloppy. I don't feel secure. I don't feel self-confidence. In a sense, I feel maybe shallow, like I'm half the man I used to be. Honestly. When I was heavier, I was more mobile, more excited, more outgoing, more aggressive in certain matters, but now I feel more timid, more shallow, more withdrawn."*

> *Because the jobs that I used to do demanded strength and stamina. So I needed that size because you couldn't be my size and walk up to a 300 pound guy and tell him to get out of the club. You would have to physically throw him out. Now I don't know if I could take a hit like I used to."*

This finding has obvious implications for understanding why some diet-related health interventions may be ineffective in this particular population.

Like Brownsville, the Upper East Side has a reputation that precedes it. However, it has a reputation for being home to the wealthiest of New Yorkers, and some of the wealthiest people in the world. One might assume that a neighborhood with seemingly unlimited resources in terms of money and political power would have all of the food resources its residents desired, and perhaps even some extra ones for its workers. I found this was not the case.

As a part of my efforts to recruit study participants in this area, I had an opportunity to attend an auction at Sotheby's that was a benefit for a foundation created in memory of an Upper East Sider. I attended for free because I had previously worked for the event organizer and had reached out to them for help making contact with eaters from that area. I observed a lot that evening in the early March of 2011. Most relevant to this chapter, was the first item of the evening's auction – a heart shaped box of Russell Stover's chocolates left over from Valentine's Day and unpretentiously purchased at the drug

store across the street. After some very fast talking and few pauses for dramatic effect the chocolates were sold for $700. The lesson for me in this experience was that in a Marxist sense, when money is no object the use- and exchange-values attached to food can be divorced and rearranged in ways that are surprising, to say the least.

Along these lines, it was then even more surprising to learn that many people living on the Upper East Side were deeply dissatisfied with their neighborhood's food environment. Unsurprisingly, they used their resources to procure foods elsewhere. Most striking was one participant's description of Manhattan supermarkets as part of "*the 11th circle of hell."* To avoid such torture this eater and other's described in the excerpt below shop not just outside their neighborhood, but when possible outside of New York City.

> *"There are an X number of supermarket chains and frankly I don't like any of them. When I go out town almost anywhere, to visit someone, to visit one of my daughters who lives in New Jersey, shopping in a grocery outside of Manhattan is really a pleasure. Shopping in these places, with their tiny little constrained aisles, is horrible. Yesterday, and I do this sometimes, I took my car and drove up to Fairway at 125th Street; that is terrific; I mean, for the variety, the price, the whole thing. But, Manhattan, the Upper East Side supermarkets are not terrific. I mean, it's maybe on the 11th circle of hell. And it's incredibly expensive. Incredibly expensive!"*

> *"When I used to live on 92nd Street there was a building right across from my place – it was a very expensive luxury building. They [luxury building residents] would come in on Sunday nights, bring their laundry all done, bring all their groceries for the week. Kids, everybody's back. I would see the license plates, either Maine or Connecticut or New York, but probably West Chester. They're putting it down on the street and the doorman's helping them take everything in."*

E-retailing grocery services, like Fresh Direct, were another way that Upper East Siders described procuring food to eat at home. Several eaters I spoke to in that study site participated in this practice. Their stated reasons for doing so were somewhat varied. One recurrent reason for ordering groceries over the internet was to save time. Others appreciated not having to lift or carry heavy items. Ordering online and having items delivered to one's home also made it possible to purchase things like a case of one's favorite beverage or toilet paper that would otherwise be challenging to do in Manhattan without a car. Given the high prices for grocery items in stores on the Upper East Side some eaters even claimed that having food delivered was cheaper for some items than going to a nearby store. The quote below, illustrates these ideas.

> *"I use Fresh Direct, because I don't have time to go to the store. And I also don't have time when I get home from school late at night to cook myself a nutritious meal. And they have four-minute meals that are very good for you, that have protein, and are like under 600 calories. You just put them in the microwave for four minutes. And it's like real food. And, I like Fresh Direct because the produce is amazing. And I don't have to worry about it, it just comes to me. Also, you know I had my boobs done, and I can't carry heavy bags. In terms of cost, I think that it's less than the*

Food Emporium. It's more than Fairway, but Fairway's in Brooklyn. It's less than Morton Williams. It's overall, because I'm so neurotic, I did price comparison. It's less than Gristedes. And I don't like Gristedes."

Eaters in both London study sites also reported using e-retailing grocery services. However, Brownsville is not included in the delivery zone for Fresh Direct. Thus, no eaters there reported using this kind of service to get their food home. The quote above also illustrates that, at least for some women I interviewed in this area, maintaining a slim body and attractive appearance was a very high priority in their lives. Being beautiful was important enough that they were willing to sacrifice other capabilities to maintain their appearances. This was not a theme that came up in any of the other study sites.

In another interview, I was describing the concept of a food desert to an eater on the Upper East Side and was surprised to learn that although this eater has never heard the term before, it had strong resonance with their experience. The comment below was also significant because it highlighted how even within an area housing some of New York's most expensive and prestigious restaurants and wealthy residents, a relatively small area dominated by fast food chains could take on this label. This suggests a need to reconsider the scale at which food deserts are identified and the demographic profiles of the residents that live in them.

"Yeah. I think that's really true of 86th Street, this neighborhood. Yeah, because you get — there's like Tasti D-Lite that fake ice cream. There's a Haagen Dazs on 1st Avenue. There is — 86th Street is all junk food, Pizzeria Uno or Chicago Pizza. There's a zillion pizza places. There are not — I can't — there's one very nice Mexican place on 86th Street but then there is Dunkin' Donuts, Chirping Chicken. Oh, it's all fast food."

However, as the quotes above and below demonstrates fast food places take on very different meanings for residents and workers. This contrast emphasizes that urban food environments sometimes are structured to serve several populations at once, even when those groups have divergent tastes and price points for market entry. The frequency that this individual eats food that is by necessity inexpensive, fast, and thus often admittedly not the healthiest of available options, suggests that, as a measure of food access, Euclidian proximity may be more salient for workers in, than residents of, urban food environments. As a local worker states:

"I buy my lunch here almost every day. I almost never bring lunch and then mostly, sometimes I'll get a little bit of breakfast, mostly otherwise it's coffee and snacks. It's a pretty limited range of things. There's a guy who does halal food on a little cart in the corner, which I actually love. Although speaking of salty, it's probably too salty. There's a Subway up the street, there's a pizza place. I used to go to a little Taco place around the corner but I don't seem to go there anymore.

I find myself even less willing to spend more than $6 or $7 because I just know what I can rely on to get fast and close."

During data collection for this study it was also a revelation to discover that the social geography of class on the Upper East Side was much more varied than the neighborhood's reputation would suggest. The following quote from a non-resident staffer of a local elected official describes this phenomenon.

> *"It's a neighborhood that has an international reputation but on the ground it's much different than that reputation in most respects. I work with the east side of the neighborhood, which is not the famous Park Avenue, Fifth Avenue side of it. What I see is a much more actually working class neighborhood even though it's income wise it's probably quite high. It's a lot of middle class folks. One of the highest percentages of rent regulated tenants in the city. A lot of seniors, a lot of regulated seniors who are finding themselves squeezed. A lot of people who suffer in a bad economy but are still either, their income is too high or they simply have the wrong kind of self image to be able to avail themselves of a lot of the benefits that are out there for people who need help"*

In addition to describing the somewhat declining shifts in income moving east of Fifth Avenue, this quote speaks to this study's interest in understanding the scale of the lived neighborhood food environment, the ways that social policies influence such contexts, and the ways that eaters respond to them.

Specifically, the quote above reveals that, within the geographic area that most people familiar with Manhattan would label as the Upper East Side, the actual space inhabited by the very wealthy is relatively small. Yet, it is what determines the reputation for the larger whole. The quote also indicates that while its reputation for being wealthy masks the area's high concentration of rent-regulated housing, and allows those residents to maintain an invisible tie to social welfare, the less easily disguised stigma associated with applying for and using SNAP benefits prevents people from accessing them. This point is particularly important in the context of the finding reported in Chapter Four that there were no Eat Later food establishments that accepted food stamps found in that food environment observation area. It also suggests that the poor quality of the supermarkets in the neighborhood described earlier may be a result of high-income food dollars being spent outside the area and leaving the supermarkets there to serve those with significantly fewer resources. If this were true, a case could be made that increasing area participation in SNAP by reducing the program's stigma might improve the quality of these stores by increasing the available dollars to be spent in them. Thus, SNAP may have the untapped potential to achieve what FRESH attempts.

London: Clapton and South Kensington

Interviews with eaters in both Clapton and South Kensington pointed to some of the more dynamic qualities of urban food environments and neighborhoods, as well as how macro-level forces intersect with everyday lives to shape them and their lived contexts. South Kensington, like the Upper East Side, may have always been an area of relatively privileged status. Still, residents describe the area and its food as having changed significantly over the past thirty years. In contrast to the broadly held perception that income inequality creates a landscape of unequal food provision in New York, at least with regard to grocery stores, in London eaters describe poor areas as having a greater variety of fresh fruits and vegetables available than wealthy areas whose food environments are dominated by stores selling expensive convenience foods. For example, one worker eater from the South Kensington site said of the landscape of food availability across London,

> *"you've got poorer areas near Brick Lane and White Chapel which have lots of great fruit and veg that you can't get anywhere else because it's got big populations of people from Asian countries. So I don't think wealth in an area sometimes can affect the kind of food there. Where I lived in Glasgow they have a great big street of fruit and veg shops because - and it's like the only place in the city where a lot of these ethnic minorities can buy the stuff that are a part of their menu."*

At the time this research was conducted, Clapton was deeply involved in a process of gentrification. The tensions it draws between social classes, and the role that the food environment can play in such struggles are the major theme of that site. As the narrative below will show, gentrification in that area has the potential to reduce the vibrancy and variety of the foods available there.

In addition to waves of immigration and their influences on urban food environments, technological advances and media expansion have increased and transformed the flows of people and goods into, and out of cities, especially global cities. Evidence suggests that these changes are having different effects on high- and low-income areas. Globalization has led to the growth of 'new forms of human sociality' where technology and media support the extension of social relations in new ways (Amin & Thrift, 2002). In my fieldwork I found that dialogues about food environment changes in Clapton created new arenas for purportedly democratic participation in local decision-making. These examples of media use illustrate technology's advancing role as an arena in which the political discourse surrounding changes in the material world takes place. In Clapton, the internet served two different but equality important roles with regard to the two food environment changes debated and enacted there while I was

conducting this research. These changes were the opening of a Tesco Metro on Lower Clapton and the re-creation of a weekly street market on Chatsworth Road. Both of these examples highlight the frictions that arise from processes of gentrification and the ways that media can provide an illusion of inclusive dialogue and have the potential to open local forums of debate to the voices of outsiders.

Unlike many areas in New York that undergo gentrification, Clapton has no tube station and less than spectacular bus service connecting it to the rest of London. For these reasons, I found it unusual that this neighborhood would be chosen as 'the next place to be' in London. But, the area has a great deal of green space and a historically diverse population. It was described to me as, " *"a lovely area. It's got loads of parks and the River Lea."* In addition to green space the area was described as "*interesting, because of Chatsworth Road and because of the sort of independent nature of the retailers there, and in terms of where you buy the food and the food shopping, it's really affordable. And the shops reflect the sort of the ethnic needs of the sort of various communities that live there."* Somewhat paradoxically, the diversity of people, shops, and foods in the area were a large part of what made the area attractive to renters and homebuyers priced out of more central locations.

Several white residents that had moved to the area more recently described the ethnic diversity of Clapton as a feature that drew them to it and lamented that gentrification was changing its social and material landscape. In one such example I heard,

> *"it feels a bit sort of sad, because actually, that kind of -- that feeling of being in a place with a very mixed neighborhood, but kind of feeling that you're -- that there isn't such a separation isn't that common in London. And even though it's not like huge interaction where everyone's hanging out having parties together, it kind of feels like that's there's generally -- I don't know, there's a sort of openness around here."*

But, along with this apparently dwindling sense of openness and diversity, gentrification brought some usual gifts. Clapton had become much safer and was rewriting its reputation. Or, at least some of its residents were. As the quotes below recount, the neighborhood had a notoriously violent history, culminating in it receiving the moniker "Murder Mile." This history was not so long ago, or far away, that its material evidence had been erased when I was there in 2010. While conducting the food environment observations for this research, I found a Chinese restaurant with a bullet hole and ruled tape, suggesting a ballistics investigation, marking its front door. Still, a great deal of effort on the part of the new middle-class residents has gone into cleaning up Clapton's public space and face.

> *"Over about a year, I don't know quite how many it was, it was something like ten murders on this stretch of road, the media dubbed it the Murder Mile, which didn't do the area any favors. So, I did a lot of work [cleaning up a park in the area], and here's personal request of you, that if you mentioned the phrase Murder Mile in your thing that you very much put it in context. It used to be called that and we worked hard to stop that experience of it."*

> *"It [Clapton Pond] was really rundown. And a lot of -- it still happens in some of it, but a lot of the local drinkers used to come sit there, people didn't really want to use it. We've done a lot of work, and we've got the council onboard, and the council have done a lot of work, thankfully. We have some of the money we raised to pay for the new bridge across -- because the bridge was derelict, it was dangerous. We got a new bridge across there, and we paid for the new notice board, which is getting mended this spring*."

A lot of the "work" of transforming Clapton revolved around public space generally and Clapton Pond's surround park in particular. While the park beautification has many public benefits, in the context of it being located in the MSOA with the lowest median household income in 2000 census, I wondered from whom the funds for its repair had been raised and if there might not have been more pressing needs in that community with regard to, for example, educational or recreational programs for youth. It should be noted that the bridge mentioned is largely decorative and only about ten feet long.

The efforts to improve the park and pond bled into the bigger goal of creating an official Area Action Plan for Clapton.

> *"One of the things that's been an issue for Clapton, well in certain other areas, they have what's called an Area Action Plan, which really guides planning, guides how we want to see the area developed, and Clapton's never had that. So, developers -- so, when planners are responding to developers, they don't have that very specific guidance."*

This example illustrates one of the critiques of localism introduced in earlier in earlier chapters of this dissertation, namely that it can serve to exacerbate inequalities in power and help the hand of neoliberal urban transformation. While the creation of an Area Action Plan for Clapton could appear to be an opportunity for community participation and local control over land use, the intimate affiliation of this project with the small and somewhat exclusive group that transformed Clapton Pond strongly suggests otherwise. While I was not in the area long enough to follow this particular backstory to its end, I would argue that such a planning process would serve to codify the desires of the newer residents at the expense of the opinions of those that are less educated, and less materially and politically resourced, and thus less likely to be included. This example also suggests a conceptual linkage between the food environment and public space. Both arenas touch ground with planning policy, have clear connections to public health, and as the following examples will show, the potential to serve as seemingly inclusive and

altruistic spaces where the desires of a new minority in a neighborhood can hastily change the character of neighborhoods.

Both the re-creation of the Chatsworth Road Market and the opening of the Tesco Metro used the internet to inform residents about the these changes and provide formal and informal spaces for their feedback on the planning proposals necessary to move these projects from vision to reality. Historically there had been a traditional street market in Clapton that sold fresh food and some household goods. Over time the market's customer base dwindled and it closed. And as the following quote shows, after a period of unglamorous functionality, the retail space on that road began to change in ways that some residents found quite exciting.

> *"It kind of got rundown [Chatsworth Road], quite a lot of derelict shops. But there's some shops that have opened up, I think from very much from the point of 'what can we create here?'. And they are quite nice, middle-class, and all that kind of stuff. So, it's not that I'm saying that's all we should have, and I'm not saying that at all. But there's an organic shop, there's another café -- there's quite a lot of cafés. There are a few places down there. And it does bring a different energy to the place."*

In the story of the Chatsworth Road Market, the visionaries attempting to re-fashion the market now framed as "historic" used the internet to solicit and compile community support for the project as away of demonstrating its potential value to the local council. As the interview excerpts below show, they were successful and received permission to hold several bi-weekly pilot markets. However, the new Chatsworth Road Market appears to have taken on a character quite different than that of its predecessor.

> *"And he [one of the market planners] really worked with some of the local traders, and some of the other people. And there were a group of people locally who wanted to do something with the area to create a market. I've seen some of the web presence, and I know they're doing a survey to get opinions about it. It's really to try and bring some energy back to the area."*

> *"I thought it would be like a normal street market. But it was kind of like a bit of a trendy, like art-y, boutique-y market. With people selling like jewelry and whatever. Which, that stuff isn't sold on that street, there were just like loads of like trendy artists hanging around. And it was like fucking hell, like, this isn't Clapton -- where have these people come from? Because -- I don't feel like they live here -- I mean, maybe they do?"*

Clearly the new Chatsworth Road Market did bring a "new energy" to the street, but it was not one that all residents wanted or expected to grow out of its planning process. I had the opportunity to visit the market as part of my fieldwork and was also surprised at the discrepancy between feel of the older local shops that were termed derelict above, and the street vendors. For example, there were several food places selling inexpensive traditional foods of non-British origins such as a halal butcher, a Nigerian video store

that also sold bulk goods, like rice, in bags big enough for me to fit in. At the street market, alongside the cashmere baby sweaters and fresh cut flowers, there was a re-presentation of British cuisine. These traditional English foods included new and old varieties of locally baked meat pies, fresh vegetables from an urban farm in Hackney, and a stand where young men dressed in styles from the early 1800s sold coffee made of beans they ground by hand on site accompanied by kedgeree, a gruel-like food historically eaten by British colonials who blended their love of fish (and overcooked starches) with Indian cuisine.

The opening of the Tesco Metro on Lower Clapton Road was highly contested by some Clapton residents. This group, which included some of the same people involved in the clean up of Clapton Pond, used the internet as a forum for organizing 'the community' against the biggest supermarket chain in Britain. The quotes below illustrate this debate, again emphasizing the close ties between urban planning, urban development, and the dynamic and contested character of the food environment. The story starts with the fact that, "*Tescos have a big store down at Hackney Central. They've been attempting to get planning permission to rebuild the store, but with massive flats on top*." The "*expansionist*" nature of Tesco was alarming to some Clapton residents. They feared the impact the new store would have on the smaller retailers in the neighborhood and felt that Tesco would not make a nice neighbor. In addition to arguments against having trucks deliver to that location, eaters relayed the sentiment that Tesco is "*a business, they run their business incredibly well. Just not with all the values and the interests that I and a lot of other people would like*." Still, at least some of those who opposed the new store felt that in the context of Clapton's historically very poor resident population, it could have value. As one eater put it,

> *"I'm not against Tesco, per se. I know that when I shop at one of the local shops, even though they may ship the stuff in as un-ecologically, un-environmentally as Tescos do, they may be more expensive. They may actually not provide locals who find it difficult, financially, with this option. My perception is by using the local shop, it's better for the community economy. But also for the local population. But let's say, you know, people who find it difficult, financially, Tesco would provide an opportunity for them to walk around the corner and buy something if it's cheaper; cheaper than the local shop."*

Thus, the debate about the new store became an online debate about whether or not Tesco would better serve the Clapton residents with the least financial resources than the somewhat more expensive local shops. In addition to lower prices, Tesco would also bring a free 'cash point,' or automatic teller machine,

and the ability for people without cash to use credit cards to purchase low-cost items without the additional fees charged by the independent shops for paying in this way for purchases less than £10.

The debate online also seemed to attract what some people I spoke to believed to be the commentary of an experimental artist collective called DECIMA. This raised questions about the authenticity of the online debate if indeed DECIMA were the devil's advocates, not local residents with little money genuinely arguing in favor of the Tesco. For example I heard from one eater, "*now, I may be wrong there, but -- and there's been quite a lot of stuff on the web where there's a group of people who seem to take light in puncturing holes, as many as they can, in the case the [anti-] Tesco group have. Are they pro-Tesco or are they just anti-Tesco group?"* Just the idea that outsiders, or even Clapton insiders, expressing less than authentic opinions seemed to destroy the credibility of the online debate and generate paranoia on the part of at least some of its participants. Nevertheless, the web-based forum appeared to have some very real, if merely symbolic, connections to the material world. I was able to continue following this story from home in New York by regularly checking in with the no-Tesco website. This is how I learned that within the first week of it being open, someone had smashed the store's front windows out.

On a subsequent research trip, I was determined to understand reality of the debate about prices and whether the Tesco would indeed benefit Clapton's poorest residents. During an interview with one such eater I raised the question. This eater described themself as follows:

> "*I was a computer engineer for 13 years. Just been recently laid off. So I'm on social benefits now which is job seekers and that. I'm struggling to feed myself at the moment. Like everybody else. With the price of food, you know, the budget going up*."

With regard to my question about the benefits of the newly opened Tesco, he responded,

> "*Well no because it's not a big super market, it's only a little one called Tesco Express or Tesco Metro, which is like a smaller version of a bigger super market, which is the one on Mare street. Plus the items, they don't have the variety of items they just have the expensive brands. So no I've gone in, I've got a pack of crisps out of it, because they were like 10p cheaper than in the little shop, but other than that I've just gone in, walked around, and walked back out*."

Although the prices may not have been lower than those at the local shops, the ability to get cash for free to then go to a local shop, or shop at Tesco's and pay a little more for individual items but avoid additional fees for buying on credit, could enhance access to food for some Clapton residents. But the anecdote above suggests that the ability for Tesco to leverage its size to purchase food at lower prices and pass on

that savings to customers was only at play in the market for potato chips, and thus unlikely to create any significant positive impact on public health.

In South Kensington, eaters describe a rich and varied food environment that has been shaped by forces of globalization. This process has changed the format of the food retail environment, the varieties food available, raised the bar on wages for the wealthy, and in turn ingrained a culture of convenience - expressed through food. But, unlike the Upper East Side which was described as having a wide range of inexpensive fast foods available for those with more modest means, this area leaves those with less money with less choice about what to eat. One eater described the area as follows:

> *"a part of London with a lot of money. There's a lot of green space with Hyde Park. It's quite beautiful. The architecture is beautiful. In terms of museums and resources, it's probably the best area in London. It's amazing. You have the Natural History Museum, the V & A, the Science Museum, all these different resources on your doorstep for free."*

The quote below demonstrates that for low-wage workers the wealth of the area and the high cost of food means that eating out, or eating on the go will be eating foods that don't necessarily feel like eating a meal. Thus, the lack of cheap fast food options may lead to food choices that are even less healthy than a burger and fries.

> *"In this area, I haven't eaten out yet. It's probably because I don't have that kind of disposable income at the moment. So mostly it's eating on the go. If I stayed in the studio too long and I'm going down to the tube station, I might pop in a confectionary shop and pick up a quick snack to keep me going until I get home. So I'm really not eating out main meals, more kind of confectionary."*

Residents describe that South Kensington's food environment has changed rapidly. These transformations started in the 1970s with the appearance of new American supermarket chains and restaurants representing food from non-British cuisines. These changes were especially dramatic for those that had lived through World War II and the era of food rationing. One older eater in South Kensington described these changes in the following ways.

> "*The supermarkets really became significant in this country in about 1970. That's when they started. First we had the Safeways, which is an American one. Safeways came, and then there were Sainsburys and Tesco is the big one. All those supermarkets had arrived in the last 30 years. And now there are so many, and convenience stores. Not only do they have the supermarkets, the – the big supermarkets have little stores."*

> *"It's routine now [eating foods unavailable during rationing] because the food gradually came to be in the shops. And then we had tremendous variety of food. I mean we never had Italian food as we have in this country now. We never had Chinese food; Chinese, Italian, all sorts of food is available [now]."*

As these new foods became more familiar, British tastes changed. As one eater states, "*then restaurants started to come, so you then went out, so you tried the various restaurants. And you became educated in foreign foods- and there's so many restaurants that I really couldn't think of anything that I would want to put in the area now."* This appears to have reinforced the dynamically diversifying food availability of the area to the extent that now "*English food things like roast beef doesn't exist anymore, steak and kidney pies are difficult to find*." While this perception is telling of an overall sense that the areas food have become more ethnically diverse, I was able to find several establishments selling traditionally British foods.

In addition to changing the restaurants and food retail formats in South Kensington, globalization has changed the incomes of people living in that area, the types of foods they are willing to spend money on, and their at home food practices. For example, *"people are buying so much more takeaway food they don't actually make it in their homes anymore*." It appears that these changes in turn produce and reinforce changes in the food environment as the market for food morphs to meet these desires. In supermarkets these changes are seen in the proliferation of fully- and partially-prepared food. Eaters describe these, "*ready meals and all that sort of thing*" changing at home behaviors because "*you don't need to cook a thing here*." These changes and those described in the following quotes were portrayed as taking place since the 1990s. This timing fits with the history of neoliberal globalization and its influence on cities (Brenner & Theodore, 2002).

> *"You know, people were making more money. There's much more money around now than there ever was. I mean the salaries that you find people getting are extraordinary. Absolutely sky high American salaries."*
>
> *"You might have read the newspaper here, the man called Lord Young just said, "Britain has not been affected significantly by the recession." And it hasn't. The restaurants are packed here. People are still going out and buying cups of coffee. In fact, as he said, they've never had it so good. They – they're doing well."*
>
> *"To go and buy a cup of coffee in a cardboard cup and walk down the street with it, ten years ago never happened. That's a change. I see a man coming down every Sunday morning, he walks down here having collected his paper and he's carrying two cups of coffee. Obviously one for his wife and one for himself. And I think they're all gone mad, the English have gone mad. They've got too much money to spend."*

One need not be a nutritionist to imagine how such changes could negatively impact the health of eaters in wealthy urban areas with food environments like South Kensington's. Foods prepared and

eaten outside the home notoriously have higher than recommended caloric, fat, salt, and sugar content. Beyond this apparent appetite for convenience food, one restaurateur running an upscale eatery shared with me that data from an online customer survey he conducted revealed that residents of South Kensington regularly ate in restaurants like his between four and six nights a week. When asked about the implications of this finding for his social responsibility to provide healthy menu options, he all but laughed. He believes that his role as a business owner is to generate profit, not public health. And besides, he claims that there are already a few healthier menu options available, but that no one but ladies on diets ever orders them.

EATING IN AND OUT OF THE NEIGHBORHOOD

This chapter now turns to its investigation of the assumption that residential neighborhoods play a deterministic role in shaping urban diets. Food diary and mental-mapping data were cross-analyzed to calculate the percentage of in-neighborhood food events for each participant's three days of self-observation. The in- or out-of-neighborhood distinction was determined based on the location of the event in relation to the individual's definition of their neighborhood boundaries as illustrated on their mental map. In the few instances where eaters returned diaries with incomplete maps and elected not to participate in the interview portion of this research, study site boundaries were used to determine the status of the food events recorded. Table 20 provides the number of each types of data included in this analysis in total and by study site.

Table 20. Food Diary, Interview, and Mental Mapping Participants by Study Site[16]

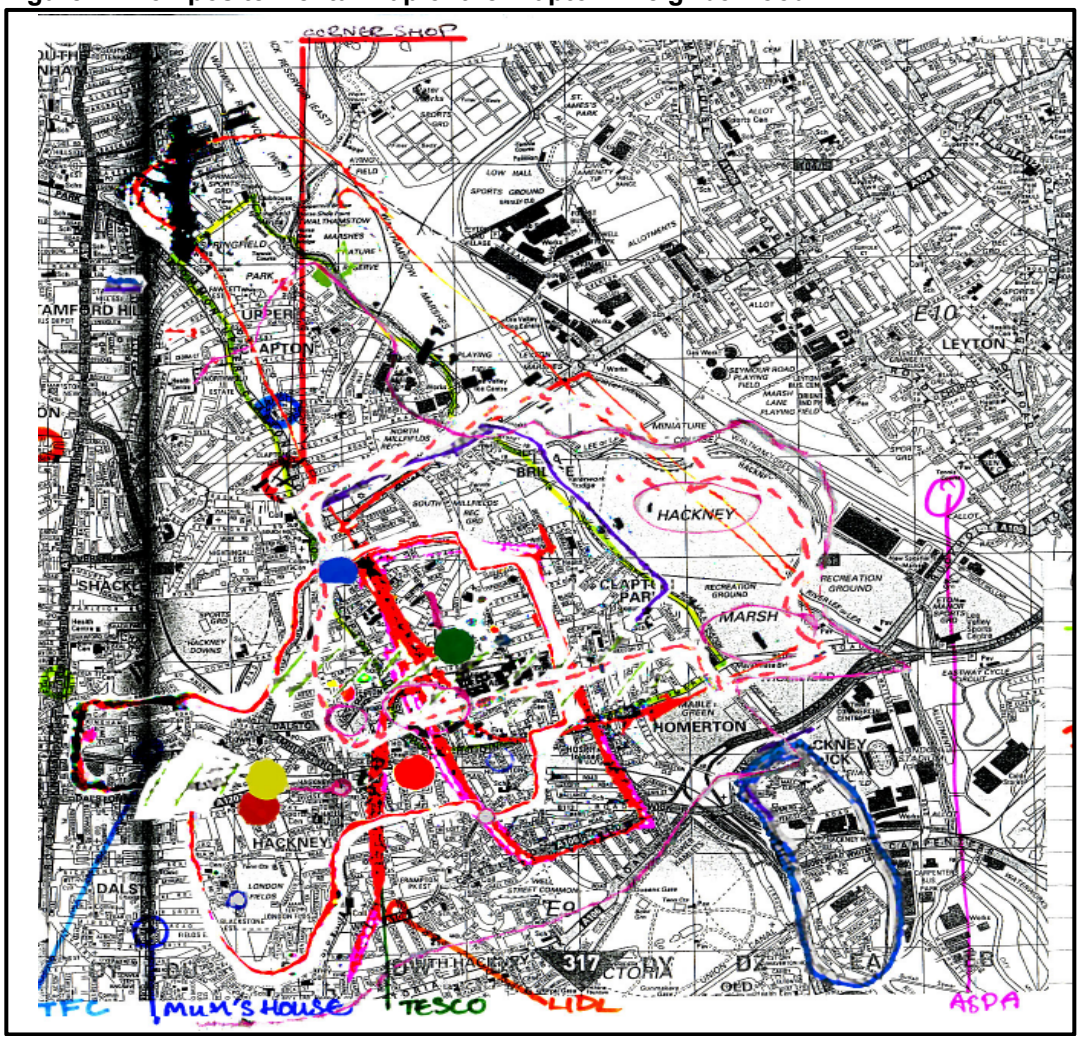
	Brownsville	**Upper East Side**	**Clapton**	**South Kensington**	**Total**
Food Diaries	12	10	12	6	40
Interviews & Mental Maps	10	10	11	5	36

Before fully presenting the comparisons between areas with regard to percentages of in-neighborhood food events for each category of eater, it seems essential to this study's concern with

[16] One London eater lived in one study area and worked in the other. This individual completed two mental maps, one for each study site and their diary was used to calculate the percentages of in neighborhood food event for each site.

understanding the role of neighborhoods in shaping diets, to consider what these data reveal about how participants operationalized their neighborhoods. To address this concern, I created composite maps using photo-editing software to layer the mental maps from each neighborhood. Figure 4 provides an example of one such composite. It illustrates quite clearly that within that study site, as was found with the others, the definition of where Clapton's boundaries lie was quite fluid. In addition to illustrating the malleability of Clapton's location, it indicates that from a relational perspective the geographic scale of a neighborhood is highly varied depending on whose perspective is being used to define that space. Perhaps unsurprisingly, eaters with access to cars generally drew maps with larger neighborhood geographies and more dispersed arrays of food places that they frequent.

Figure 4. Composite Mental Map of the Clapton "Neighborhood"



The results obtained from this analysis of food diaries and mental maps are presented in Table 21. This analysis segments participants in each site into two groups, residents and workers. This analytic strategy stems from the reconceptualization of study population in relational framework on health and place. In addition to studying how residents interact with these study sites, this research also examined how workers in the study areas perceive and use these food environments. The denominators in Table 21 are the number or participants in that category of eater for each site. It is apparent from this table that in both New York and London, and across the area-income divide, workers consistently have around a third of food events happen in the area where they work. This observation supports the significance of universal policies that would normalize standards of healthful practice in the food retail industry and food outlets citywide. In New York, the disparity between the percentage of in-neighborhood food events reported by residents in Brownsville (83.9%) and the Upper East Side (63.4%) suggests that people living in lower-income areas of that city are somewhat more constrained in their food geographies than residents of wealthy areas. This resonates with the neighborhood characterizations presented earlier in this chapter. Upper East Siders are more likely to own or have access to a car and this is likely to contribute to their expanded food range. This observation, on the other hand, supports the assumption that in poor areas of New York people are more apt to eat what is physically proximal. Closer examination of individual-level data confirmed that eaters with the least financial resources, those that were physically disabled, and those that were unemployed report all or nearly all of their food events taking place within their neighborhood of residence.

Table 21. Mean Proportion of In-Neighborhood Food Events By Study Site and Category or Eater

	New York		London	
	Brownsville	**Upper East Side**	**Clapton**	**South Kensington**
Residents	83.9% (n=10)	63.4% (n=9)	64.7% (n=11)	94.1% (n=2)
Workers	37.6% (n=2)	38.1% (n=1)	50% (n=1)	34.8% (n=4)

This pattern, where those eaters having the greatest disadvantage were found to also have the most restricted food range, was also apparent in London. However, Table 21 illustrates that in that city there was a reversed pattern than was found in New York in the disparity between the percentage of in-

neighborhood food events reported by residents of Clapton (64.7%) and South Kensington (94.1%). This finding may be spurious. One explanation may be that it reflects the finding reported in Chapter Four where South Kensington had the densest and most diverse food environment of those observed for this research. It is plausible that people living in this area have little reason to eat outside their neighborhood. However, it more likely reflects the small sample size of South Kensington residents who completed food diaries and that both of these individuals were elderly, not currently in the workforce, and thus spent the majority of their time at, or near home. Still, this reveals another category of person for whom the residential neighborhood appears to be a relatively strong determinant of diet.

Finally, it is worth noting the remarkable similarity in the percentage of in-neighborhood food events reported by residents of the Upper East Side (63.4%) and Clapton (64.7%). As discussed earlier in this chapter, Clapton was undergoing a process of gentrification at the time these data were collected. Thus, the data presented represent an averaging of in-neighborhood food events from eaters that were very poor and geographically constrained and those that were more resourced, and more likely to have a geographically large food range. Similarly, the eaters that lived on the Upper East Side tended to come from two somewhat different categories of neighborhood resident. Some were older, retired, very well resourced and more likely to stay closer to home for food events and to order groceries online as opposed to traveling by car to buy them elsewhere. Other Upper East Side eaters were younger, less well resourced, and by and large working outside of that neighborhood. These eaters tended to have about a third of their food events take place in the areas where they worked. While these data appear to reveal a similarity between behavior of resident eaters from these two study sites, they most likely illustrate that within what appear to be similar or homogenous areas and populations, there is a great deal of variety in individuals' food geographies.

FOOD PLACES AND FOOD POLICY

The final section of this chapter further investigates these data as they describe how eaters experience food places and policies. The goal of this section is to provide a grounded perspective of how participants living and working in contexts like Brownsville, that are targeted for change, describe their political and phenomenological perspectives on the food policies of New York and London.

Supermarkets

While discussing New York's responses to inequalities in food availability and health with a teacher in Brownsville, I asked if she was supportive of the FRESH policy. A wife and mother, this woman lived in a neighborhood adjacent to Brownsville and felt that food availability in the area was lacking. She and her husband travelled weekly by car to a Trader Joe's halfway across the borough to find affordable organic foods sold with convenience in mind. Her response highlights another contradiction in the perception and framing of these issues.

> "*Yes and it would, but not just the regular Key Food Associated pack. . . No, no, I was thinking about the good supermarkets. . . It would be good to give them incentives to lower their costs and encourage them to set up shop in good neighborhoods – poor neighborhoods. So absolutely, tax incentives will lower their costs so they can make the food affordable for people who are in a pinch and need healthy food. Everyone deserves good food. But I do not agree with giving incentives to supermarkets that are just your typical run of the mill supermarkets that don't care about what they're serving people."*

Her response indicates that her understanding of why supermarkets would merit financial incentives for operating in poor areas- was not rooted in a perception that there are not enough supermarkets in the area. Rather in her observation, the barriers to access that the incentives should address were the high price of food and the consumer environment in the "*run of the mill supermarkets that don't care about what they're serving people."* When asked if Brownsville needed more supermarkets, another eater replied, "*It's nice to have more options."* Both responses imply that there are enough supermarkets in the area but that the quality of those stores is the more salient issue. These comments call into question the logic behind FRESH. Will adding more stores to the area improve access to fresh food? Or, is there something other than a reliance on market competition that could more effectively address this issue?

Another Brownsville resident responded to the same query about her opinion of the FRESH policy and without calling it by name, effectively suggested that beyond more brick and mortar stores, the area needed a food delivery service like Fresh Direct. Unlike the reasons discussed earlier that Upper East Siders recount for using the service, this eater, like some in Clapton that responded to these same questions, expressed frustration with the ways that supermarket shopping environments promote overspending and impulse purchases.

> *"There are times where you have a specific meal in mind. And you know if you go to the supermarket, you're going to get more than what you're supposed to get, because you're there.*

> *Okay. Sometimes you order -- if you can order, let's say I want to do a corn beef brisket. I don't want to mess it up. The recipe is everything, everything. Everything is on there, and if they could send you everything [in the recipe], that's what I want. Like a food delivery place, that would be great."*

Thus, in both low-income study sites included in this research, residents desired more economically efficient food-retail settings where they could purchase what they needed without pressure or temptation to overbuy.

Related to the discussion earlier in this chapter that highlighted some of the linkages between urban planning, urban food environments, and public space, the following interview excerpt from another Brownsville resident demonstrates an expectation for public accountability and social responsibility on the part of developers who receive zoning and tax incentives. In her view, where developers construct new buildings with residences above publicly subsidized supermarkets, that housing should be designated affordable and the income thresholds for residents should be set with the needs of those most challenged by the city's housing market in mind.

> *"So, if they had affordable housing in the building as well? Yeah. I mean, that was supposed to be affordable housing, but to them, minimum income starting was $28,000. That's not affordable. That's not affordable to people that's on disability. And I've noticed they've gotten more ridiculous with the income guidelines for certain areas with the buildings"*

Bodegas and Corner Stores

Participants' experiences of convenience stores in Brownsville suggest potential limitations in the effectiveness of policies that aim to improve the healthfulness of these stores. A resident in her mid-twenties described her experience of a choice point regarding food that took place in her local bodega. This example again raises the issue of perceived inequality in that neighborhood food environment. This eater works outside Brownsville and draws on her understanding of the difference between her bodega and stores "*in the city."* To her, having a fresh and fast option would have led to eating dinner. It also demonstrates one reason that adding low-fat milk and fresh produce may not improve the diets of people who live nearby.

> *"I didn't eat dinner that day. I actually had milk duds and popcorn from the corner store. When I got home I just walked over there and was gonna get a sandwich."*

"I remember there was like a bunch of kids in there, I don't know what they were doing but they were annoying me . . . I was already tired and didn't feel like waiting, so I was like let me just get this and get out."

"If there was something I could have grabbed, I would have. . . Definitely, like in the city they have that (prepared sandwiches) all the time, and I have that while I'm there, I have no problem with that, so if it had been there, I'm pretty sure that's what I would have grabbed because a meal would have been better."

Fast Food

Eaters in both New York and London were asked their opinions of municipal regulations that restrict or ban fast-food establishments near schools. The quote below from a teacher indicates that, absent parallel regulation of corner stores and bodegas, this approach would likely fail to have its intended public health impact.

"If they did that [banned fast food near schools] then the students will have to buy food from what's available because a lot of them get food from corner stores. That's where they get their sandwiches. And if you check out those sandwiches, you might — not even one piece of lettuce is inside of it, which to me is not right, you know. Well, hey. So those stores, they have a lot of those unhealthy stuff in my opinion. And to me if you're going to ban fast food then you should ban those because all that will do is increase the revenue of the bodegas and still have the same bad options out there for the kids."

Considering what strategies would be promising routes toward promoting healthier dietary habits among school aged youth, the quote below from a high school senior indicates the need to reduce the availability of unhealthy foods in and around schools while simultaneously improving the availability and taste of healthier foods. This particular eater reported going to the corner store near her school every morning and getting a sugar-sweetened beverage of some kind and candy for breakfast -then waiting to eat again when she got home after school. In her opinion the food served at that public institution is flavorless and inedible.

"I say don't ban fast food because it's like the food that they giving us now doesn't even have no seasoning. Certain people, they don't eat school food because it either don't got no seasoning. Sometimes it tastes bland. With the fast food, at least it got a little flavor, even though it may have grease and stuff, but it got flavor to it."

From a public health perspective, policymakers and practitioners must weigh the relative benefits and potential negative outcomes of young people going hungry and developing a habit of refusing food, eating fast food and /or candy, or fighting the political and fiscal battles associated with improving school food.

Free Food: Pantries, Church Kitchens, and Community Gardens

Eaters in Brownsville discussed several avenues through which they obtained food when they could not afford to buy it. These included food pantries, church kitchens, and community gardens. The examples below indicate that these resources, which fall outside of the scope of the programs, strategies, and regulations that policymakers discussed earlier in Chapter Three, are essential resources for the poorest residents of Brownsville. The quotes also suggest that these food places are both potential sites for health promotion initiatives, yet they are kept ephemeral by the limited and at times unsteady resources at their roots.

> *"They used to have one on Linden Boulevard, I don't know what happened to that, I think they closed or -- you know, they close them when they don't have any foods, and that's a shame, because you don't know where the people are going to go get their food, and that's where they knew."*

> *"My mother got collard greens from our other neighbor, Scotty. He's on Riverdale and Rockaway, so it was just a block and she got collard greens and mustard green sometimes."*

> *"We go to the Bishop's. It's a church, right? He feeds you. He gives you appetizers, I mean everything is healthy. He may give you split pea soup, he can give you appetizers, hors d'oeuvres, everything, man, you get it. Then he'll bring you the salad. He makes sure you eat healthy. That's right. When you leave out of there you cannot say you haven't had a good meal. He doesn't serve a lot of greasy foods, you know, pork chops and all that crazy stuff."*

SNAP and the Sugar-Sweetened Beverage Ban

The following are excerpts from an interview with a 45 year old man in Brownville who was unemployed and largely housebound while recovering from a stroke. Although he was diabetic and hypertensive, he maintained moderate smoking and soda drinking habits. Further complicating his situation were the financial limitations of living on a fixed low-income and relying on SNAP benefits for food. I asked for his opinion of the New York's proposed ban on using SNAP benefits to purchase sugar-sweetened beverages. He retorted in obvious exasperation that Brownsville had "*its own rules*" and further stated the following.

> *"You're going to get more opportunity for more individuals to go to the store owner and say take $10 off my food stamps. Take $15, give me $10 and give me four bottles of soda."*

> *"It won't stop me with my food stamps. Believe me, I'll still go buy my soda. With the stamps or cash. . . I'd rather lose it [money] but still keep my Pepsi."*

> *"You're taking away my right to do what I want. You can't govern that. You might as well put me back into slavery. If you're telling me I cannot purchase a soda."*

His response raises the need to deeply consider the negative unintended consequences of this purportedly health promoting policy. These include, exacerbating his food insecurity and assaulting his dignity in a way that may contribute to his array of stress-related health conditions and their subsequent complications.

Social Marketing

Eaters in this study expressed a range of opinions about the use of social market campaigns to promote healthy eating. In general, those eaters with more education and money felt that such efforts were at least somewhat effective and were an appropriate use of municipal resources. The quote below form an American living in London indicates that there may be cultural differences between the two contexts with regard to the effectiveness of such campaigns. While this eater did not offer an analysis of why such differences exist, the quote suggests that the synchronization of government, industry, and public efforts may part of that recipe for success.

> *"The British love a message – they really embrace a campaign here, compared to how you might in North America. And the five a day thing is the government, the retailers, and the general public have all embraced. That message sticks with you, you can't miss it. And anywhere you go, even at Sainsbury's they'll tell you it's one of your five. It really helps, because I'm keeping tabs, even subconsciously how much fruit and veg I eat every day."*

In New York people with high incomes expressed that in addition to believing that social marketing, inclusive of scare tactics, was effective they also perceived these campaigns and messages as 'not for them.' The following recounting of an exchange I had with one such eater in New York provides an example of this perspective.

Eater: *Oh, it really scares the hell out of me. You see those smoking ads?*
Interviewer: *So do you think that cities should be investing in this kind –*
Eater: *Yes. Scare the hell out of them.*
Interviewer: *And do you think they work?*
Eater: *Yes. Yes, I think so.*

Yet, eaters in Brownsville did not feel like these kinds of health promotion campaigns would be effective. To the contrary, they expressed frustration with language of obesity and less than positive messages which they interpreted as "shallow" and misdirected.

> *"It was more like an attack. They want to tell you to lose weight because if you don't, you're not pretty or you're not happy. They're too hyped up on weight. People are so shallow. You know it could have been different if they promoted healthy eating. It should be more of, a positive message. You know, when you lose weight, you live longer. You're healthier. You get to see your kids grow. One that I seen, it was like, oh, obesity. Nobody wants to hear that word when they're dealing with a delicate matter. So it shouldn't be nothing about obesity."*

Reading across these perspectives, it appears that there is support for the overall approach of social marketing. However, the view from this eater in Brownsville who was overweight and considered herself a target for these messages suggest that scare tactics and clinical language are experienced as threatening, stressful, and thus turn people off of messages that are aimed at helping them. In the context of the perception of social marketing success in England, it appears that for this strategy to be effective it must be coordinated with material cues in places and social settings where people eat and acquire food.

SECTION FOUR: CHAPTER SIX

Conclusion: Interpretations and Applications

In the US, research has linked disparities in food environments, diet, and health. Yet, based on such research policy interventions that aim to improve equity in food access and health have had mixed results at best. One fundamental assumption of research and policy in this area is the assertion that people eat what is closest to them, and consequently, that local, mainly residential environments should be the targets for change. In this study, this assumption has been interrogated using the theoretical language of the synoptic error and contrasting that view of the problems of inequalities in food availability, diet, and health with phenomenological perspectives of eaters from a range of social and economic backgrounds in New York and London. This research aimed to investigate the fundamental assumption that proximity is synonymous with access.

Through a critical examination of the saliency and scale at which neighborhood food environments are operationalized in the everyday lives of people living and working in historically poor and wealthy areas of New York and London, this project aimed to empirically examine the assumption that everyday food geographies are concentrated in residential areas. A pragmatic goal of this work has been to contribute to understanding why assumptions that hold in the context of research, appear to fall apart in the context of everyday implementation. This falling apart has, for example, been evidenced by the mixed results of supermarket siting incentives and calories labeling interventions. The conclusions of this work aim to suggest a few novel and promising strategies for using food policy to reduce social and health inequalities while acknowledging that proximity and access are not the same.

INTERPRETATION

Have New York and London Fallen into the 'Local Trap'?

By asking if New York and London have 'fallen into the local trap,' this study has called into question the appropriateness of local-scale food environment interventions and the localization of governance structures that have bearing on food in these global cities. Answering this question requires a

consideration of the 'fit' between the synoptic and phenomenological views of food geographies and food policy these cities. Based on the finding of this work, I find that to a large degree both New York and London have fallen in to the local trap. Food policy and governance in both cities privileges the local and takes a strongly targeted approach to deploying policies and public health programs with the goals of addressing inequalities in food availability and health. In so doing, both cities miss opportunities for intentionally leveraging their market share and political influence at higher scales. Additionally, this approach causes both cities to create unintended consequences that are antithetical to the stated goals of their food and health policies. A detailed analysis of these unintended negative consequences and missed opportunities is presented in the following section of these conclusions. The aspects of localized food governance in these cities also provide insights about how New York and London could take more strategic scalar approaches to addressing inequalities in food availability and health. Thus, that analysis directly precedes the recommendations for action that come from this research.

I argue that New York and London have fallen into the local trap based on the following observations. The analysis of policymaker interviews and food policies effecting New York and London demonstrated a synoptic dominance, wherein decision-making is shaped by distanced and totalizing views of these cities. In each locale, localization of food governance and policies took different forms and aimed at different targets. In New York, synoptic dominance was found in the portfolio of programs that aim to increase availability of fresh fruits and vegetables in targeted areas. In London, synoptic dominance was expressed through the localization of planning governance and this city's anti-fast food policy. The phenomenological perspectives on these polices found in this research demonstrate that promising strategies for reducing inequalities in food access and health can look dramatically different from the everyday than they do through a synoptic view. For example, in New York residents of both high- and low-income areas expressed deep frustration with the quality of supermarkets. Yet, that city's FRESH initiative targets only low-income areas and provides subsidies to the same companies whose practices eaters are dissatisfied with. Eaters in New York expressed a range of opinions about this policy, demonstrating that they expected greater and broader accountability on the part of subsidized grocers than the policy requires, such as tying in low-income housing, living wages, or lower food prices. In London, grounded perspectives on food governance showed that the localization of authority over food

creates policies that have little impact, are difficult to enforce, and create opportunities for cooption by vocal minorities.

To conclude addressing this question, I assert that as a strategy localization in urban food policy is useful, but that absent complementary strategies at other and intersecting scales it will likely be ineffective at reducing inequalities in food access and health in these and other global cities.

Expanding the Scope of Food Policy

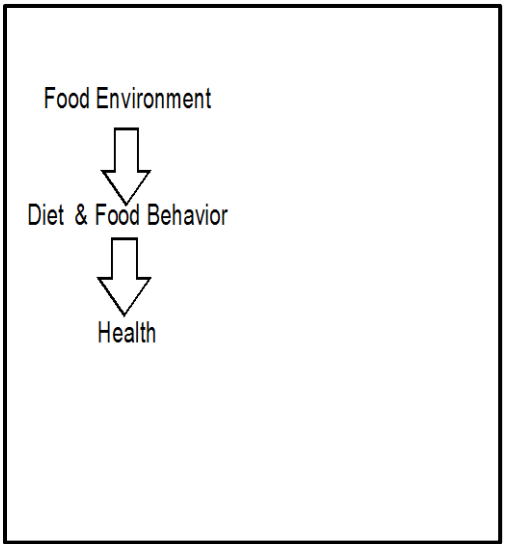
The results of this study also suggest a need to expand contemporary conceptualizations of food policy. Lang and colleagues (2009) write that with regard to food, "policy responses to problems may draw upon a variety of available policy instruments. These range across legislation, regulation, self-regulation, fiscal (tax) measures, education, labeling and advice" (p. 10). With a somewhat stronger tone, Guthman (2008) states that advocacy and activism "should shift away from the particular qualities of food and towards the injustices that underlie disparities in food access" (p. 443). This research has demonstrated that income inequality, and in the US its pairing with racial inequities, underlie disparities in food availability, diet, and health. Addressing these issues will thus require more than targeted approaches that are akin to using band-aids to seam together a gaping wound. This research suggest that policies with the greatest potential to reshape the landscape of food access and health inequality may be found in the realms of housing, urban governance, and social welfare. The observation that social housing policies in London have produced an urban social fabric that is more integrated with regard to race, income, and food attests to the potential that housing and social welfare have for achieving such gains in the US. If local spending on food is a stronger determinant of the conditions of the food environment then policies that redistribute food dollars are likely to also redistribute quality food resources.

Introducing a Place-base Model of Urban Food Environments and Health Disparities

Osypuk and Galea (2007) write that "few theories of area influences have been articulated in the health sciences literature, and one of the most vital issues impeding progress in place and health research may be the lack of theory articulating the mechanisms of how place affects health" (p. 402). An aim of this project has been to contribute to the academic literature theorizing place effects on health and specifically to suggest new ways of conceptualizing the role of food in that web of relationships. Several

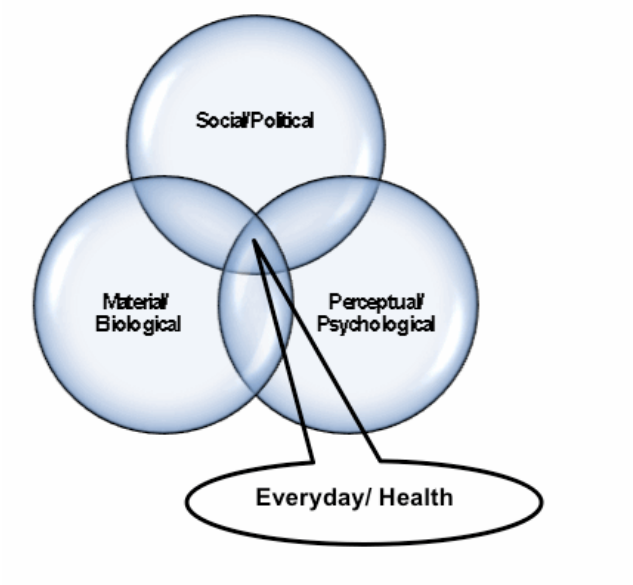
authors have called for improved conceptual models for describing 'how the environment gets into the body' (Cummins, 2007, p. 197). For example, in her review of the food environments measurement literature, Lytle (2009) argues that the current state of this science is rooted in an overly simplistic theory of how food environments influence diet and health. Borrowing form her article, Figure 5 illustrates this model. I use the term synoptic in its title to signify that this is the model that underpins the research critiqued in the introduction of this study and the perspective taken in Section Two of this work.

Figure 5. Synoptic Concept Model of Food Environments, Diet, and Health



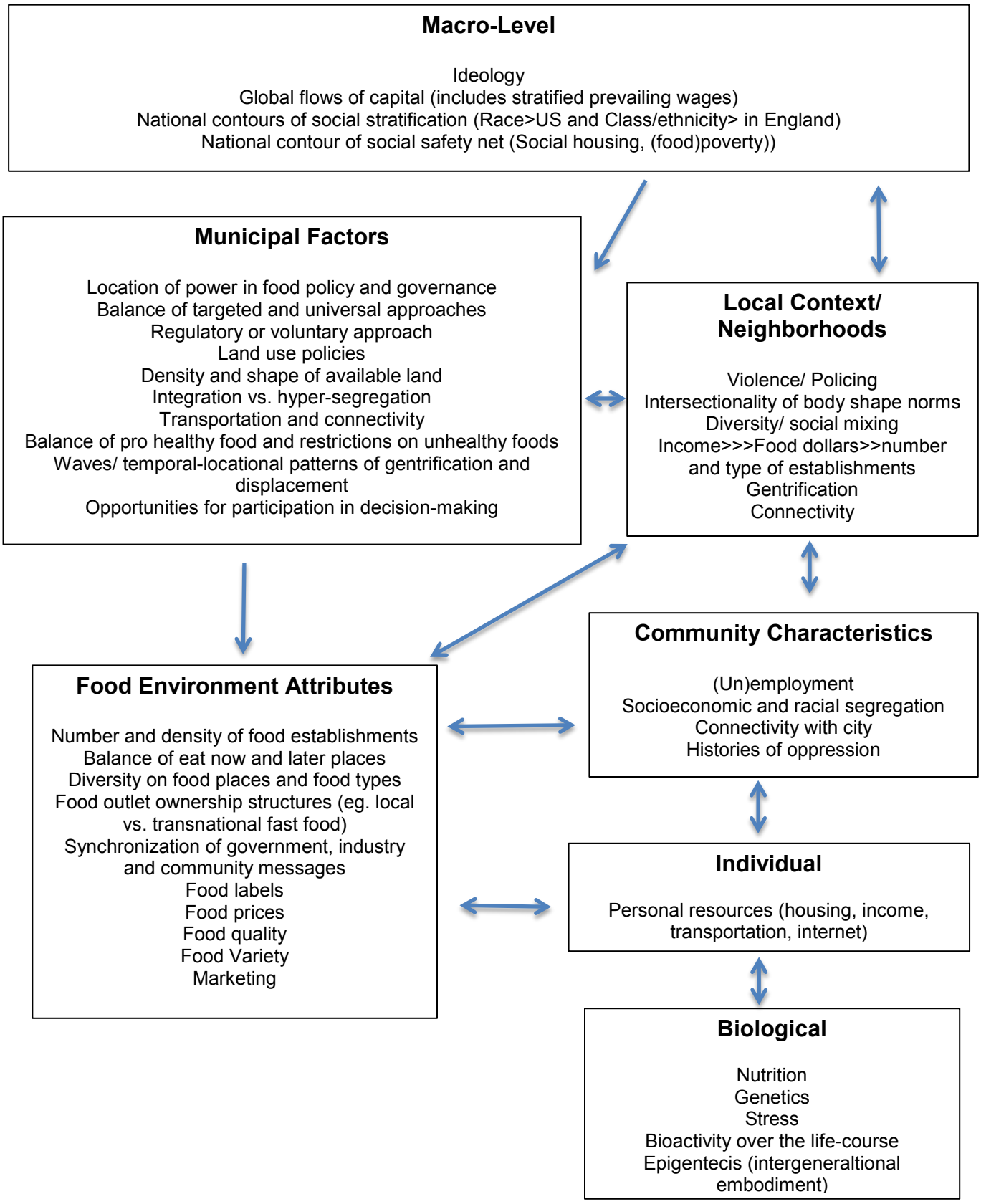
In contrast to this synoptic model, this research has been rooted in a relational framework. Figure 6 illustrates that model. It shows how everyday experience grows out of the intersection of social and political, material and biological, as well as perceptual and psychological domains. As an amalgam of these forces, a relational perspective asserts that it is everyday experience that shapes health.

Figure 6. Relational Model of Everyday Experience and Health



To address the question, 'what do the whole journey narratives of eaters at the socioeconomic poles of New York and London teach us about how to conceptualize the ways that food environments shape inequalities in food availability, diet, and health?' I introduce a conceptual model developed out of the results of this research and rooted in the relational framework that I call the place-base model of urban food environments and health disparities, Figure 7. Like other social ecological models of health this one conceptualized the environment as multi-dimensional. The specific dimensions that I assert are relevant to the question of how food environments get into bodies and produce disparities in health come from the findings in Section Two of this work. This model also conceptualizes the person as multi-dimensional. The specific dimensions I assert as relevant in that domain are drawn from the findings and theory presented in Section Three of this dissertation.

Figure 7. Place-base Model of Urban Food Environments and Health Disparities



APPLICATIONS

Building on the results and interpretations of this study, this section addresses the pragmatic question of how to apply this knowledge in the contemporary contexts of New York and London. Beyond questioning localism in food governance, this project aims to make recommendations for how cities can avoid the local trap and succeed in using policy and public health programming to promote health and social equity. Toward that end, the first application of the findings from this study is a framework outlining the advantages and disadvantages of targeted and universal approaches to urban change. Using the language of power-topologies, introduced in earlier chapters, provides a basic framework for considering the strategic use of targeted and universal scales of political action. This is followed by a discussion addressing the question: *What does looking across both the synoptic and phenomenological perspectives indicate of the missed opportunities and unintended consequences of the food policies and governance of New York and London?* These examples then inform thirteen specific recommendations for action. These recommendations address the question: *What do whole-journey narratives and participants' desires suggest as promising sites for food environment interventions that promotes health?* They are organized to first address concerns relevant to both cities, then to each city individually, and then focus on supermarkets and fast food.

Avoiding the Local Trap

To avoid the local trap policymakers, advocates, and public health professionals must think topologically about their goals for food policy and how to strategically use scale to achieve them. This kind of thinking entails privileging considerations of how power operates in practice, and how the realities of such maneuvers in our contemporary context can defy traditional notions of situated authority (Allen, 2011). For example, traditionally one might assume that a sub-municipal policy would not be capable of leveraging influence at the national level. Yet, the lens of power topologies recognizes the reality of such action and stresses that understanding the workings of such an achievement can enable others to similarly leverage authority across scales in surprising ways.

In the arena of food policy and governance, an added challenge is the need to simultaneously consider the multifunctional character of the food system and the effects that it can create in other

domains (Morgan and Sonnino, 2010). This tension again suggests a need to imagine scalar relationships that go beyond horizontal and hierarchical relationships. In the context and language of public health, thinking topologically can further understanding of the relative benefits of targeted and universal approaches to intervention.

To illustrate topological insights related to the use of local/ targeted and municipal/ universal approaches to food environment interventions, Table 23 summarizes the advantages and disadvantages of these two scalar strategies as they have figured in this study. It is a first step toward using insights gained from this research to inform a more specific discourse around scalar strategies for food systems change. For example, the positive unintended consequences of food policy change described in Chapter Three are indicative of topological channels whereby big urban markets can move national policy in the governmental and corporate domains. This illustrates a specific advantage of using a universal strategy at the city scale. Another strength of a universal approach is its normalizing potential through setting standards (and thus influencing norms) that apply to all population groups. This aspect of a universal approach can avoid the risk that targeted approaches have for taking on a paternalistic or neocolonial character. As Julie Guthman (2008) writes, " the intention to do good on behalf of those deemed other has the markings of colonial projects, in that it seeks to improve the other while eliding the historical developments that produced these material and cultural distinctions in the first place" (pg. 436). Another example of an actual disadvantage to targeted approaches stems from the observation that there were so few of the New York's interventions implemented in Brownsville. Somewhat intuitively, it seems that targeted approaches can have limited reach or impact, even in target areas.

Table 22. Advantages and Disadvantages of Targeted and Universal Approaches to Food Policy

	ADVANTAGES	DISADVANTAGES
TARGETED	Promotes civic engagement and cooperation May help reduce disparities in access to and control over resources Politically controversial proposals can be advanced that might otherwise be blocked Achieving ecological gains of bioregionalism Attends to the complexities of local history and culture Possibly less expensive to implement	Neoliberal decentralization diminishes the responsibility of the nation state Naturalizes and may exacerbate inequality Stigmatizing Limited impact Excludes people and places not targeted Enforcement challenges Jurisdiction boundaries limit enforceability of policies Harder to scale up innovation
UNIVERSAL	Normalizing, standard setting, and thus inclusive Can impact markets and corporate practices Leverages scales of economy	Political process prevents transformative action Political processes are vulnerable to special interests Policies and programs lack specialization and tailoring to local contexts Possibly more expensive to implement

Missed Opportunities and Unintended Consequences of Localism and Synoptic Error

Now, some examples from previous chapters will support a discussion addressing the two cautions of the local trap – 1) unintended negative consequences and 2) missing strategic opportunities that exist at other scales – that have promise for actually building a more just, sustainable, and healthy urban future. These examples demonstrate how attention to everyday food geographies in the context of urban inequality can help identify some of the limitations of the largely targeted approach to diet-related health disparities taken in New York and London. Such considerations are important because, as noted in the introduction to this dissertation, current approaches to intervention have produced mixed results at best with regard to improving diet and health. Furthermore, interviews with residents in areas targeted for intervention in New York suggest that the current focus on increasing supermarket density may not be

perceived by residents as a priority for change. . Consequently, the cautions of the local trap also suggest new routes forward. These are presented in the recommendations for action that follow.

In both New York and London gentrification and the displacement of residents and businesses may be the unintended consequence of the local trap with the gravest consequences for health and social inequality. In New York there is concern for both residential and economic displacement as new supermarkets incentivized by FRESH make historically poor areas of the city more desirable places for relatively wealthier people to live. Over time, the influx of these new residents is predicted to drive parallel changes in these housing and commercial real estate markets, driving out initial residents and businesses. In and of itself this may not seem detrimental to public health. However, when considered in the context of the US's long history of repeatedly displacing African American communities, another picture emerges where those bearing the greatest burden of diet-related diseases are again systematically pushed into living where resources for health are scarce. Thus, by perpetuating this pattern of displacement and unequal access to resources, FRESH has the potential to maintain if not exacerbate racial disparities in health. In London, locating the greatest authority over food policy at the local, sub-municipal, level may also support gentrification. But, in this context, gentrification is somewhat less likely to lead to residential displacement because of England's social housing policies. For example, in the London borough of Hackney, where the Clapton study site is located, roughly 40% of residents live in social housing. Still, the economic up scaling of the area is likely to displace businesses as commercial rents go up and people with greater spending power and tastes different from long-term residents. The debates about the Chatsworth Road Market and Tesco Express serve as evidence that these tensions are already at play. Such changes to the area's food environment may have negative consequences for immigrants and other marginalized groups who own or use those food establishments.

As the eater interviews in New York illustrate, other targeted public health nutrition policies and programs also have the potential to induce negative health outcomes among those they aim to help. One such example is the proposed, but failed, policy of restricting SNAP beneficiaries from using these benefits to purchase sugar-sweetened beverages. In addition to the finding that majority of Brownsville study participants were unsupportive of this proposal, interview data from one SNAP beneficiary that participated in this study indicates that if it were to have been implemented the policy could have

exacerbated food insecurity among those determined to continue drinking sugar-sweetened beverages. Beyond negative unintended consequences for food security, this policy proposal – along with a recent and controversial social marketing campaign depicting an overweight black man with an amputated leg encouraging people to reduce their food and beverage portion sizes – are likely to increase the experiences of stigma and chronic stress associated with being poor and of color in one of the wealthiest cities in the world.

Finally, and perhaps the most certain unintended negative consequence of New York's targeted approach to food policy is the loss of public resources as funds and staff time are funneled into programs, like FRESH, that this study has shown are not widely desired or valued by the residents of target areas. As of January 2012, over $10 million in financial incentives have been granted to grocers accepted into the FRESH program. Of the ten projects accepted so far, only four entail opening new stores, while the rest are expansions and renovations of already existing supermarkets. Collectively these projects are projected to create 214 new jobs, of which only 82 may be unionized, and none of which are promised to go to local residents. Grocers included in the program include those that Brownsville residents and workers specifically cite as irresponsible members of that community, and describe as "the problem" stores – Key Food, Western Beef, and Associated. One has to ask how the communities targeted by FRESH might choose to spend $10 million to improve the food available to them, their food retail environments, and their position in the municipal and regional food system.

In London, an unintended negative consequence of localizing power over food policy at the borough level is that it normalizes, rather than levels, inequalities in food availability as well as food and heath policy across that city. It does so by creating a political landscape where it is acceptable for some boroughs to take up these issues while others choose not to do so. This may have more detrimental impacts on London's diet-related health disparities than it would in New York because England's social housing policies have created a social landscape that is more integrated along lines of income and class. Specifically, there are significant numbers of people living in social housing across all of London's boroughs, even its wealthiest. Thus, in wealthy areas where food access and diet-related health conditions are less pressing, there is still a minority of the population for whom these are likely to be very

real concerns, but who also have less political power to raise the position of their concerns on local authority agendas.

Relatedly, another negative unintended consequence of London's food governance structure is that it supports power imbalances between population groups within the city's changing social landscape. In the Clapton study area, the conflicting perspectives of older and newer, as well as between wealthier and poorer, residents over planning decisions related to changes in the food environment are evidence of this effect. In such cases, wealthier newer residents were able to mobilize their professional, financial, and political resources and connections to advocate for the changes they desired, even though these were in conflict with the needs of other residents. Had these issues been brought before a citywide planning board there may have been greater opportunity for debate, as there would have been elected officials, at least theoretically, representing interests on both sides of these debates.

Finally, two interrelated unintended negative consequences of London's food governance structure are that it eliminates, or at minimum dramatically reduces, opportunities for coordinated action at the municipal level and creates a fragmented regulatory landscape where food policies that boroughs do create can't be enforced without the cooperation of neighboring jurisdictions. These seem to be the most practically significant of the unintended consequences discussed in this study. While it may not be possible to revise the city's charter to change this dynamic, other more transitional measures may be possible. For example, a citywide policy could be enacted whereby neighboring boroughs were required to help enforce each other's policies or where such responsibility would be vested with London's Metropolitan Police. In addition, it was suggested by more than one elected official in London that the London Plan, a citywide planning guidance developed by the Mayor, could be used a mechanism for creating more cohesive food policies – at least as they relate to land use planning – across the city.

When food governance and policy rely on geographic and social targeting, they miss opportunities to bring together a broader constituency of eaters; and fail to address the full gradient of health inequality – not just addressing the lower end of the city's gravest disparities. In both New York and London participants from high-income areas expressed interest and concern about inequalities in food availability and health. Yet they felt that there were few routes for them to become more involved in citywide food politics. At the same time, in both cities study participants identified many sub-populations

that could benefit from programs and policies that were targeted elsewhere. Examples of such groups that exist citywide include low-wage workers and the elderly. Also in both cities, data from the NYLON FEAST observations and food diaries indicated that in high-income areas a relatively high proportion of all food places are full-service restaurants and that residents of these areas eat a significant portion of their meals outside the home in these establishments. In New York, these restaurants are not required to provide nutrition information to customers, but down market chain restaurants are required to provide such information. Given that diet related diseases such as heart disease and diabetes are also of concern in these areas it would seem that this indicates another missed opportunity to promote health. While it may be impractical to require high-end restaurants with frequently changing offerings to include calorie labels on their menus, it could be practical and beneficial to require clear labeling and identification of healthy menu options. Similarly, beyond calorie labeling and trans fat regulations, New York has done surprisingly little, especially when compared to London, to improve the healthfulness of products served in fast food restaurants.

Targeted approaches in New York also overlook opportunities to coordinate action across scales. For example, the opportunity to use an already existing municipal resource, the public transit system, to address issues of food access by making it easier for residents of areas with low availability of healthy and affordable food to get to food markets in other areas is missed. Similarly, some of the targeted programs in New York such as FRESH and Green Carts were created independently and have area boundaries that are not coterminous. Both of these examples illustrate missed opportunities for action at the intersections of existing programs and resources.

In New York the emphasis on municipal regulation, even when targeted at smaller areas, has created missed opportunities for local community engagement and participation in food policy decision-making processes. For example, the zoning portions of FRESH are “as of right,” meaning that the only opportunity for community input into project proposals is a 45-day review and comment period through relevant community boards. After this period, the Chair of the City Planning Commission can unilaterally certify the approval of the plan. While this may appear to be sufficient time for community review and input, community boards only meet monthly and are notoriously dysfunctional in many of the areas targeted by FRESH. Thus, it would seem that at least two months, or a 60-day review period, would allow

for more genuine participation as the issue could be introduced and discussed at one meeting and reviewed before voting at a second meeting.

Targeted interventions also lead policymakers and public health professionals to miss opportunities for intervention at other scales. For example, universal citywide food safety regulations for supermarkets' cleanliness and fresh food quality might have a greater impact on improving food availability in poor areas with programs like FRESH. Based on the eater interviews in this study, such a strategy would most likely be welcomed by residents of all income levels and could prove more effective at reducing disparities in the price, quality, and availability of fresh food across areas of the city than targeted incentive programs that ultimately rely on market forces, rather than regulation.

London's approach to food policy and governance leads to two related missed opportunities for creating more effective change. This city's emphasis on voluntary action and lack of regulatory mechanisms at the municipal level has meant that its action on food has almost entirely focused on the alternative food sector and failed to reach the mainstream arena, where most people buy their food. Similarly, London's localized authority over food safety and food policy limits the ability to use economies of scale to influence corporate food producers and retailers in the way that New York was able to through its calorie labeling and trans fat regulations.

Recommendations

New York and London have different foci guiding their food policy formation and employ different strategic approaches to addressing concerns about food and health in a global city. New York's approach is more nutritionist in its orientation toward food policy. This city also takes a strong regulatory approach, using its Health Code to affect social and environmental change. By contrast, London's food policy is guided by concerns for environmental sustainability. It relies on voluntary action in the private sector and advocacy outreach to Local Authorities as key mechanism of change. Lang, Barling, and Caraher (2009, pg 6) define ecological public health as "seeing food as an intersection point for societal and planetary relations." They aim to reframe health in this context by including social equity as a dimension of sustainability and acknowledging the reciprocal, or transactional, relationship humans have with the global environment through food. Realizing a food policy framework rooted in ecological public health would require both New York and London to adopt some of the other's approach. The following

recommendations aim to suggest potential routes for doing this. Moreover, they may suggest potential approaches for other cities looking to enhance their food and health policies by adopting an ecological public heath framework. These recommendations are presented in three broad and somewhat overlapping categories: cities, supermarkets, and fast food. The first of these categories was chosen to reflect the focus on municipal policy and governance that guided this research. The others represent this works' critical reframing of supermarkets and fast food as respectively being good and bad for public health.

1. ***Collaborate to counter the international forces promoting food environment convergence and divergence, and consequent uneven dietary development within the global city.***

By implementing the parallel regulations for food products and places, New York and London could leverage their large markets to influence corporate practices within the agro-food industries and potentially affect change at the national and international levels. Clearly, London's food governance structure presents barriers to such action. However, with the support of the Mayor and the London Food Board such coordinated action would be tedious but not impossible. Along these lines the cities could further collaborate to utilize the differences in their food governance structures to evaluate and share knowledge on food policy measures that prove effective. For example, currently this could entail using London as a testing ground for fast food interventions, and New York to evaluate and learn about policies like FRESH.

2. ***Look to synergize food policy with other sectors as a strategy for creating changes in the broader social determinants of health.***

Examples of such action in New York would include linking government incentives in programs like FRESH to requirements for local hiring, living wages, creating training opportunities and pipelines for career advancement among grocers. This approach could also entail using housing policies to create more economically and racially integrated neighborhoods that would thus promote more diversified food environments. Such policies should include displacement protections for poorer residents. This approach would include considering the economic marginalization of many of those persons and families that operate independent fast food establishments and ensuring that anti-fast food policies do not further disadvantage this population socially or economically.

3. Consider the (im)mobilities of their eaters.

Presently, food policies in both cities are rooted in the assumption that individual's diets are ubiquitously influenced by what is available around where they live. Yet, the food journeys documented in this study support the notion that in global cities, many people across the socioeconomic spectrum acquire food and eat outside their residential neighborhoods with significant frequency. At the same time, some individuals are extremely limited in their mobility and ability to access food outside their homes or residential neighborhoods. Cities should diversify their food policies to address these realities. Such actions could entail providing nutrition and food preparation training for home health aides and other professionals that serve the needs of people who are homebound; using tax policies to encourage employers' creation of healthy cafeterias and meeting food guidelines; modifying public transit routes so that eaters without access to private vehicles can easily reach a range of food places; and requiring that internet-based food retailers like Fresh Direct accept SNAP benefits and serve eaters of all income levels.

4. *Enhance payment transfer architecture to ensure that all people can easily buy food.*

In both cities food environment observations and eater interviews indicate that infrastructure for purchasing food using EBT or credit and debit cards is lacking and restrictive. In New York there were no stores that visibly indicated acceptance of EBT on the Upper East Side. Similarly, most Green Carts in New York cannot accept EBT or credit/debit card payments. From a social justice perspective, barriers to using EBT stigmatize benefit recipients; this in turn contributes to the underutilization of the SNAP program. EBT should be accepted at all grocers and food places that sell eligible items, and operate in the same way that personal credit/debit cards do. In the Clapton study site, residents reported going out of their way to shop at stores that would accept credit/debit cards without charging additional fees. Policymakers in that city should recognize these restrictions and work to ensure that free cash machines (the norm in England) are available throughout the city and find ways to incentivize shop owners to eliminate additional charges for electronic payments.

5. ***Utilize targeted approaches for Eat Now places and universal approaches for Eat Later places.***

The NYLON FEAST observations found that income inequality has a greater impact on the Eat Now rather than Eat Later establishments that collectively make up community food environments. This observation suggests that the income of area residents more strongly determines the types of restaurants in an area than it has on area grocers. This suggests that targeted approaches to diversifying restaurant service and food types in poor areas through business development incentives could be a promising strategy for leveling this food environment inequalities between rich and poor areas of the city. This kind of intervention is also supported by data in both cities about what kinds of changes eaters desire in the foods and food places available to them. By the same logic, the observation that high- and low-income study areas have similar proportions of Eat Later establishments suggests that universal approaches are more appropriate than targeted ones in this sector.

Fast Food

6. ***Create a regulatory infrastructure that incentivizes nutritional improvements in fast food and protects public health.***

Building on the observation that somewhat paradoxically fast food establishments had significantly more health promoting messages and incentives than full-service establishments, this study and others with the same finding indicate that regulation in this area should move beyond the informational or media aspects of fast food environments and address the materiality of foods sold through this service format. Examples of possible regulations include limiting maximum portion sizes by caloric content or volume, requiring the inclusion of a minimum number of fresh fruit and vegetable servings with “meal deals,” and restricting the use of potentially harmful food additives and ingredients such as high-fructose corn syrup.

Under the framework of ecological public health, regulations should also require that fast food producers, distributers and retailers to adopt environmentally sustainable procurement standards and waste removal practices. Similarly, relevant local and municipal authorities should review employment conditions to ensure that workers are fairly compensated and not otherwise endangered while working.

Finally, economic incentives should encourage diversification of types of foods available in this service format with emphasis on increasing the availability of healthier foods.

Supermarkets

7. ***Create a regulatory structure that mirrors food safety protections in restaurants.***

Under the framework of Food Safety for the 21st Century, relevant authorities should develop universal regulations for supermarkets and other fresh food grocers (Silver & Bassett, 2008). These regulations should address issues similarly included in restaurant food safety regulations such as store cleanliness and food storage. In addition, requirements for minimum percentages of shelf space dedicated to fresh food similar to those in the FRESH guidelines should be included. Supermarkets and grocers should also be required to provide a minimum degree of training for workers on the public and environmental health impacts of their business practices.

New York

8. ***Use tax and spatial planning codes to incentivize business model innovation, not just grocery store location.***

New York's FRESH program provides financial incentives to many of the same grocers whose business models created the problems that planners and residents find with supermarket locations and store quality throughout the city. Simply providing public funds and zoning supports to this business model are unlikely to create the changes that residents and city officials desire. Incentives should instead be used to support innovation in store formats and business models. For example, the small format stores that leading supermarket chains in England have used to resolve the issue of difficulty finding large footprint commercial spaces in dense cities has not been adopted by grocers in New York. Similarly, at present the FRESH incentives are written in ways that exclude non-profit food cooperatives even though there are local examples of this business model successfully increasing access to sustainably procured and low-priced healthy foods.

9. ***Emulate London's approach to working with local fast food restaurants and their distributers.***

The NYLON FEAST observations found that a high proportion of fast food restaurants in the low-income study site are independent establishments that are excluded from the calorie-labeling requirement. This suggests that an approach like London's Healthy Catering Commitments scheme, where food safety inspectors conduct brief interventions with small business owners and managers on ways to make small easily achieved improvements to the healthfulness of their products, could be a promising way to reach fast food establishments that are not franchises of major brands.

10. ***When developing messages and social marketing campaigns, use carrots not sticks.***

To date, the NYCDOHMH has predominantly used scare tactics and fear appeals in its health promotion social marketing campaigns. Participants from the low-income area in this study reported being turned off and even offended by the graphic and threatening depictions of ill health in these ads. Similarly, when overweight, they report feeling stigmatized at the use of the term "obesity" and suggest that the overuse of this term leads them to ignore health messages. They suggest that, social marketing campaigns should tap into positive themes and values, such as wanting to live longer to spend time with children and loved ones, to motivate people to make healthier choices.

London

11. ***Reconsider location of food policy within the city's governance structure.***

The lack of universal municipal policy levers for regulating food safety is a major obstacle to enacting effective governance in the arenas of food and health. The Greater London Authority should explore legal mechanisms for vesting some of the powers currently held by local authorities with the city's central government.

12. ***Emulate New York's efforts at regulating food vending in municipal buildings and agencies.***

Although the Greater London Authority and London Food Board do not have the authority enact citywide food policies, they can regulate workplace food environments for civil service employees. With these powers, London should adopt nutritional standards for cafeterias, vending machines, and event catering similar to those that New York has implemented for its municipally procured meals and work places.

SIGNIFICANCE

This research has made theoretical, methodological, and practical contributions to the field of research on food environments, diet, and health inequality. Under the heading of Broader Impacts, I'll share some of the non-scholarly contributions this work has made to date. The scholarly significance of this dissertation in the areas of theory, method, and the production of new knowledge are discussed later.

Broader Impacts

This study's use of ethnographic methods, specifically including observant participation, supported two routes of integrating research, policy, and public health program development. As part of the practitioner interviews and policy research in Kensington and Chelsea, I presented this study's methodology and preliminary results with members of the area's primary care trust. These contacts were responsible for all of the public health nutrition education and policy guidance for the area. At the time of our interaction, that team was preparing to conduct a food environment audit and develop a borough wide guidance on food policy to be taken up by the Borough Council and thus this research played a role in informing those efforts. Secondly, Brownsville specific insights generated by this research have been shared with GrowNYC market managers that serve that area and used to inform their approaches to marketing local produce and new farmer's markets. In connection with the recruitment of participants in Brownsville, I visited a public high school where an elective course on food was being offered. I taught a series of guest lessons about disparities in diet-related disease and the food environment. In one of these lessons, students used the NYLON FEAST protocol to observe and discuss the food places within a block of their school. In the same vein, this study's connection to the ObesCities collaborative facilitated my ability to develop and teach a master's level hybrid course, called a Practicum in Urban Food Environments. In this class students at the City University of New York and London Metropolitan University participated in a five-week seminar on food environments in these cities, conducted field observations of the study sites using the NYLON FEAST protocol, and used a blog to share this information. Beyond knowledge production, this project has made modest, but still important contributions to public health practice and pedagogy.

Methodological and Empirical

A central challenge of this work was to develop a policy-relevant research method that used a relational framework for understanding health and place. The resolution to this challenge was a combination of using whole journey approach to understanding the person within a diagnostic ethnographic research design at local-global nexus of urban inequality, food, and health. Consequently, one methodological contribution of this dissertation is that it operationalized the relational framework on health and place with regard to units of analysis, barometers of validity, and articulations of population, experience, and place. This contribution is summarized in a table entitled, Conventional and Relational Approaches to Health and Place Research: The Implications for Applying a Relational Stance to *Eating the City*. It illustrates each approach's operationalization of concepts that are central to investigations of health and place, such as geography, distance, population, health resources, political power, context, scale, territory, and perception.

The design of this research used mixed methods and diagnostic ethnography to investigate urban inequality, food, and health at the global-local nexus. This entailed building an interdisciplinary grounding in relevant literature and multi-site segmented study sample that is rooted locally but conceptualized globally. The application of rigorous site selection procedures drew on the social determinants of health framework and took an iterative mixed method approach to mapping the study area boundaries. Also significant are this study's method of enumerating food places and categories from the group up and its use of hand held touch screen devices for data collection in the field. These are likely to have had a positive effect on the internal validity of the food environment data. The whole journey method used space-time food diaries, mental maps, and interviews to collect data on the socio-relational geography of everyday food behavior in these cities. This combination of methods reveals how individuals view the same food place differently, and emphasizes the limits of "objective" un-grounded food environments research.

Additionally, the comparative elements of this study design led to empirical contributions to the literature on food environments, diet, and health disparities. It appears that to date no other studies have taken a comparative approach to observing and comparing food environments in high and low income areas of London. This study may be the first to offer such a comparison. And, connections between

disparities in food environments, eating habits, and health are demonstrated in the US but not in other high-income countries. It remains unclear how to explain this unique positioning of the US. This will be the first research investigation using a standard methodology to study food environments internationally (Holsten, 2009).

Theory

This dissertation makes four significant contributions that advance the theoretical needs of this field of research, and contribute to contemporary conversations and debates within this area of literature. First, this research contributes to advancing theory by developing and introducing a place-based model of urban food environments and health disparities, and responds to calls for improving theory and developing new conceptual models of how food environments get into the body and produce disparities in health. This model suggests several new lines of research for scholars, like myself, who are interested in understanding and addressing inequalities in food and health. This conceptual model is also significant because it fills in gaps found in other models linking food environments and health. The model introduced by this research adds specificity to often included, but vaguely addressed, area of upstream governance and policy structures. The model introduced here grows out of this research's critical stance of scale and cross-national study design that enabled identification of specific pathways wherein policy shapes food availability, and shapes opportunities that eaters have for engaging in decision-making about these issues. As colleagues and I have commented elsewhere, theory is also important because it can help 'paint a bigger picture' and be a critical component of drawing together seemingly divergent interests in struggles with neoliberalism and other political economic projects and processes that promote inequalities in food environments and health (Libman, Fields, & Saegert, 2011). The breadth of factors included in the place-based model of food environments and health disparities aims to capture this potential.

A second theoretical contribution of this work is that it elaborates a rationale for, and provides an empirical example of critical research that uses a relational approach and delivers new insights that can inform policy, advocacy, and intervention. Neil Brenner (2009) argues that critical urban theory critiques, and even rejects, instrumental reason. In Brenner's view, instrumental reason is social scientific

knowledge that seeks to enhance efficiency and bolster current formations of institutionalized power. He asserts that critical research and instrumental research that informs policy are in opposition. I assert that they can be one in the same. I don't believe in rejecting instrumental reason so completely that as critical urban theorists and researchers interested in informing social change, we lose our ability to engage elected officials and institutional policymakers in dialogue about how to create more just and more optimal conditions in cities now and in the future. While I agree with Brenner that we need to maintain a critical stance toward instrumental reason and vigilantly avoid replicating oppressive power relation in our research and advocacy, I caution fully rejecting instrumental reason. Doing so would hamper our ability to participate in the production and interpretation of the bodies of evidence that the holders of intuitional power look to as sources of authority and guides for directing political and material action. It would also entail a surrendering of hope for immediate, albeit incremental, change that ameliorates the suffering of social and health injustice and begins to shift and reshape the dynamics of power within cities. Furthermore looking critically at the ways that instrumental reason, and its scalar assumptions, get deployed in policy development offers an important lens for understanding the decision-making processes that shape food environments and health in cities.

A third theoretical contribution of this research lies in its investigation of a central assumption that has shaped much research and policy on food and health inequality. Research on food access and health tends to conflate physical proximity and availability with access, and assumes that neighborhood food availability drives food behavior. This research set out to understand the disjunctures between Euclidean and socio-relational distances as they pertain to everyday geographies of food. It also specifically investigated the assumption that food behavior takes place overwhelmingly in residential neighborhoods and found that while neighborhoods constrain food access for some, there are also many reasons and routes for people to get their food far away from where they live.

The fourth theoretical contribution of this dissertation is that it contributes to recent debates in the scholarly literature on the 'local trap.' It does this by applying the local trap framework in a public health research context and to an analysis of localization and decentralization in relation to food policy and governance. To date, the local trap literature and its debates have focused mainly on the intersections of food-systems re-localization and sustainable development, as well as government decentralization,

community-based food projects and the reproduction of neoliberal ideals. Questions about the appropriate role of government in re-shaping food systems, and whether or not local initiatives and locally produced foods should be part of this re-shaping dominate this literature. This research used the local trap argument to frame a critical investigation of the scales of policy, governance, and behavior. In questioning the saliency of residential neighborhoods with regard to food, it brought new meanings of local into this conversation.

LIMITATIONS

There are several limitations to this study and the generalizability of its findings. These concerns fall into three areas. First, there are limitations that stem from the design and methods of this research. Second, several limitations result from the study's sample. The final section discusses limitations resulting from my training and background.

Research Design and Methods

This study only included four study sites in its examination of the income inequality and food environments in New York and London. Consequently, findings may not be representative of the entire populations of these, or other cities. At the time of this study's conception, the most up to date census data available for New York and London were from 2000 and 2001 respectively. In London, there were some changes in the demographic profile of the Clapton study site as this area was in the midst of gentrification. As such, it might not be the best current example of the lowest income area in that city. Still, Clapton is home to many poor people and the changes to the neighborhood provided an unexpected opportunity to observe how food environments figure in perceptions of urban change. The small areas observed in the NYLON FEAST pilot limited the types of statistical analyses possible. Specifically, the low numbers of specific categories of food places in individual study sites made it impossible to conduct analyses of variance tests comparing data on a site-by-site basis. The selected study sites observed using the NYLON FEAST protocol were areas with administrative boundaries and may thus present some bias in the inclusion and exclusion of food places. In addition, like many other studies examining the relationship between neighborhoods and health, this study was observational and cross-sectional. Thus,

its results cannot demonstrate causality or to make inferences about food environment changes occurring over time.

Problems inherent to self-reporting of data on food behavior and weight status present another limitation to this study. Participants are likely to have underreported beverage consumption (especially alcoholic beverages) and over reported fruit and vegetable consumption. Similarly, they may have underreported their body weight. Although these biases may skew this study's findings, self-reporting remains the most practical way of collecting data on food behavior.

Participant Sample

The sample sizes for each study site are relatively small in relation to the population sizes of the areas of interest in this work. Thus, they are not fully representative of the areas studied. This bias is likely to be most pronounced in London. As the area profiles presented earlier in this dissertation illustrate, the study sites in London had complex social profiles. This made it more difficult to attain samples for these areas that included individuals from every salient social group. It would take a significant increase in resources to get a representative sample in these contexts. In addition, because participants voluntarily responded to fliers about this research, they may represent a population more interested in food and health than members of the general population. In addition, the $25 participation incentive is likely to have contributed to the greater number of participants in low- as compared to high-income study areas because this financial benefit was more significant for people with fewer resources. Lastly, my limited time to conduct this research in London made it more difficult to enroll participants than in New York.

Limits in Training and Background

A limited background and training in GIS constrained my ability to analyze the spatial data gathered in this study. I had hoped to be able to digitize the data from participants' mental maps and use GIS to analyze variation in how they operationalize their neighborhoods. Future research should take a collaborative approach to working with this data and include colleagues with more extensive geo-spatial analytical skills. In addition, the analysis of borough-level food policy in London presents a further

limitation of this study. The relatively high number of boroughs and their varied reporting standards and structures for local authority policies made it challenging to systematically review food policies for each borough in the London. I relied on the expertise and experience of policymakers and information I gleaned as an observant participator in the food policy arena of London to further gather data on important food policies in that city. While I am confident that I have comprehensive information about the food policies of the boroughs that house the selected study sites, I am less confident that I was able to ascertain the full spectrum of food policies across all other boroughs.

FUTURE RESEARCH

The findings from this dissertation suggest several directions for future research on food environments and the etiology of diet-related chronic disease disparities. These are discussed below under the headings of project extensions and opportunities for collaborative research, methods, and generating 'policy-based evidence'.

Project Extensions and Opportunities for Collaborative Research

Future research should aim to expand the food diary and interview data collection so that the qualitative samples are representative of their respective study areas, especially in South Kensington where recruitment was most difficult. Building on the theoretical insights about segregation and density produced in this work's conclusions, another project extension could include replicating this methodology in other cities, or with a larger sample of neighborhoods. This would be especially useful in places that have contrasting socio-spatial and political formations such as suburbs, rural areas, and the global south. The NYLON FEAST instrument and observation method could also be employed to examine larger areas with data later being analyzed at multiple scales of aggregation to reflect variations in residential density and smaller socially meaningful areas, such as those identified in participants' mental maps. Future research should use these instruments to collect food environment data in the summer months when more outdoor food vendors are operating and observable, when weather is more hospitable to this activity, and using teams of observers to examine larger areas in synchronous and more succinct time periods.

Additionally, future research in this area would benefit greatly from collaborating with a GIS expert to re-analyze the spatial data collected for this dissertation, and the above extensions, using cartographic techniques and spatial statistics. One such line of research would entail digitizing the mental maps from this study and using spatial statistics to calculate the degree of agreement among participants about neighborhoods' boundaries and measure the size of these areas. These investigations would set the stage for further research that would calculate and compare area-based food environment statistics using a combination of geo-coded food environment data and individuals' neighborhood maps. Finally, a geo-narrative analysis would present maps of each study area with the space-time trajectories of participants daily journeys visualized as a 3D layer overlaid on the food environment data.

Methods

Research aimed at improving the methods available to investigators hoping to better understand everyday human-environment interactions involving food is still needed. For example, the NYLON FEAST pilot included in this study highlights the tension between the depth of direct observation and the practical limitations this places on the size of area that is possible to include in the study. Future research should attempt to optimize this relationship and include larger study areas. Such research should also address the challenges of variation in food place density in comparative food environments research. The NYLON FEAST pilot results indicate a mismatch between the fundamental assumptions of the statistical tools used in this area, and the way that food environment inequality plays out in the real world. Along these lines, the greater frequency of nutrition information in fast food as compared to full-service food places was observed in this study and has been noted in the literature on food environment methods (Lytle, 2009). This remains a major challenge in data interpretation and research translation. Additionally, this finding is meaningful because it suggests that the informational elements of the food environment may be important, but not as important as the nutritional quality of the food actually served. However, measuring the nutritional quality of food in restaurants is a much more difficult task than observing the informational environment. Still, future studies should assess the portion sizes and nutritional attributes of food served. Finally, future methodological research and development should seek to develop new tools that use mobile phones, mobile social mapping software, and location-based service technologies to

measure how individuals experience and respond to food environment exposures by capturing data in real-time and place.

Generating 'Policy-Based Evidence'

This study and the broader literature on food environments, diet, and health disparities point to a need for moving beyond cross-sectional and observational study designs. This dissertation has taken a critical perspective on the current relationship between evidence and policy by suggesting that there is a mismatch between the types of research that inform societal decision making and the realities of everyday life in New York and London. In closing, I suggest that as researchers we should generate policy-based evidence that uncovers the environmental, dietary, and health impacts (or lack thereof) that are likely the result of policy and/or community driven changes in food availability, pricing, and the informational elements of food environments. This type of study is essential in part because experimental research at the citywide and neighborhood scale is practically prohibitive and to date cities have done little to document the outcomes of their policies and share this information. Generating policy-based evidence is possible by cross-referencing using longitudinal datasets and employing quasi-experimental research designs.

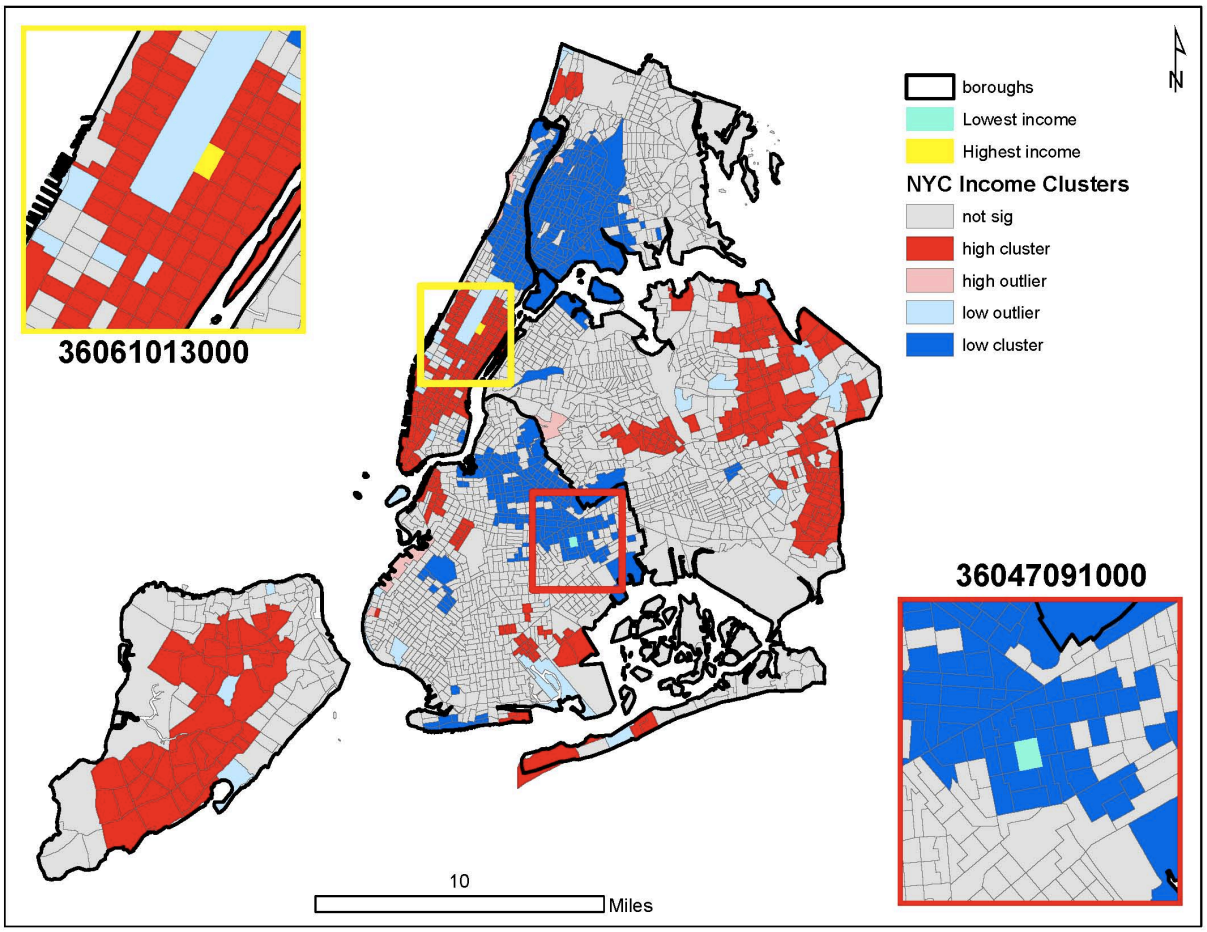
One example of this kind of research would be a critical investigation of the relationships between store format and size, diversity of healthful foods, and ownership structure. This would build on the observation in this study that for eat later places; store size was the only factor that has a significant impact on the overall healthfulness rating of these establishments. This observation is consistent with literature on food environments, diet, and health. However, qualitative observations of small format stores in London and market research on small-format supermarkets suggest that the association between store size and the healthfulness of its product line may not be universal. Given the planning debates in London on the issue of opening a new small-format supermarket, and New York's attempts to use zoning and tax incentives to help supermarket operators mitigate the dearth of large footprint retail spaces, it seems important to test the assumption that store size dictates healthfulness.

Along these lines, this study's findings about targeted policies that aim to change food environmental and gentrification raise questions about the temporal dimensions of these interrelated

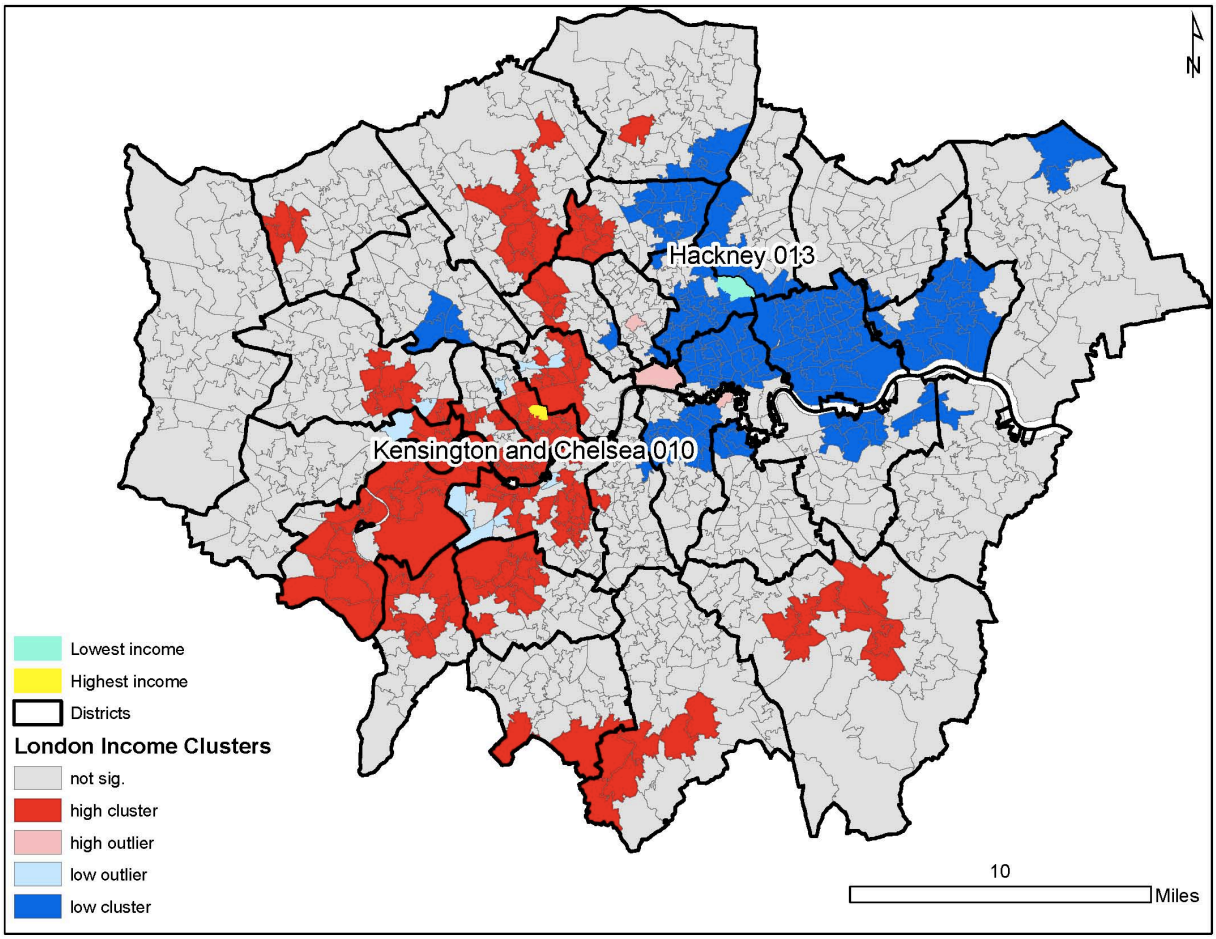
urban transformations. These findings also raise questions about the need to be cautious about the potential for targeted interventions to exacerbate gentrification and displacement—thereby contraindicating their goal of redressing health inequalities. Finally, these findings also suggest that hyper-segregation creates places that don't gentrify; where disparities are most extreme, they are also the most durable. Future research in this area would use multi-level analysis and compare New York and London with longitudinal data on citywide food environments, dietary practices, and prevalence of diet-related disease, census data, and food policy. Research is needed examining how changes in food policy (broadly conceived) have shaped patterns of social and economic segregation and how this in turn shapes disparities in food availability and health. This comparative approach would enable testing and further development of the place-based model of urban food environments and diet-related health disparities. The ultimate goal of this research would be to examine and describe the temporal order and feedback loops that link changes in policy, urban and neighborhood changes, with changes in food behavior and health so that the health and social equity outcomes of these systems can be improved.

Finally, future research should attempt to understand how best to strategically deploy targeted and universal approaches to food environment interventions to promote social and health equity. Proponents of the social determinants of health framework assert that reducing inequalities in health requires a mix of bottom-up and top-down approaches that together form a "nutcracker." The nutcracker framework is helpful. Nevertheless, as this research has shown, un-strategic uses of local or targeted or universal action can lead to wasted efforts, missed opportunities, and even negative unintended consequences. To advance the dialogue on acting on the social determinants of health, future research should conduct topological analyses of how policies and community-driven food environment changes jump and dissolve scales. That research should aim to generate further evidence-based suggestions about the most appropriate uses of each approach.

Appendix A. Maps Visualizing the Results of the Cluster and Outlier Analysis[18]

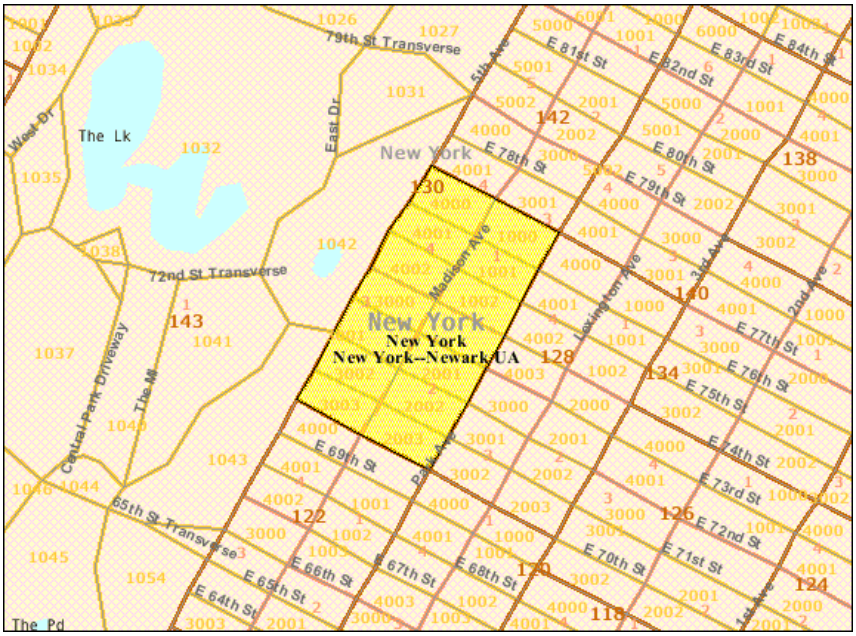


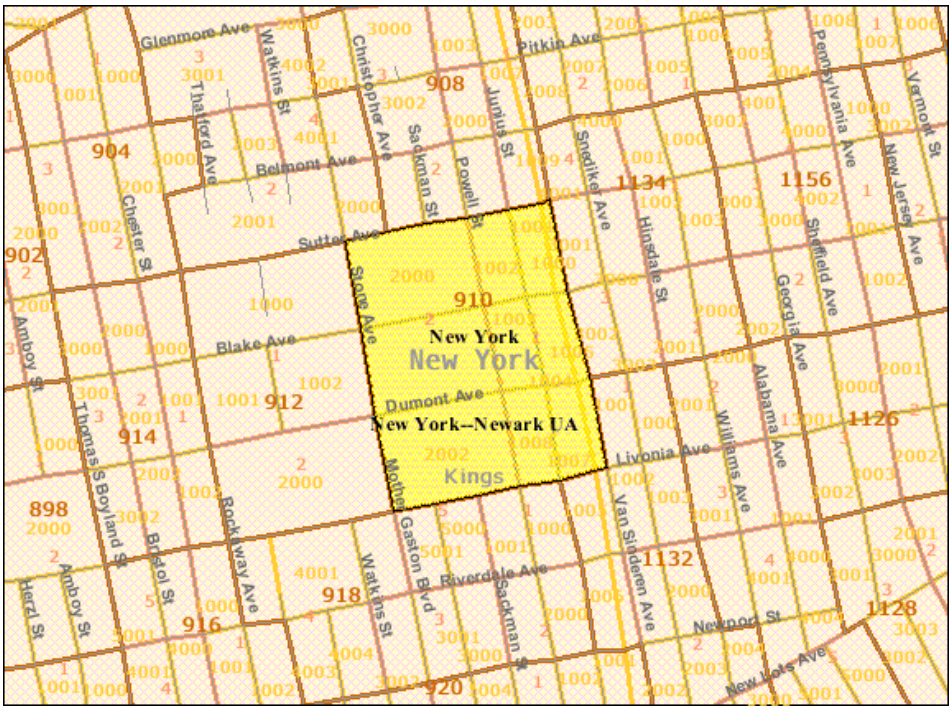
[18] Maps prepared by Andrew Maroko


N
Hackney 013
Kensington and Chelsea 010
Lowest income
Highest income
Districts
London Income Clusters
not sig.
high cluster
high outlier
low outlier
low cluster
10
Miles

Appendix B. Food Environment Observation Areas

New York





London


pyright and database rights 2011 Ordnance Survey 100019153
Works
Lea Bridge
R Lea
Hackney
Hackney 013
Market
Recreation
Grounds
Clapton Park
B112
Hosp
0
0.5km

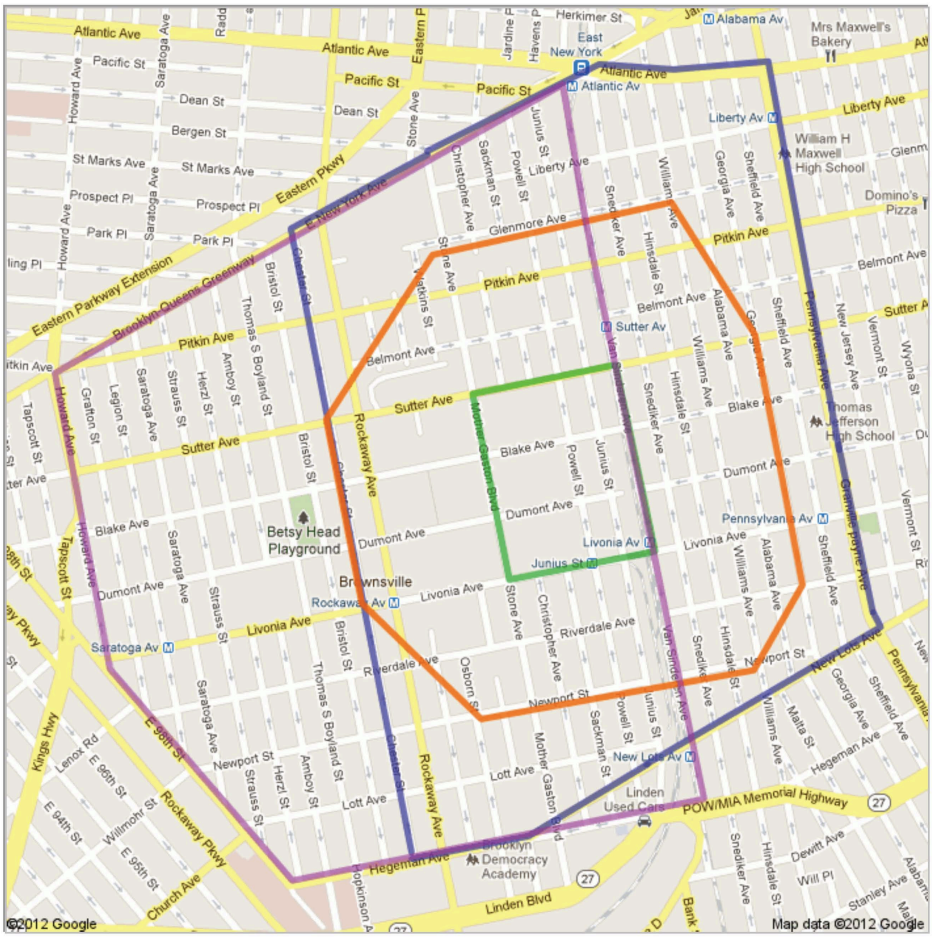

pyright and database rights 2011 Ordnance Survey 100019153
Kensington and Chelsea 010
Museums
0
0.2km

Appendix C. Final Study Site Boundaries for Participant Recruitment

Upper East Side, New York City

Unlisted · 41 views
Created on Oct 12, 2010 · By Iris · Updated Sep 4, 2011

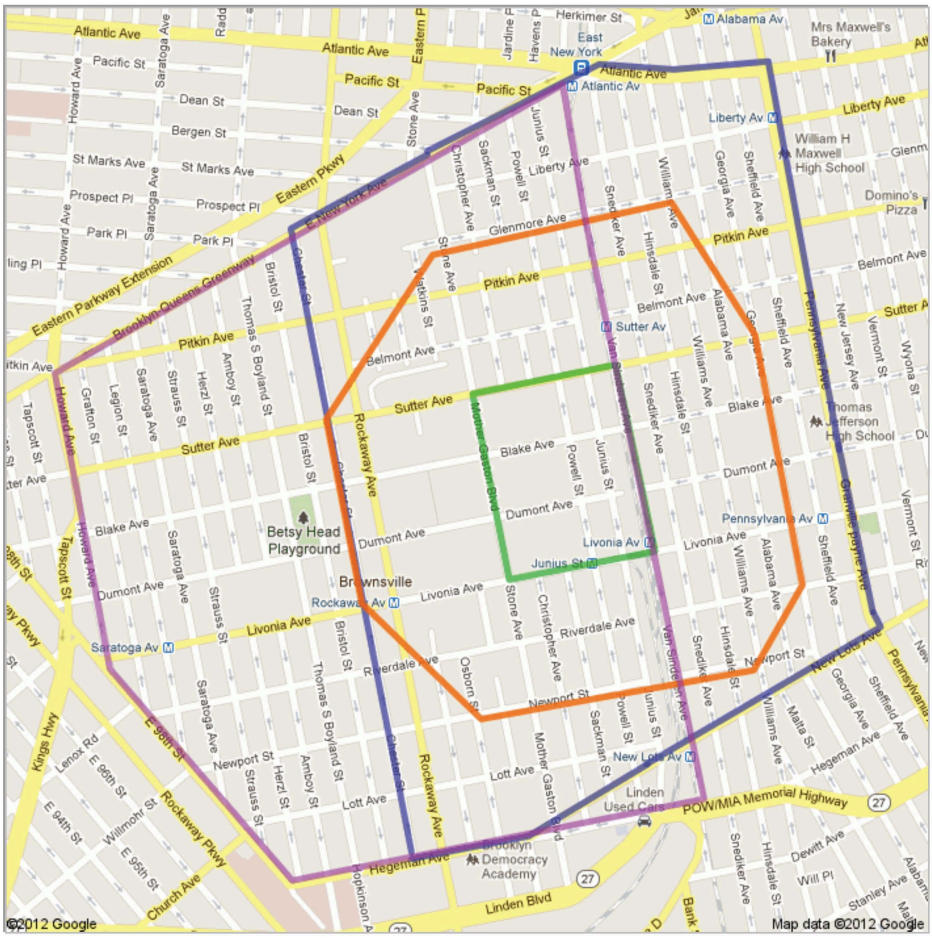
- Study area
- Study area
- Study area
- Study area
- Census tract with 0.25 mi. bufer



Brownsville, Brooklyn, NY

Unlisted · 120 views
Created on Oct 12, 2010 · By Iris · Updated Jun 8, 2011

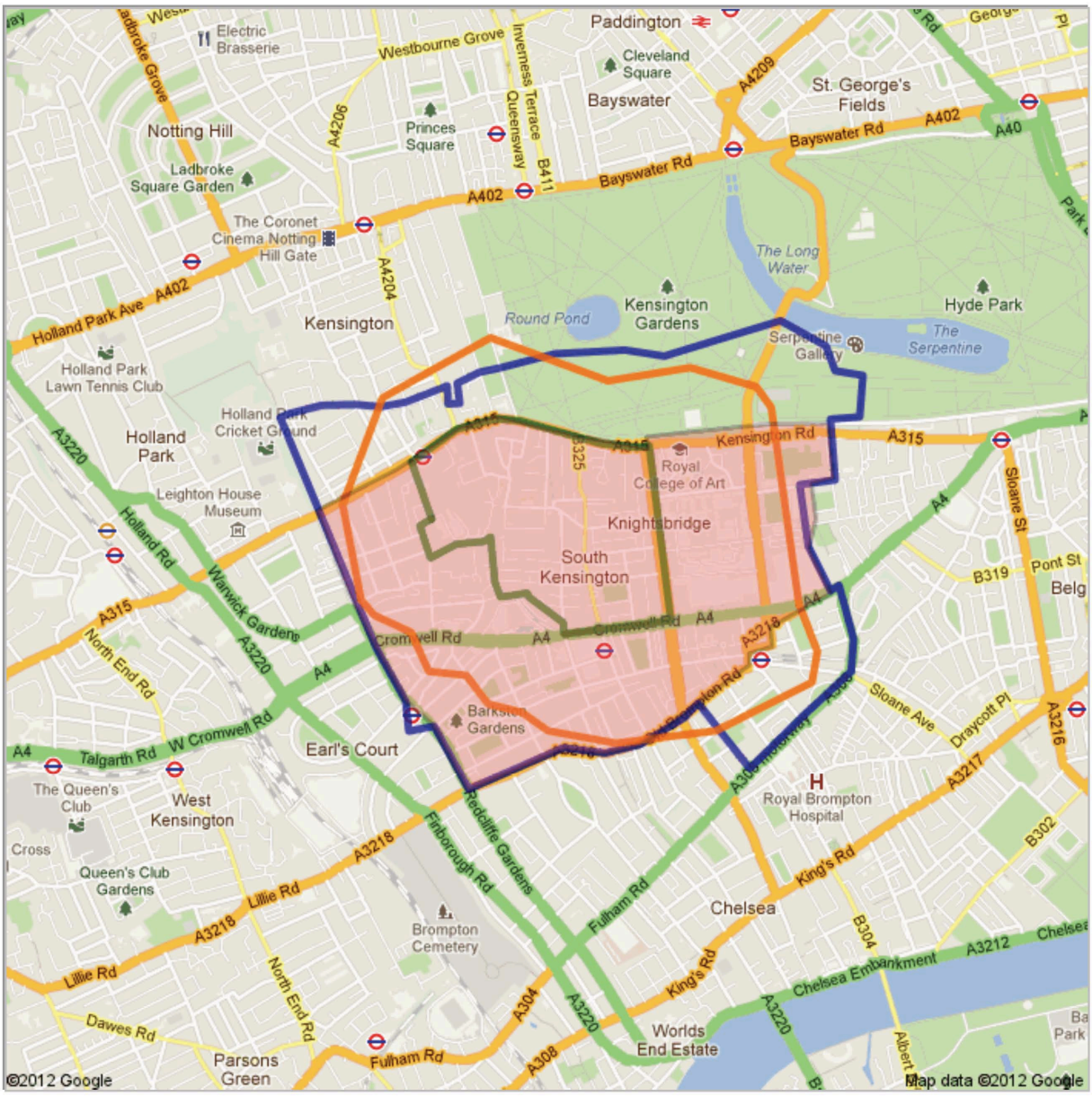
- Study area
- Study area
- Study area
- Study area
- Study area



Brownsville, Brooklyn, NY

Unlisted · 120 views
Created on Oct 12, 2010 · By Iris · Updated Jun 8, 2011

- Study area
- Study area
- Study area
- Study area
- Study area



Queen's Gate, London, Boundaries

Unlisted · 10 views
Created on Oct 12, 2010 · By Iris · Updated < 1 minute ago

- Study area
- MLSOA with 0.25 mi buffer
- MSOA 10
- MSOA 10

Appendix D. NYLON FEAST Measures

Eat Now	**Eat Later**
Place name, address, observer, study area, date, time	Place name, address, observer, study area, date, time
Place type (includes write in option for any not listed)	Place type (includes write in option for any not listed)
Food type (includes write in option for any not listed)	Vegetables (forms available, e.g. pre-cut, pre-washed, frozen)
Unhealthy promotions, Health promoting messages or promotions	Vegetable variety
Health and safety grade visible	Vegetable quality
Calorie labels	Fruits (forms available, e.g. pre-cut, pre-washed, frozen)
Change for life	Fruit variety
Vegetarian option	Fruit quality
Entrée comes with a vegetable	Whole grain bread
Alcohol	Whole grains
Whole grain bread, cost extra	Low-fat dairy
Whole grains, cost extra	Dairy alternative
Potatoes fried/ un-fried, does un-fried cost extra	Meat alternative
	Alcohol
	Prepared food/ ready meals
	Pulses nuts and seeds
	Eggs
	Low-fat meats
	Visible indication of EBT-WIC acceptance
	Healthy Bodega
	Green Cart
	Change for Life
	Eat Well Buy Well
	Calorie portioned packages
	Healthy/unhealthy promotions and messages
	Cooking tips or tastings

Appendix E. Policymaker Interview Protocol

Interview Questions

1. Please say a little bit about who you are and how your work has brought you into contact with the problem of childhood obesity and responses to it. If relevant, please describe your work from 2005 onward-or start at whatever point you became engaged with this issue.

2. I'm going to go through a short list of areas for action on childhood obesity. For each one I'd like you to briefly describe any relevant New York City/ London/ Cape Town developments that you have been involved in from 2009 onward.

   Food
   Physical Activity/ Sports
   Land Use and Planning
   Health Care
   Schools and Education
   Parks and Green Space

3. In your experience how have forces at the national, municipal, and community levels supported and/ or constrained intersectoral action on childhood obesity?

   [If helpful, ask for one example for each level]

4. Can you give any examples of specific governance structure or mandates that have supported intersectoral action on childhood obesity in your city? Or, if none, can you comment on the degree to which intersectoral responses to childhood obesity have been the result of more opportunistic action?

5. Please tell the story of the genesis a specific intersectoral action on childhood obesity in your city with emphasis on: barriers encountered, supports found, mechanisms and procedures used, and the degree to which concern for health and social equity informed this action.

6. Looking toward the future how do you see the current fiscal climate having an impact on the potential for further intersectoral action on childhood obesity?

7. What recommendations would you make to the Mayor of this city to strengthen action designed to reduce child obesity?

Appendix F. Sample Space-Time Food Diary Page

FOOD EVENT	
Date & Time	
Food and/or Beverage	
Where food acquired	
Estimated Cost	
Location Eaten	
Estimated Portion consumed	
Physical/ Social Environmental Influences	

FOOD EVENT	
Date & Time	
Food and/or Beverage	
Where food acquired	
Estimated Cost	
Location Eaten	
Estimated Portion consumed	
Physical/ Social Environmental Influences	

Eating the City

Space-Time Food Diary

Participant Name:_____

Appendix G. Semi-structured Interview Protocol for Eaters

Introduction to the participant and study area:

1. Tell me about yourself? How would you like to be described in this study? Please also tell me about your household?

2. How are you connected to this study area? How long have you lived or worked here?

3. How has it changed? How would you describe it to someone who had never been here?

4. In general, how often do you shop for food or eat while you are here? How do you think the time that you spend in this area influences your diet?

Mental mapping activities: (Uses two maps one of the city at large and one of the study site)

Using the map of the city at large:

1. What do you consider to be the boundaries of this (study site) neighborhood? Please draw the boundary of this neighborhood on the map. If the participant does not live in this neighborhood, ask: What are the boundaries of the neighborhood where you live? Please draw the boundary of this neighborhood on the map.

2. What communities do you feel you are a part of? How does food figure in the activities of these groups? Are there specific places in this city that are important to this community, or these communities? If so, please mark the map where. How does the food in these places relate – if at all- to the way your community works?

3. I've picked two days from your diary – one weekday and one weekend day – I'd like you to tell me the story of each of these days from beginning to end. You can use the information in the dairy to help you remember the parts of the day that happened in between the time that you were eating or shopping for food. In these two stories, try to include some details about how you were feeling, things you remember seeing that may have influenced your food choices, interactions with other people, and how long each part of your day took. Please annotate the map as you tell these stories. When you mark places such as where you live or work, please mark the nearest intersection and not the exact location. This is to protect your privacy in case I use any images from the map in my presentations or publications about this study. Possible probes:

    a. How do you usually travel to and from work? How long does it take? Do you ever stop along the way to shop for food or run other errands? Where? Why? Why not?
    b. Do you ever stop along the way to shop for food or run other errands? Where? Why? Why not?
    c. Do own a car? If yes, does it influence how you shop for food or go out to eat? How so? Or, Why not? If no, how, if at all, would having a car influence how you shop for food or go out to eat?

4. This is a map of one of the study area where you live or work. Please tell me about the food places that you go to regularly and why you do so. Are there food places that you avoid? Why do you avoid them? Are there places that you are interested in, but don't go to? Why? If you could add any kind of food place anywhere in this area what would you add, where and why? If you could add any kind of food place anywhere in this city what would you add, where and why?

5. I'd like you to think about the city overall. Where do you think there is good access to good food? Where do you think there is not good access to good food?

Questions about their food diary activity:

1. How accurately do you think this diary reflects your usual eating and food purchasing patterns? Possible probes:
    a. Can you remember any times when it was too inconvenient for you to record what you ate or foods that you bought? If yes, please describe it.
    b. Did like, or dislike, the experience of keeping a food diary?
    c. Do you have any suggestions for improving this kind of data collection in the future?

Questions about how participants perceive, navigate and use the urban food environment:

1. Do you notice / pay attention to food labels (give appropriate examples from each city) when you shop or eat out? If so how do they figure in your purchasing decisions?

2. Do you ever feel offended or bothered by these kinds of messages about food? When? Why?

3. What kinds of changes to the food environment would make it easier for you to eat well?

4. Can you describe a time and place you were frustrated by the food options available to you?

5. Can you describe a time and place when you went out of your way to get a particular kind of food?

6. Do you think the city government should support: urban agriculture? Supermarkets? fast food bans near schools? Calories labeling in restaurants? Trans fat bans and salt reduction programs? Why or why not?

7. How often do you shop for food? What determines this frequency? How does your food get to your house?

8. How often do you eat out? When you go out to eat how do you decide where to go?

9. How of often do you while you are 'on the go'? When does this happen? Do you have any meal strategies for eating while in transit?

10. Do you look for information about new things to cook or new places to go eat or shop for food? Where do you look? How often? Why these places? How often do you follow-up on these leads and go?

Appendix H. Closed-ended Questionnaire for Eaters

Race: White Black Latino Asian Mixed Other

Ethnicity:

Individual income:		
	Up to $10,000	Up to £6,250
	$10,001 to $30,000	£6,251 to £18,750
	$30,001 to $50,000	£18,751 to £31,250
	$50,001 to $70,000	£31,251 to £43,750
	$70,001 to $90,000	£43,751 to £56,250
	$90,001 to $100,000	£56,251 to £62,500
	$100,001 to $125,000	£62,501 to £78,150
	$125,001 to $150,000	£78,151 to £93, 750
	$150.001 to $200,000	£93,751 to £125,000
	$200,000 and above	£125,001 and above

Educational attainment:

L1/Compulsory	L3/ Bachelors
L2/High School/ GED	L4/Masters
	L5/ Doctorate

Gender: Male Female Transgendered

Age:

Marital status: Single Married Widowed Divorced Separated Partnered

Housing tenure: Own Private rental Public/ Social housing

Household size:

Profession:

Height: ***Weight:***

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