

Quality of Life in New York City: A Matter of Income?

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ABSTRACT

Over the past several decades, major efforts have been made to measure the quality of life (or well-being) of society. While various approaches have been attempted across different fields of study, few, if any, have examined the quality of life of the lived urban experience in relation to income. The purpose of the following study is to identify whether there is a relationship between median household income and quality of life in select New York City Census tracts. The study uses secondary data from two instruments: the Census Explorer and the NYC 311 Service Request Map. Quality of life is measured according to complaints or service requests regarding safety, sanitation and maintenance, and noise. Possible improvements to the methodology and analysis are presented, along with a call for further research.

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Chapter 1: Introduction

Introduction

Recently, several studies have declared that New York City is a hotbed of economic inequality (among other forms of inequality). These studies—in addition to numerous non-academic reports—all call attention to the difference in household incomes between affluent and low-income families. Several references to Charles Dickens's “Tale of Two Cities” were even made during the 2013 New York City mayoral election campaigns (Barbaro, 2013, de Blasio, 2013; Walker, 2013). Though certainly not a new phenomenon, much of the current political and philosophical discourse persistently centers on economic inequality (Berube, 2014; Geewax, 2014; New York City Comptroller’s Office, 2012). Aside from the evident disparity in wealth and income, it is still unclear as to what this economic inequality entails and if there are other observable differences in the quality of life between high-income New Yorkers and low-income New Yorkers.

Statement of the Problem

The problem is that some communities have been, and continue to be incapable of attaining a high quality of life. Quality of life is simultaneously a measurement of well-being and a goal. There are a variety of indicators across different fields of study, which are said to estimate quality of life. With the growing emphasis on urban economic inequality, whether or not wealth plays a role in the fulfillment of a satisfactory quality of life remains to be answered.

Definition of Terms

Quality of Life. For the purposes of the proposed study, quality of life will refer to noise pollution, safety, and sanitation and maintenance. This specified definition differs from the interpretation of quality of life seen in the NYC 311 Service Request Map, which includes issues such as asbestos, food poisoning, mold, and smoking.

Purpose of the Study

The purpose of the study is to examine the relationship of income to quality of life within specific New York City Census tracts, which will be chosen based on median household income.

Research Question

What is the relationship between specific quality of life indicators and income in select New York City Census tracts?

Chapter Two: Literature Review

Introduction

In recent decades, research into quality of life has proliferated. These efforts, which have essentially given meaning to the term quality of life, have cultivated a remarkable collection of literature that has prompted intrigue and further advanced our understanding of social and individual well-being. While some studies have suggested a limited but positive relation between wealth and well-being, others have focused on the physical environment's implications on quality of life. The expanding variety of approaches to measuring quality of life have not only advanced our understanding, but have also increased the complexity of the concept of quality of life.

Quality of Life

Identifying a collectively determined and unambiguous definition of quality of life is a difficult task. When delving into the topic of quality of life, there is an array of definitions to be considered (happiness, satisfaction, and well-being, among others). Quality of life is a comprehensive concept that incorporates different factors and figures. These factors and figures, depending on the discipline, are believed to be instrumental in negatively or positively affecting one's well-being. According to Malkina-Pykh and Pykh (2007), quality of life is a term that is being employed in a variety of academic fields "to express the idea of personal well-being in a framework, which goes beyond the simple economist equation of well-being with income" (p. 854). Likewise, Costanza (2009) argued it is imperative that we incorporate the nonmarketed contributions to the notions of well-being or human satisfaction.

There may be a variation in the degree of life satisfaction across different countries. Measurements for quality of life may be formulated with concern to a particular group of people in a distinct set of social circumstances, and may not be applicable to other groups of people in other circumstances. It is questionable whether there can ever be an absolute set of standards or measures that can be applied universally (Costanza, 2009; Gomes, Pinto, & dos Santos, 2010; Malkina-Pykh & Pykh, 2007). Quality of life researchers agreed that there are multiplicities of factors that can have an effect on the perception of quality of life and that they are in a state of continuous change (Abbott & Wallace, 2012; Gomes, Pinto, & dos Santos, 2010; Malkina-Pykh & Pykh, 2007). Malkina-Pykh and Pykh (2007) postulated that quality of life is intrinsically a subjective abstraction under the influence of various environments (e.g. cultural, economic, social, physical). Nevertheless, a common finding among researchers was that human beings, no matter the nationality, required economic stability and social connections (among other things) to feel satisfaction, or to reach a satisfactory state of well-being (Abbott & Wallace, 2012; Costanza, 2009; Gomes, Pinto, & dos Santos, 2010; Malkina-Pykh & Pykh, 2007).

In quality of life research, there are two main measurement methodologies: subjective well-being (SWB) and quality of life (Costanza et. al., 2008). SWB centers on an individual's account of his or her happiness (Costanza et al., 2008). Despite the intention of focusing on the subjective well-being (SWB) of the individual, those conducting research risk assessing a more collective, rather than individual, experience (Malkina-Pykh & Pykh, 2007). Malkina-Pykh and Pykh explained that because every individual's view of his or her well-being is subjective, and influenced by expectation and

social comparison, studies have instead analyzed objective circumstances which have an effect on the experience of the individual. Due to such tendencies, some quality of life academics have proposed the employment of not just objective, but subjective indicators (Cummins, 2000); the former arising from “psychological responses, such as life satisfaction,” and the latter as “measures based on frequency or physical quantity” (Malkina-Pykh & Pykh, 2007, p. 855).

Accordingly, the evolution of research on quality of life has resulted in different scales of measurement, such as a graduated range of values for measuring satisfaction (Gomes, Pinto, & dos Santos, 2010; Malkina-Pykh & Pykh, 2007). Studies of quality of life have ordinarily been separated into different spheres of life. Economics, for example, has used money to estimate the value of one's happiness, whereas medicine has used health to determine satisfaction, or positive well-being. Within the broad range of disciplines of social science, quality of life is evidently an all-embracing theory. Malkina-Pykh and Pykh (2007) questioned why researchers themselves do not challenge the exclusion of some spheres, while others are embraced. Cummins, a noted pioneer in SWB, suggested that researchers learn to recognize the “strengths” of all disciplines, as the concept of quality of life should encompass “the totality of human life” (2000, p. 53).

Malkina-Pykh and Pykh (2007) claimed that the absence of a theoretical approach is indicative of possible flaws with the empirical research on quality of life. Furthermore, Malkina-Pykh and Pykh criticized “the reductionistic approach based on aspect-compartment oriented research methods” [as it] “has failed in analysing... complex, multidisciplinary, large scale quality of life phenomena” (p. 858). They proposed engaging in a systems analysis approach: a structural approach through which researchers

would focus on the different parts of the system and the relationships among its subsystems, rather concentrate on a single subsystem. It was hoped that through such a process, researchers would gain a better understanding of processes and changes that occur within systems, in addition to identifying possible causal connections (Malkina-Pykh & Pykh, 2007).

Hsieh's (2012) study on the weighting of quality of life measures determined the impact of domain importance (also known as value-priority) in quality of life measures. Hsieh (2012) remarked, "In the area of life satisfaction studies, researchers have long recognized the possibility that not all aspects of life are equally important to all individuals" (p. 268). It is for this reason that Malkina-Pykh and Pykh are explicit in arguing that monetary values alone should not determine or influence quality of life. 268). Still, an important issue, which several researchers touched upon but were unable to resolve, is how importance ought to be measured (Hsieh, 2012; Malkina-Pykh & Pykh, 2007).

Wealth and Location in Relation to Quality of Life

Financial assets are to a great extent incredibly accommodating resources that can be used to divert a person's tensions and troubles. A wealthy individual with cancer, for example, will have more access to high quality health-care than the average person by means of her or his material wealth. According to Mellor, Cummins, and Loquet (2012) academics and researchers have been hesitant about determining a positive relationship between income and SWB. This, however, is explained by the claim that there is "no simple linear relationship between these variables" (Mellor et al., 2012, p. 8).

Although increasing the annual salary of an economically disadvantaged person may generate a higher SWB, doing the same with an affluent person will generally not produce the same results (Mellor et al., 2012). Raising the concept of homeostatic theory, Mellor et al. explain that a person's ability to steer clear of homeostatic failure—a person's ability to maintain a positive state of well-being—can be determined by a) the intensity of the problem; b) the resilience of the homeostatic system; and c) the amount of resources (such as money) that one can resort to in order to evade the problem. The study confirmed that “homeostatic defeat” was more likely to occur when an individual had limited material resources and unhealthy interpersonal connections with others (2012).

Permentier, Bolt, and van Ham (2010) analyzed factors that decisively affect the assumed reputation of a neighborhood and neighborhood satisfaction. Permentier et al. (2010) alluded to writers who suspect that the well-being of individuals within neighborhoods is, to some extent, shaped by what they think of their neighborhood, and how they believe others view their neighborhood (referred to as perceived reputation). Kearns, Hiscock, Ellaway, and Macintyre's (2001) study (as cited by Permentier et al., 2010) suggested that the perception of a good or bad reputation is indicative of social ranking. According to White's (1987) study (as cited in Permentier et al., 2010), this satisfactory or potentially unsatisfactory reputation, which influences the subjective perception of a person's neighborhood, is a decisive factor in neighborhood satisfaction.

Permentier et al.'s (2010) study discovered that the features of a neighborhood are more likely to account for a resident's satisfaction in his or her neighborhood than his or her perception of neighborhood reputation. Additionally, homeowners tended to be more content with their neighborhood and likewise have more favorable perceived reputations

than those who do not own homes. Conversely, with respect to other socioeconomic factors (education levels, status of employment, and income), Permentier et al. (2010) failed to yield any significant findings. Even so, Permentier et al. (2010) believed that the element of homeownership “captures the effect of these socioeconomic variables” (p. 990).

At the macro level, there has been controversy over national income inequality in relation to happiness (inequality). Zagorski et al.’s (2013) study, for example, suggests that the national level of inequality (measured by the Gini index) bears no correlation with well-being in “advanced societies” (p.1089). Jan Delhey and Ulrich Kohler’s (2011) study disagrees with such findings, however. In fact, Delhey and Kohler proposed using alternative measures to assess happiness rather than measure happiness inequality as “the standard deviation of reported well-being” (2011, p. 742). The researchers discovered that the use of standard deviation skewed data, ultimately generating a depiction of happiness inequality that was inaccurate. By means of their instrument-effect-corrected measures, Delhey and Kohler found that there was a correlation between income inequality and happiness inequality.

Quality of Life Indicators: Issues of Noise, Safety and Maintenance

Those unfamiliar with the field of health may be inclined to take its overarching influence for granted, as it not only involves biological or pathological aspects but well-being, too. Shepherd, Welch, Dirks, and Mathews' (2010) study centered on noise, as one of the numerous elements that can have an effect on one's health. It may not surprise, then, that noise, a widely recognized quality of life issue, is argued to negatively influence our health. Depending on the situation and one's personal sensitivity to noise,

noise can either elicit annoyance or disrupt sleep (Shepherd et al., 2010). A study by Botteldooren, Dekoninck, & Gillis (2011) concurred with this view, as they stated “subjective noise sensitivity... is an important predictor of noise annoyance” (p. 778). Sheperd et al.'s findings suggest that sensitivity to noise can deteriorate one's health related quality of life, but additional investigation would be required to prove a causal relationship.

The influence of noise on individual and community well-being is a facet of quality of life and well-being that is of much interest to researchers. While public and private forms of transportation are certainly useful, they also have ramifications. One of the many adverse implications concomitant with traffic is irritation caused by noise, which can put the quality of a neighborhood at risk. Botteldooren et al. (2011) found that the connection between the quality of the life in a neighborhood and reported noise annoyance is a direct one.

The conditions of any particular environment have the ability to dictate one's state of being. According to Botteldooren et al. (2011), more emphasis is being put on the mental well-being of societies across the world. The favorable or unfavorable evaluation of a neighborhood is determined by an assortment of indicators. Botteldooren et al.'s research demonstrates how individual neighborhood satisfaction can be predicted better by the kind of location the individual's house is located, rather than familiar factors such as economic standing.

In a publication of a survey requested by the European Commission, over 40,000 people were interviewed in upwards of 70 European cities (TNS Political & Social, European Commission, & Directorate-General for Regional Policy, 2013). The survey's

participants were asked to share their opinion in regard to elements of urban life. The results indicate that there is a high correlation between one's satisfaction with a) green and public spaces; b) impression of safety; and c) cleanliness, and the overall satisfaction with one's city (TNS Political & Social, European Commission, & Directorate-General for Regional Policy, 2013). Additionally, satisfaction with the noise level was positive in most cities, with the highest levels of satisfaction in cities located across Northern and Western Europe.

The results of the survey further indicated that the volume of the population is a factor that contributes to life satisfaction (TNS Political & Social et al., 2013). Cities with more than one million residents were reported to be among the least satisfied.

Additionally, cities with larger numbers of inhabitants were also more likely to be dissatisfied with the problem of noise. According to Johannes Hahn, a member of the European Commission, there were considerable discrepancies between cities in the perception of quality of life (TNS Political & Social, European Commission, & Directorate-General for Regional Policy, 2013). Hahn believes such discrepancies highlight the consequences of economic crises on European residents' lives and the cities in which they live (TNS Political & Social, European Commission, & Directorate-General for Regional Policy, 2013).

Kruger, Reischl, and Gee (2007) conducted a study regarding neighborhood deterioration and its association to physical and mental health. Kruger et al.'s (2007) results expressed that well-being and social conditions of neighborhoods are not mediated via satisfaction in one's neighborhood, but via impressions of safety, social contact, and social capital. Unfortunately, however, the researchers never went into depth about what

is meant by social capital—a term with several conflicting definitions—and it is therefore, difficult to accurately determine what the results of their study mean. Kruger et al. (2007) reported that the unemployed manifested feelings of despondency, greater rates of stress, residential deterioration, and fear of crime. Fear of crime also predicted neighborhood satisfaction (Kruger et al., 2007).

Wandersman and Nation's (1998) study (as cited in Kruger et al., 2007) suggested that indicators within the built environment of a neighborhood can have an effect on physical and mental health, and as stated by Austin, Furr, and Spine's (2002) study, it may cause public unease about safety (as cited in Kruger et al., 2007). Such indicators were said to cue lack of social control (Kruger et al., 2007). Similarly, Bronzaft and McCarthy's (1975) study argued that elevated levels of noise in neighborhoods were linked to low education levels, and Damon's study (1977) associated noise levels with poor maintenance of yards and higher arrest rates (as cited in Kruger et al., 2007).

Summary

Improving the quality of life is known as one of the most important social, economic, and political issues facing society today (Costanza et al., 2008). New York City's 311 Customer Service Center, for instance, can be regarded as a reflection of that aspiration. By means of 311, New Yorkers can make maintenance complaints against their landlords, noise complaints, and other complaints concerning issues of everyday life in New York City. No matter their perceived insignificance, however, problems with noise or building maintenance are gradually being recognized as quality of life issues. Many of the studies reviewed provide substance to the argument of acknowledging urban matters that are commonly considered trivial.

Kruger et al.'s (2007) study, for example, showed a correlation between impressions of safety with the social conditions of a neighborhood and well-being. Similarly, Botteldooren et al. (2011) found a clear correlation between reported disturbances of noise and quality of life. The study by TNS Political & Social, the European Commission, and the Directorate-General for Regional Policy (2013) demonstrated a correlation between life satisfaction and location, as Northern and Western European countries consistently reported higher levels of satisfaction across the board. Still, even a basic inquiry into literature pertaining to quality of life can show one the myriad influences on the development of this field, and moreover, the difficulty in developing a collective understanding of quality of life.

Unfortunately, academic research on quality of life in New York City appears to be quite limited or outdated. No studies focusing on the possible relationship of income to quality of life that is specific to New York City were identified. There also do not seem to be any relevant studies focused on the sanitation or maintenance practices of cities and quality of life. Most of the information identified in academic databases centered on quality of life from national and international-comparative perspectives. Furthermore, an overwhelming portion of the research regarding quality of life came from a medical frame of reference. Due to this lack of information, it is suggested that further research will expand knowledge on the relationship between income and quality of life in New York City.

Chapter Three: Research Design

Introduction

The purpose of this study will be to determine if there is a relationship between specific quality of life indicators and median household income in select areas of New York City. Notwithstanding the considerable number of studies addressing quality of life issues, there appear to be no academic studies focusing on the relationship between income and quality of life in relation to noise, maintenance, and safety. Further, there do not appear to be any quality of life studies that have analyzed data from the New York City 311 Service Request or from similar applications. Much of the reviewed literature employed methodologies in which surveys were conducted or analyzed as secondary data. Because little research in this particular subsection of quality of life has yet to be established, a relatively novel methodology will be employed.

Research Criteria

The criteria used for inclusion in this study will be limited to households that fall within the four poorest and the four wealthiest Census tracts in New York City. The selection of the four poorest and four wealthiest Census tracts will be based on median household income from 2012 American Community Survey data. Census tracts within any of the New York City boroughs with outdated or unavailable data will be excluded from this study.

Instruments

The instruments that will be used are the United States Census Bureau Census Explorer (Census Explorer) and the New York City 311 Service Request Map (NYC 311

Map). Both instruments are web-based and can be accessed online via their web addresses.

Census Explorer is an interactive map that displays demographic and economic statistical information. Census Explorer was developed with a data visualization instrument called Social Explorer, which offers users over 200 years worth of demographic data. Specifically, Census explorer uses data from the American Community Survey (ACS). The ACS is an official Census Bureau survey that is sent to approximately 3 percent of households within the United States every month (U.S. Census Bureau, 2014). Due to the fact that the data derived from these surveys are based on samples, a margin of error must be considered.

The NYC 311 Map allows the public to view service requests and complaints made through the 311 Customer Service Center (a public service which can be accessed online or by phone). The NYC 311 Map is a relatively recent development created in 2011 as a result of the increased use of the New York City 311 Customer Service Center (established by the City of New York in 2003) and as a goal to increase transparency (New York City Global Partners, 2011). Complaints and service requests that are made to the New York City Customer Service Center are given geographic coordinates and then placed on the NYC 311 Map. Users of the NYC 311 Map can view complaints and service requests across New York City according to 15 different categories, including Air & Water Quality, Noise, Public Safety, Sanitation, and Quality of Life. There are subcategories within each of the 15 service request categories.

The NYC 311 Map was developed using an older, online geospatial information system (GIS) called NYCity Map that was developed by the New York City Department

of Information Technology and Telecommunications (DoITT). The NYCity Map is essentially the prototype of all current New York City government online map portals, which enable visitors to superimpose different layers of information regarding New York City (such as the location of hospitals and libraries) on top of a two-dimensional map of the city.

The NYC 311 Map and the Census Explorer are both thematic maps, which display areas in distinct colors according to specific values. For example, Census tracts are shaded on a graduated range according to median household income (and other variables) in the Census Explorer, whereas the NYC 311 Map displays graduated points or shaded areas according to the volume of the incident rate. The closer the user zooms into a location, the more detailed the data. The service requests, complaints, and incidents on the NYC 311 Map can also be viewed according to a period of time that is selected by user.

Data Collection

The first step of the study will be to identify the four wealthiest and the four poorest Census tracts in each New York City borough. There will be eight distinct Census tracts. The wealth of a Census tract (or lack thereof) will be determined by the Census tract's median household income. This information will be attained through use of the Census Explorer. Census tract information is publicly available, de-identified data, and therefore, does not require direct contact with potential participants or consent.

Based on the location of these specific Census tracts, the next step will be to identify the amount, as well as the kinds of complaints and service requests made to the

311 Customer Service Center that are within the geographical bounds of the respective Census tracts.

The selection of complaint and service request data will be limited to indicators that are used in the NYC 311 Map. Specifically, seven categories of indicators will be considered (Noise, Property & Buildings, Public Safety, Sanitation, Streets & Sidewalks, Quality of Life, and Air & Water Quality). Each category consists of subcategories, and of those, the following will be evaluated: a) Noise comprises Commercial Noise, Residential Noise, Street and Sidewalk Noise, and Vehicle Noise; b) Property & Buildings comprises Graffiti; c) Public Safety comprises Disorderly Youth, Drinking, Homeless Encampment, Illegal Fireworks, and Bike/Roller/Skate Chronic; d) Sanitation comprises Dirty Condition, Missed Collection, Missed Sweeping, Sanitation Condition, Rodent, Collection Truck Noise, and Overflowing Litter Basket; e) Street & Sidewalks comprises Street Condition, Street Light Condition, Street Sign Condition, Traffic Signal Condition, Curb Condition, and Sidewalk Condition; f) Quality of Life comprises Asbestos, and Mold; g) Air & Water Quality comprises Air Quality; and h) Transit & Parking comprises Bus Stop Shelter complaint. All secondary data from the NYC 311 Map will be taken from a three-month period, starting on June 21, 2014 and ending on September 20, 2014. Indicators with no available data will ultimately be excluded from the study.

Data Analysis

After the data are collected, an exploratory, descriptive analysis will be performed to examine whether there is a relationship between median household income and the specified quality of life indicators. Median household income will be assigned the

constant, while a range of quality of life variables will be classified as the dependent variables.

Assumptions

For the purposes of this study, it is assumed that all the data displayed on both instruments are reliable and that the complaints made to the 311 Customer Service Center are valid. Furthermore, it is assumed that the data displayed on all both instruments are free of identifiers, and are, therefore, not infringing on any individual's privacy rights.

Limitations

There are numerous limitations that are relevant to this study. First, what is learned in this study cannot be generalized to other cities or to other Census tracts with comparable median household incomes. Second, there are Census tracts with unavailable data on the Census Explorer platform. These Census tracts hold the possibility of being among the poorest or wealthiest Census tracts within their borough, but because such information cannot be determined, they will be excluded from the study. Third, the NYC 311 Map store its data for a period of only one-year, after which the data cannot be publicly accessed. Having access to data from a longer span of time may help distinguish long-term phenomena from short-term phenomena.

Other limitations related to this study are concerned with the reliability and validity of data. Complaints and service requests made to the 311 Customer Service Center might not accurately reflect the extent of quality of life issues specific to a particular Census tract. Some people may not be aware of this public service. Conversely, some people may know about this service, but may be disinclined to use it. Finally, an

additional concern is the possibility of some complaints and service requests originating from a small number of addresses in a particular neighborhood.

Chapter Four: Results

According to the data, there does not appear to be a clear relationship between median household income and the specified quality of life indicators. In the three-month time span that was examined, the Census tracts with the highest median household incomes—with the exception of two—generated the highest amount of 311 service requests and complaints. Census tract 142 (see Appendix A), which is the wealthiest census tract¹ with a median household income of \$243,622, made 77 service requests and complaints. Census tract 130 (see Appendix B), with a median household income of \$242,500, made 61 service requests and complaints. Census tract 21 (see Appendix C), which has a median household income of \$201,731, produced 241 service request and complaints. Census tract 33 (see Appendix D), where the median household income is \$201,050 made a total of 266 service requests and complaints.

Conversely, the Census tracts with the lowest median household incomes generated a relatively small number of complaints. The four wealthiest Census tracts made a total of 645 service requests and complaints, whereas the four poorest census tracts' service requests and complaints totaled 251. Census tract 352—the tract with the lowest median household income in New York City—has a median household income of \$9,675, but only made 85 service requests and complaints (see Appendix E). Of the four lower-income census tracts, Census tract 352 made the highest amount of complaints.

With respect to indicators, noise was undoubtedly the biggest quality of life complaint. Approximately 49 percent of all service requests and complaints were related

¹ According to the Census Explorer, Census tract 228 is the wealthiest census tract in all the five boroughs. Unfortunately, there were no New York City 311 Service Request data available for this Census tract, thus this Census tract was eliminated from the study.

to noise. The New York City 311 Service Request Map recorded noise complaints according to five subcategories: Noise, Commercial Noise, Residential Noise, Street and Sidewalk Noise, and Vehicle Noise. After noticing a high volume of complaints in relation to construction noise, I decided to keep a running tally of all regular Noise complaints that designated construction as the source, and thus, Construction Noise was determined another quality of life indicator. Ultimately, Construction Noise amassed the most significant number of complaints, with a total of 183.

In both the high-income and low-income Census tracts, noise—in all its forms—was the most common complaint. Out of the total 251 service requests and complaints made by the four low-income Census tracts, 144 complaints were made against noise. Although both the high-income and low-income census tracts complained about noise, their sources of noise were quite different. While the high-income Census tracts complained about noise from construction—the totality of the 183 Construction Noise complaints were made exclusively by the wealthy Census tracts—the low-income Census tracts complained most about Residential Noise (32 complaints) and Street & Sidewalk Noise (84 complaints).

[TABLE 1 – NOISE]

There were no significant findings in the Property & Buildings or Public Safety categories. The low-income Census tracts placed seven out of the total fourteen complaints for Graffiti. While the low-income tracts reported two instances of “Drinking” (specifically public drinking), the high-income tracts made six—two of which report underage drinking in commercial establishments. There were a total of 14 complaints against Homeless Encampment, and eight of those complaints originated in the wealthy

Census tracts. Complaints involving dangerous incidents with people on bicycles, roller-skates, and skateboards were few. There were four complaints in total, and three of them were made in the poorest Census tract.

[TABLE 2 – PROPERTY & BUILDINGS]

[TABLE 3 – PUBLIC SAFETY]

There were rather interesting findings in the Sanitation category. There were 34 Dirty Condition complaints placed, but the majority of them (25 complaints) were placed in the wealthy Census tracts. A similar pattern can be observed in the complaints for Missed Collection, Sanitation Condition, Rodent, and Overflowing Litter Basket, where each amassed 20, 35, 44, and 6, respectively. In each case, at least 65 percent of the complaints originated in high-income Census tracts.

[TABLE 4 – SANITATION]

In similar fashion, the high-income Census tracts also made more complaints than the low-income Census tracts in the Streets & Sidewalks category. There were a total of 26 Street Sign Condition complaints (which involve either a dangling, damaged, or missing street sign), yet 18 of those complaints were placed in wealthy Census tracts. The same can be said of virtually every other subcategory (Street Condition, Sidewalk Condition, Curb Condition, and Traffic Signal condition), where at least 69 percent of those complaints originated in a high-income tract. The single case in which this does not occur is in Street Light Condition, where 28 out of the total 51 complaints were located in the low-income Census tracts.

[TABLE 5 – STREETS & SIDEWALKS]

In comparison to the other categories, there were a minor number of complaints in the Quality of Life, Air & Water Quality, and Transit & Parking categories. Again, however, the majority of all complaints for Asbestos, Mold, and Air Quality were situated in high-income tracts. No complaints were made against Mold in any of the low-income Census tracts. Three of out the total four Bus Stop shelter complaints were made in the low-income Census tracts.

[TABLE 6 – QUALITY OF LIFE]

[TABLE 7 – AIR & WATER QUALITY]

[TABLE 8 – TRANSIT & PARKING]

Chapter 5: Discussion

Based on the reviewed literature, one would expect to find a positive correlation between income and quality of life—that is, the higher the income, the higher the quality of life. Such a correlation would indicate that lower household incomes have a strong relationship with poor quality of life. Unfortunately, the results *appear* to demonstrate the opposite effect of the expected outcome. Of the 896 total service requests and complaints, an overwhelming majority (645) of them were located in high-income Census tracts. Thus, the results *would seem* to indicate that the quality of life of the wealthy Census tracts is inferior to that of the poorer Census tracts. Despite the majority of complaints and requests originating in high-income tracts, it should be noted that Census tracts 21 (see Appendix C) and 33 (see Appendix D) and were responsible for the bulk of those complaints (see Graph 1 – Service Requests & Complaints and Median Household Income).

There are several possible reasons as to why this analysis might have failed in reaffirming these findings from previous literature, which indicate that well being—to some extent—correlates with income (Abbott & Wallace, 2012; Costanza, 2009; Gomes, Pinto, & dos Santos, 2010; Malkina-Pykh & Pykh, 2007; Mellor et al., 2012). One plausible explanation is that population size is not uniform among the eight different Census tracts. According to the United States Census Bureau, the “optimum” population size of a Census tract is 4,000 people (United States Census Bureau, 2012). Nevertheless, a Census tract can have anywhere between 1,200 and 8,000 people in its population (United States Census Bureau, 2012).

All four of the wealthiest Census tracts were located in Manhattan, the most densely populated borough of New York City. Of the four low-income Census tracts, three were located in Brooklyn, and one in the Bronx (see Appendices A-H). Large population density and size might be catalysts for complaints and service requests, and this explanation can be corroborated with findings from the related literature (TNS Political & Social et al., 2013). To prevent the skewing of data, Census tracts should be surveyed for population size and density (a feature, which was not available on Census Explorer). If information on population size is not ascertainable, other territorial units should be considered.

If population size was in fact uniform across the various Census tracts, other phenomena can explain the discrepancy between the number of complaints for the high-income tracts and the low-income tracts. One possibility is that the residents of high-income Census tracts are well informed about the services their city offers, whereas the residents of low-income tracts may not have as much knowledge about their right to receive city services. Residents of wealthy census tracts may feel more entitled to those services than the residents of the low-income tracts. Residents of wealthier income tracts may also be more inclined to complain about a single issue (to 311) more than once in a day. Conversely, residents of low-income tracts may feel apathetic, or hold lower expectations than those of high-income tracts. Because all data on the New York City 311 Map is de-identified, such detailed information about 311 users is not readily accessible and would therefore require further study. It is important to bear in mind that the absence of a complaint does not signify the absence of a problem.

Another two possible issues are the quantity of Census tracts used in the study and the time frame. One year's worth of data on one Census tract alone can produce upwards of a thousand complaints. (Furthermore, the New York City 311 Service Request Map is a bit outdated, sluggish and thus, not user-friendly.) Regrettably, time constraints make it nearly impossible for one person to collect and analyze the year worth of data available on the New York City 311 Service Request Map. Too low of a number of tracts in conjunction with a small time frame will inevitably yield an incomplete picture.

Future studies should incorporate additional Census tracts, and use a wider timeframe. Moreover, the inclusion of other income categories would likely result in a clearer understanding of the relationship between income and quality of life. The Census tracts used in this study depict two extremes of economic status and wealth: the very rich and very poor. The most well-off tract within the group of low-income Census tracts had a median household income of \$11,635—below the poverty line for a family of two!

Lastly, a more comprehensive study should determine the weight of importance of particular quality of life indicators. For example, some people may not feel that the sight of graffiti affects their quality of life. Noise in New York City, on the other hand, appears to be a serious quality of life issue that affects the rich and poor alike. In fact, previous literature concurs that the issue of noise is significant: it can affect health (Sheperd et al., 2010), quality of life (Botteldooren et al., 2011), and life satisfaction (TNS Political & Social et al., 2013). At the same time, a different set of indicators might have yielded entirely different results. Several researchers from the related literature maintain that quality of life research should not be limited to a “simple economist equation of well-being with income” (Malkina-Pykh & Pykh, 2007), and that it should recognize and

incorporate the strengths of different disciplines (Costanza, 2009; Cummins, 2000).

Future researchers should explore other measurable quality of life indicators and ascertain which ones are most germane to the lived urban experience of individuals in New York City (or elsewhere).

Chapter 6: Conclusion

Quality of life is an issue that pervades all corners of the world. Concomitant with the expanding variety of approaches to measuring quality of life is an increasing complexity of the concept. Its complexity, nevertheless, reaffirms the need to study it further. One person's quality of life issue can be drastically different from that of another. However, these differences do not have to transpire across different continents, but can occur between two sets of people living in the same city. In light of the intensifying discourse on economic inequality—and its myopic focus on wealth alone—this study attempted to find other observable differences between the quality of life of high-income and low-income New Yorkers.

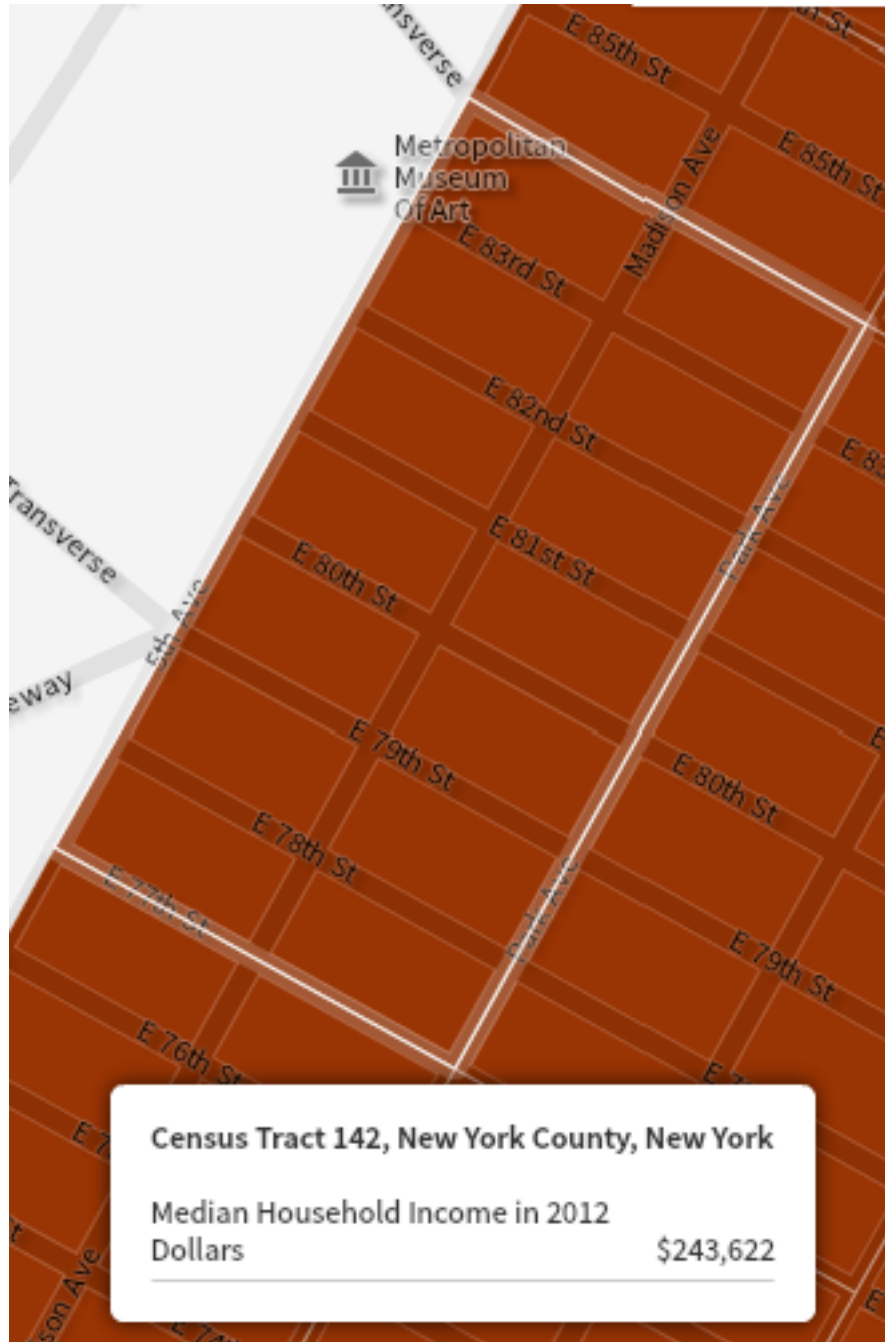
Though this study failed to find a direct relationship between income and quality of life, it did break new ground. To date, no other academic study using data from the New York City 311 Service Request Map has been identified. Though this New York City service was intended to be used as a resource of information and measurement, it appears as though academics have yet to tap into the extraordinary fountain of intelligence this resource holds. While it may be difficult to extricate the effects of wealth and income from other elements (and their respective influences), clearly identified quality of life indicators can provide an alternative perspective. Naturally, there are several setbacks to using the data provided by the New York City 311 Service Request Map, but it is the author's hope that her limited but promising research can one day be used to execute a more complete analysis.

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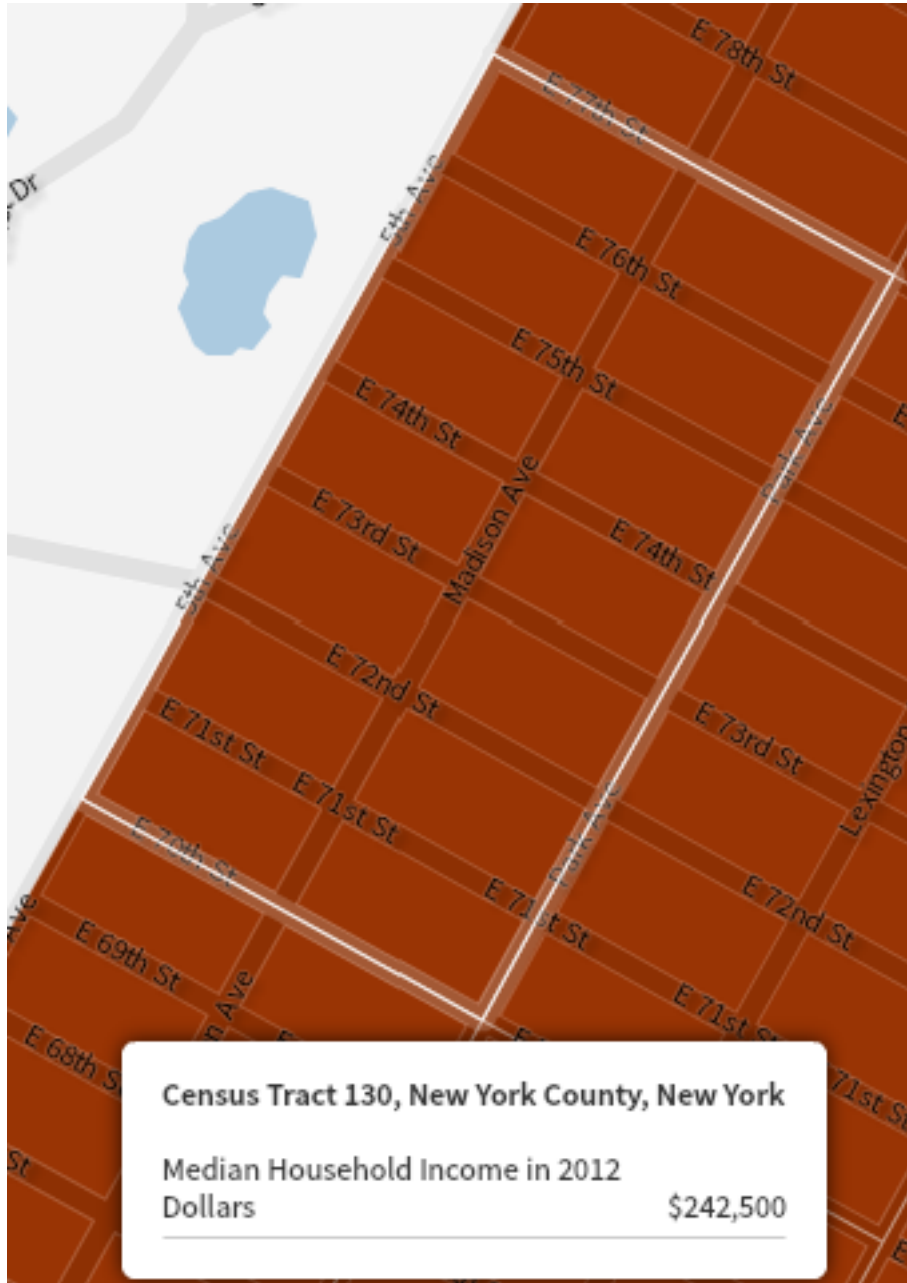
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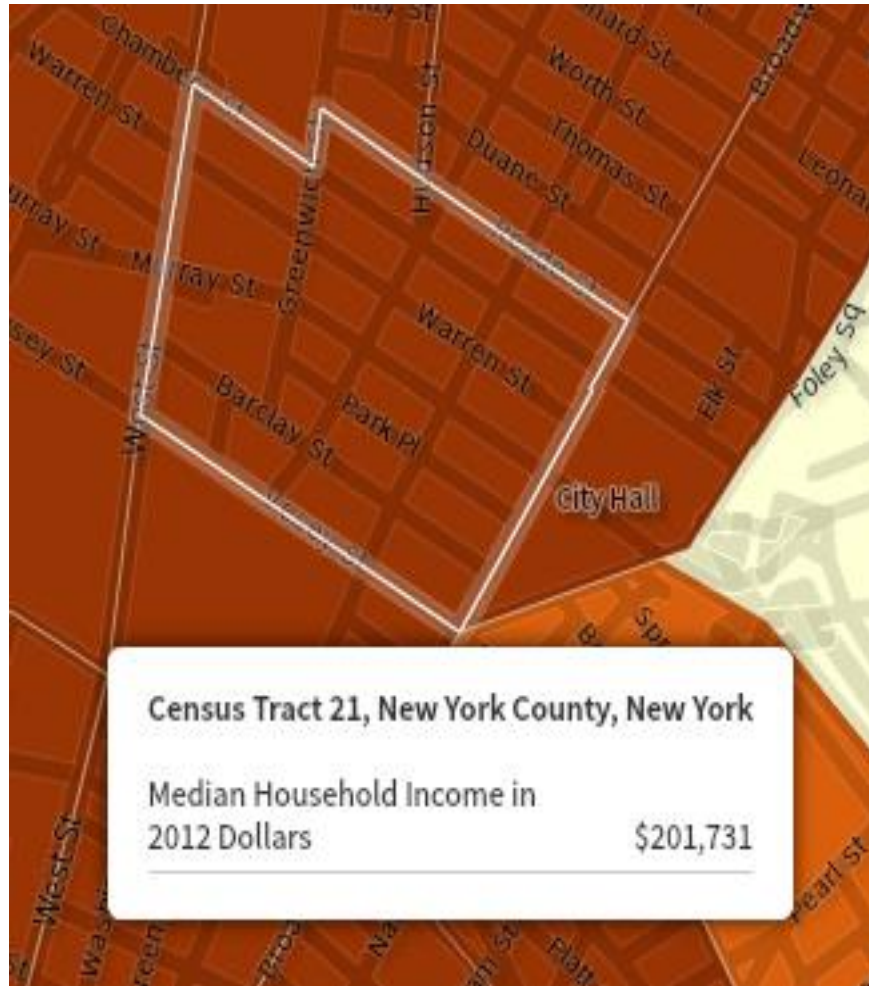
APPENDIX A



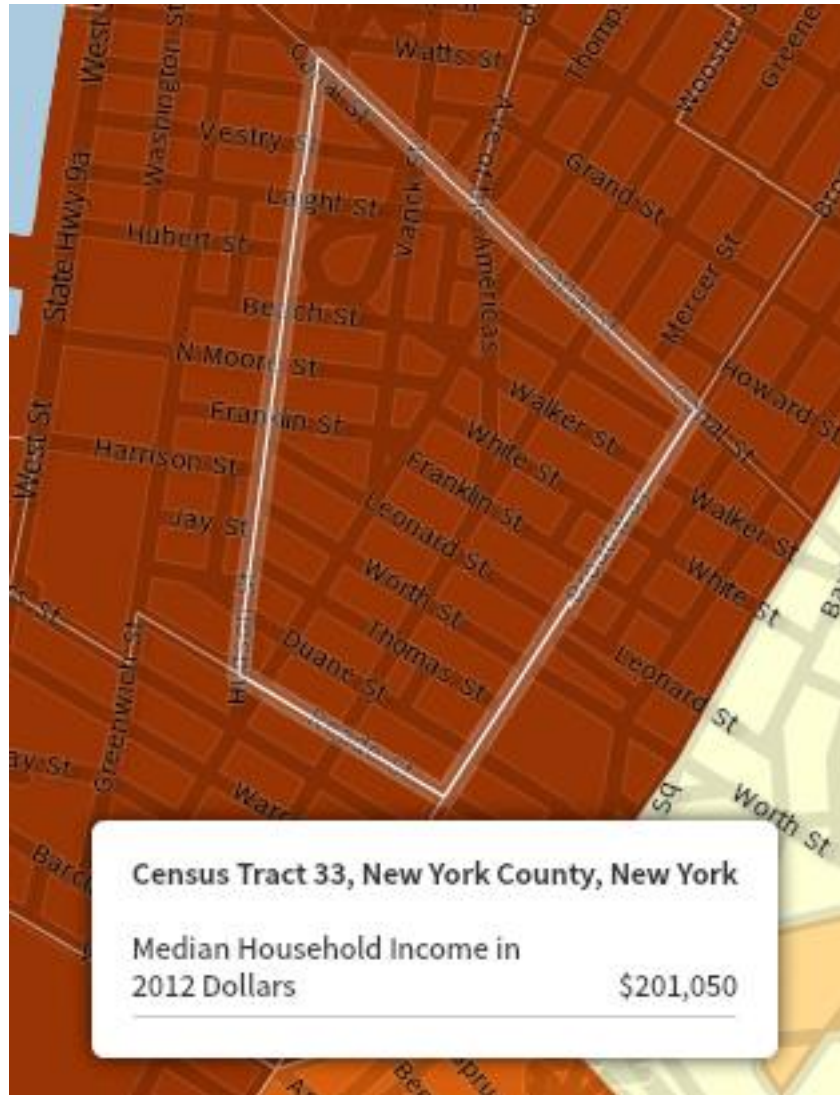
APPENDIX B



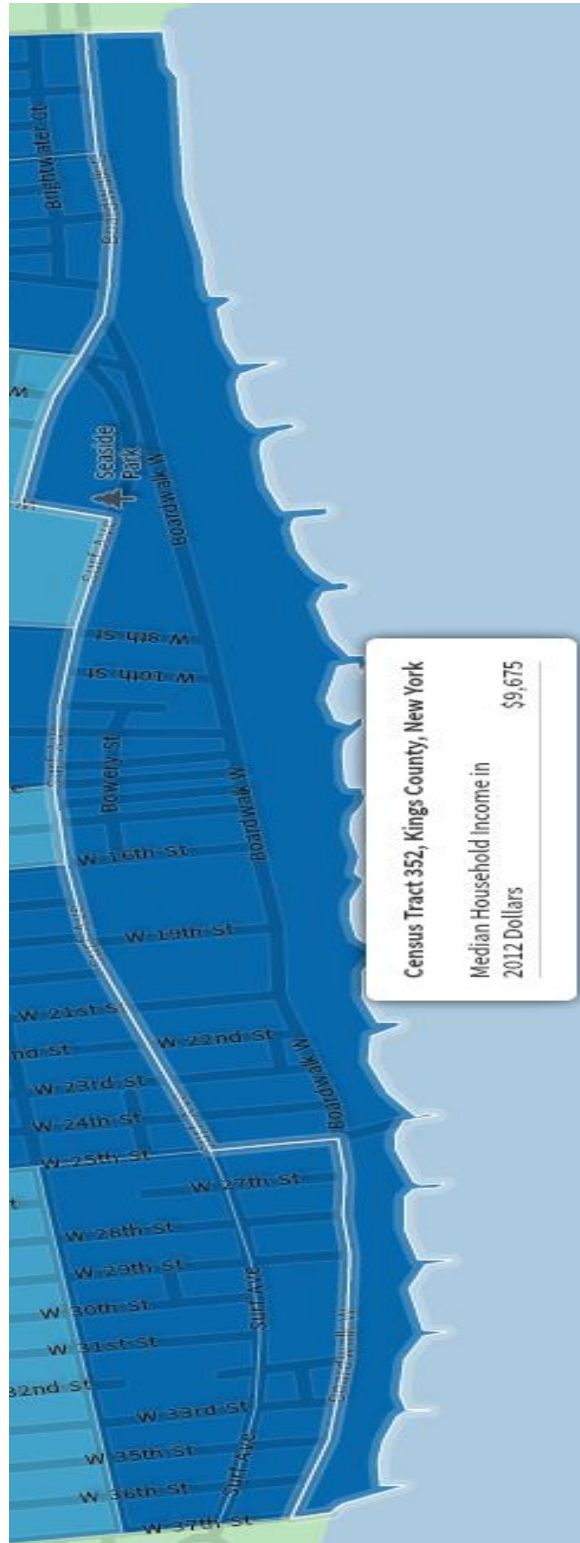
APPENDIX C



APPENDIX D



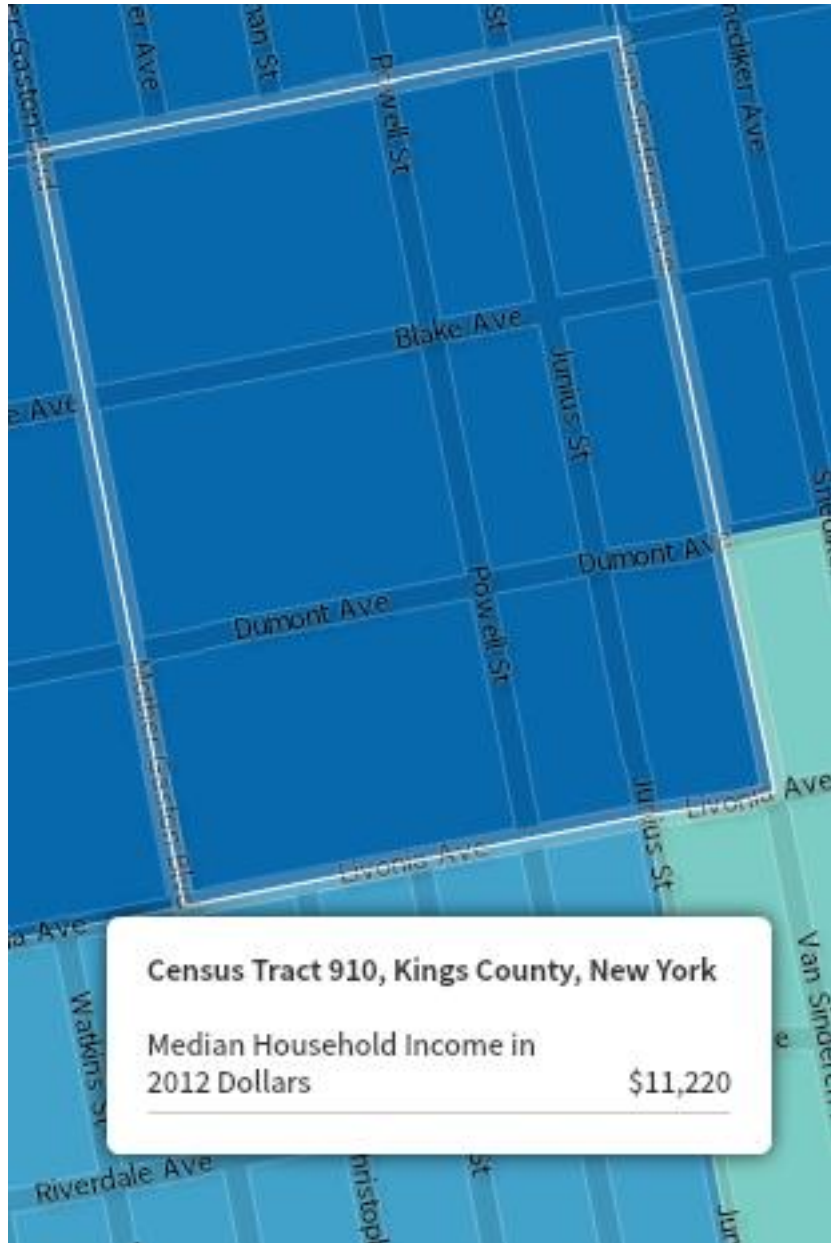
APPENDIX E



APPENDIX F



APPENDIX G



APPENDIX H

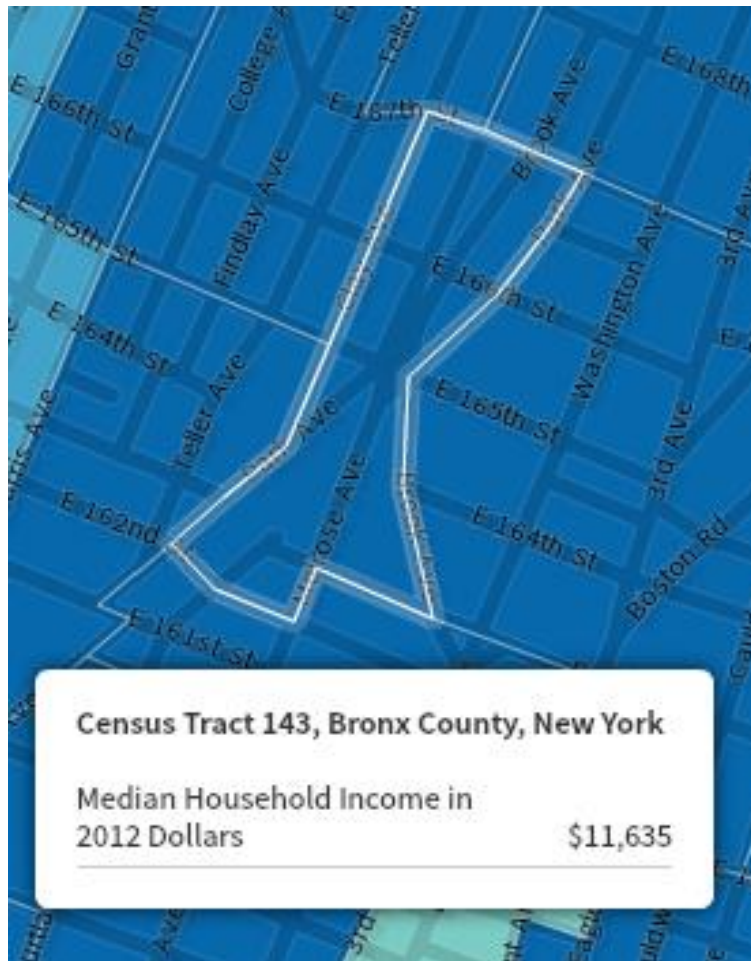


TABLE 1 – NOISE

	Noise-Other	Construction Noise	Commercial Noise	Vehicle Noise	Residential Noise	Street & Sidewalk Noise	Collection Truck Noise
Census Tract 352	3	0	5	4	3	22	2
Census Tract 29.01	2	0	0	4	11	7	0
Census Tract 910	0	0	0	0	38	0	0
Census Tract 143	2	0	1	5	32	3	0
Census Tract 33	4	79	22	15	10	10	0
Census Tract 21	5	57	6	9	8	5	0
Census Tract 130	4	26	0	1	8	0	0
Census Tract 142	0	21	0	0	2	6	0

TABLE 2 – PROPERTY & BUILDINGS

	Graffiti
Census Tract 352	1
Census Tract 29.01	0
Census Tract 910	1
Census Tract 143	5
Census Tract 33	1
Census Tract 21	2
Census Tract 130	0
Census Tract 142	0

TABLE 3 – PUBLIC SAFETY

	Drinking	Homeless Encampment	Illegal Fireworks	Bike/Roller/Skate Chronic
Census Tract 352	1	5	0	3
Census Tract 29.01	1	1	0	0
Census Tract 910	0	0	0	0
Census Tract 143	0	0	0	0
Census Tract 33	1	3	0	1
Census Tract 21	1	5	0	0
Census Tract 130	0	0	0	0
Census Tract 142	0	0	0	0

TABLE 4 – SANITATION

	Dirty Condition	Missed Collection	Missed Sweeping	Sanitation Condition	Rodent	Collection Truck Spillage	Overflowing Litter Basket
Census Tract 352	2	0	0	0	3	0	0
Census Tract 29.01	0	0	0	3	0	0	0
Census Tract 910	3	0	0	5	2	0	2
Census Tract 143	4	1	0	3	8	0	0
Census Tract 33	11	8	0	13	17	0	3
Census Tract 21	9	7	0	10	13	0	1
Census Tract 130	3	3	0	0	0	0	0
Census Tract 142	2	1	0	1	1	0	0

TABLE 5 – STREETS & SIDEWALKS

	Street Sign Condition	Street Condition	Sidewalk Condition	Curb Condition	Street Light Condition	Traffic Signal Condition
Census Tract 352	6	4	6	1	7	5
Census Tract 29.01	0	0	1	0	2	1
Census Tract 910	2	1	0	0	7	2
Census Tract 143	0	0	1	0	2	0
Census Tract 33	3	21	8	4	10	16
Census Tract 21	8	25	11	9	23	22
Census Tract 130	2	7	5	0	0	0
Census Tract 142	5	22	6	0	0	0

TABLE 6 – QUALITY OF LIFE

	Asbestos	Mold
Census Tract 352	0	1
Census Tract 29.01	0	0
Census Tract 910	0	0
Census Tract 143	0	0
Census Tract 33	1	2
Census Tract 21	1	0
Census Tract 130	1	0
Census Tract 142	4	1

TABLE 7 – AIR & WATER QUALITY

	Air Quality
Census Tract 352	1
Census Tract 29.01	0
Census Tract 910	0
Census Tract 143	0
Census Tract 33	2
Census Tract 21	4
Census Tract 130	1
Census Tract 142	5

TABLE 8 – TRANSIT & PARKING

	Bus Stop Shelter Complaint
Census Tract 352	0
Census Tract 29.01	1
Census Tract 910	2
Census Tract 143	0
Census Tract 33	1
Census Tract 21	0
Census Tract 130	0
Census Tract 142	0

GRAPH 1

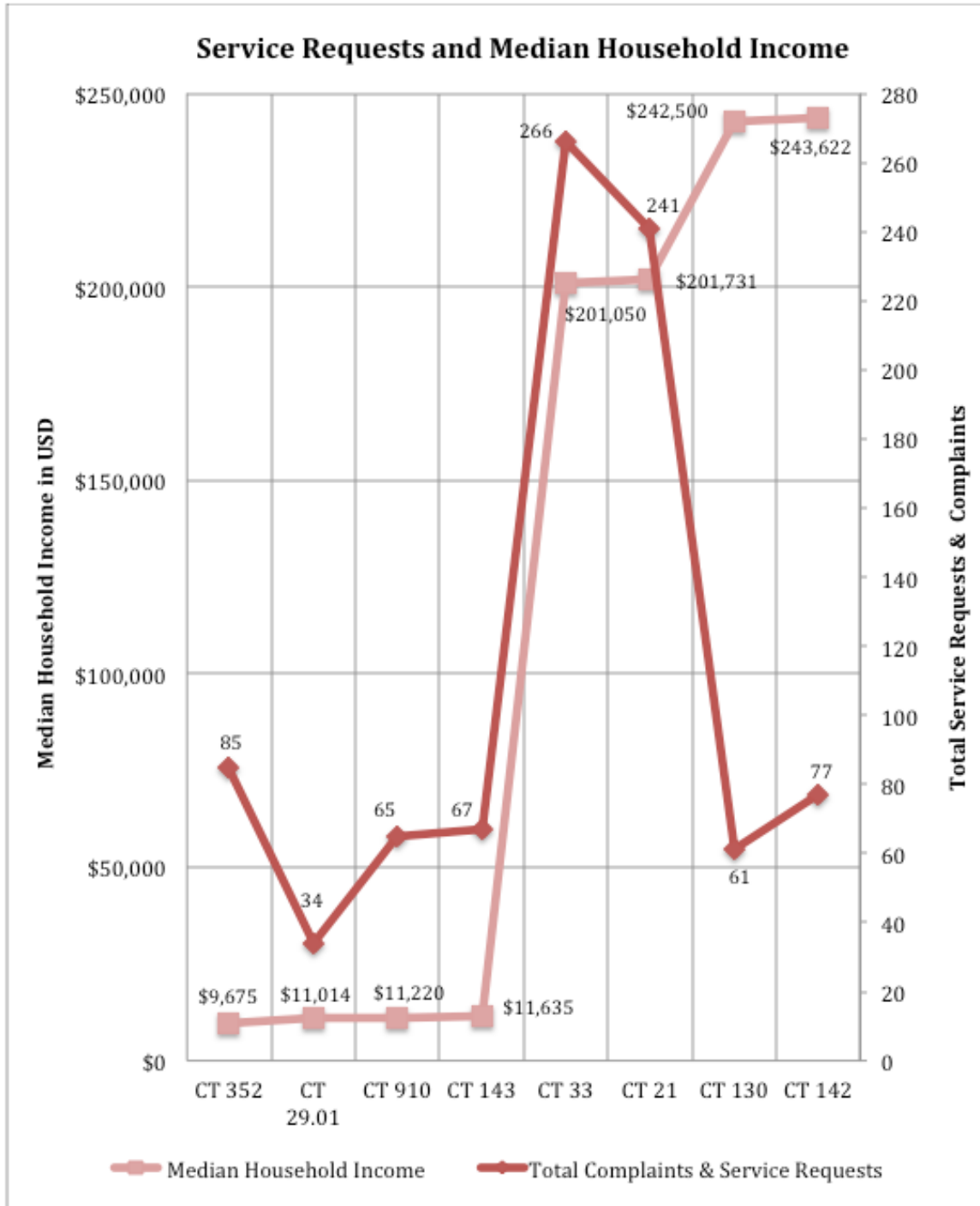


FIGURE 1 – YEARLONG 311 HEAT MAP

