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Impacts of Gentrification on Voting

New York County, 2004

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Introduction

The goal of this paper is to understand the effects of gentrification on voter turnout in New York City. To accomplish this goal, this paper will take on two major parts. First, it will explore gentrification as an urban phenomena – what is it and how can it be "measured" empirically. Defining gentrification will help to connect the dynamics of urban change to voting turnout. Thus, the literature behind voting behavior will also be explored. Second, this paper will look at New York County specifically. While New York City as a whole is of interest, this borough was chosen arbitrarily as the first part of an ongoing project. This will help to reduce processing costs. Spatial data from New York County will be analyzed in an attempt to link and isolate the effects of gentrification on voter turnout. An "Alpha" city (Beaverstock et al., 1999), New York is an interesting and unique case-study. The city has experienced unprecedented growth and provides as flagship model of gentrification in its most empowered form. As such, the results may not be generalized to other cities in their entirety, but should be applicable to other localized gentrifying areas. The hope is that by linking the extensive literature on gentrification and voting turnout to actual spatial analysis where these effects should be most evident, we will gain a greater understanding of how changes in geography and place affect behavior.

Gentrification

The term "gentrification" was coined by British sociologist Ruth Glass in her 1964 book, "London: Aspects of Change". She used the term to describe the how the gentry – generally high-class but implicitly middle-class citizens – displaced working-class people in certain inner-London neighborhoods (Glass, 1964). This general conception has not changed much in fifty years. Gentrification is still widely considered a movement of affluent, highly educated whites back to the city. Similarly, the negative connotations of displacement have persisted.

Gentrification is often viewed as a pushing out of low-income and less-educated non-whites. One of the most apparent side-effects of this is the disruption of social capital in long-standing neighborhoods. As a result, gentrification is an incredibly polarizing issue within governance, communities, and academic literature. However, gentrification is not a clear-cut phenomena. Personally, I believe that the term is over-generalized. Gentrification takes on many forms that are evident across space and time. To better understand the processes the cause gentrification, the next two paragraphs will explain the main competing frameworks for understanding the phenomena. Following will be a brief discussion on the attempts to measure gentrification. Again, these frameworks have become over-generalized and in future research I plan to unpack these terms to create a more structured typology for understanding the many processes of gentrification. Until that point, we must suffice with the persisting consumer and producer hypotheses; the former sees cities as publics, the latter as economies.

In 1978, David Ley, a geographer at the University of British Columbia, presented “Inner city resurgence and its societal context” at the Association of American Geographers Annual Conference. In it, he posits the post-industrial city – a broad social theory about the people in cities. Ley believes that the decline of manufacturing, and the concurrent rise in the service industry, has altered urban consumer preferences. That is, changes in the class composition of cities has brought along changes in culture preferences. Thinking about it another way, those previously living in the suburbs to avoid the negative externalities of industrial cities are now primely located to take advantage of the “opening up” of the city to middle- and upper-class preferences, thus creating a new consumer preference for urban living. This theory rests on the assumption that the suburbs were a response to those negative externalities – noise, pollution, and disease. This is a back-to-the-city movement by people (Ley, 1978; Ley, 1981).

In response to Ley, Neil Smith, a geography student at The Johns Hopkins University, published “Toward a theory of gentrification: a back to the city movement by capital, not people”. Smith posits that gentrification is a result of capital depreciation. That is, at some point the difference between the potential ground rent of a property and its current ground rent becomes so great that gentrification becomes not just profitable, but enticing. That is to say that the monetary profit outweighs any risk (read: crime) associated with the depressed area. This “rent gap” is simply the capitalization of undervalued inner-city land. Notably, Smith’s research also showed that gentrification was largely a process motivated by current city residents, not by people moving from the suburbs. This observation remains most at-odds with Ley’s gentrification hypothesis, despite the fact that the “rent gap” is the defining piece of Smith’s gentrification hypothesis (Smith, 1979).

While these hypotheses are important for understanding the process of gentrification, they do not do a great job of informing what gentrification looks like. At best, they tell us that gentrification may be occurring in previously industrialized and blighted urban areas. More recent scholarship has expanded on these hypotheses to offer a more observable and data-driven conception of gentrification. Maureen Kennedy and Paul Leonard define gentrification as “the process by which higher income households displace lower income residents of a neighborhood, changing the essential character and flavor of that neighborhood” (Kennedy & Leonard, 2001). Similarly, Neil Smith and Peter Williams expand on Smith’s earlier work to define gentrification as “the rehabilitation of working-class and derelict housing and the consequent transformation of an areas into a middle-class neighborhood” (Smith & Williams, 1986). In both expanded conceptions, the primary indicator of gentrification is housing characteristics. This is important because data on housing characteristics is readily available in the United States’ Decennial Census. As such, Daniel Hammel and Elvin Wyly present a model for identifying gentrified

areas with Census data in their paper, “A Model for Identifying Gentrified Areas with Census Data” (Hammel & Wyly, 1996). The model uses change in housing characteristics that are consistently associated with gentrification to inform a gentrification metric; it will be discussed more in depth in a latter section.

Voter Turnout and Gentrification

Voting behavior is influenced by many factors. A common method for modeling voting behavior is the use of demographics. How does one’s race, gender, age, et cetera, play a role in choosing to vote and for whom? More recently, there has been a push to study social effects on voting. After all, while voting is an individual-level decision, we are constantly influenced by our environments. For example, not only does education play a key role in individual-level voting behavior (Oliver, 1999), but researchers have shown that people are more likely to vote if they frequently interact with highly-educated neighbors (Verba & Nie, 1972). This is supported by research showing increased voter turnout for those that frequently discuss political issues (Pattie & Johnston, 2000). It stands to reason that gentrification and the associated neighborhood change have social effects that may influence voting behavior.

As stated previously, gentrification describes the movement of affluent, highly educated whites back to the city. This could effect voting behavior in many ways. Discussed above is the role of education and interaction on voting behavior. However, research also suggests that communities facing gentrification are more likely to engage in grassroots activism (Robinson, 1995). On the contrary, in it’s advanced stages, gentrification can disrupt neighborhood dynamics and weaken local institutions (Henig, 1982; Calhoun-Brown, 1996; Putnam, 2000). This is compounded by the issue of housing tenure; that is, are longtime neighborhood residents more likely to be politically active than their new affluent neighbors? Sociologist Brian McCabe would argue that yes, those who have lived in their neighborhoods for more than five years are

more likely to be politically and socially active (McCabe, 2016). This research justifies the need to study the varying contextual effects of gentrification on voting behavior.

Methods

Measuring Gentrification

The Hammel and Wyly Model (HWM) uses census variables to discriminate between the neighborhood types that they identified in Minneapolis (gentrified, maybe gentrified, poorly gentrified, not gentrified). To class neighborhoods, they looked for areas that had experienced sustained decline before a period of substantial reinvestment. Using a discriminant analysis, they were able to identify a list of census variables that seemed to predict gentrification with relative accuracy. Since gentrification is inherently a process of change, change in these variables was examined over three different time periods: 1960-1970, 1970-1980, and 1980-1990. At best, their model reached 89.6% accuracy in predicting not gentrified areas and 85.7% gentrified areas for the 1970-1980 period. However, classification of maybe and poorly gentrified areas was less accomplished, bringing the total accuracy of their model to 66.6% (Hammel & Wyly, 1996). This model has since been used to inform a principal-component model to create a single gentrification metric using the variables listed in Table 1 (Knotts & Haspel, 2006).

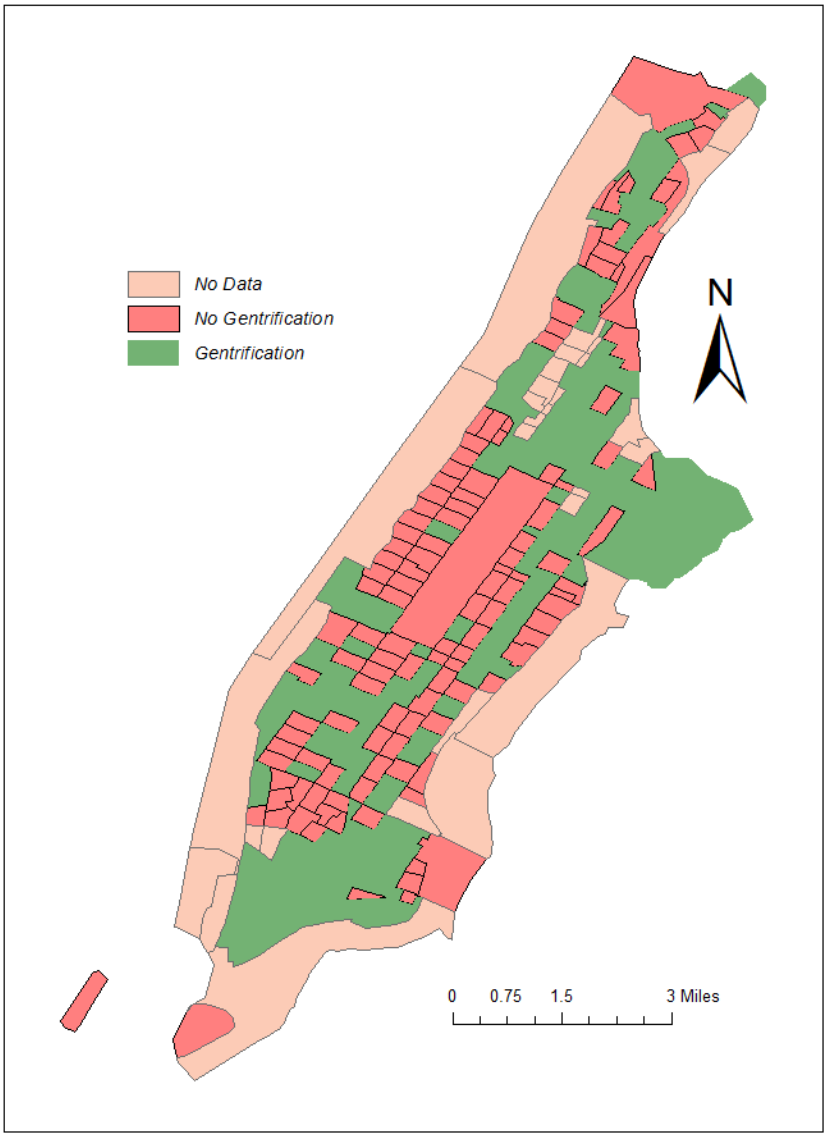
Table 1. Census variables used to create gentrification metric, measured in percent change

Census Variables
New households
College graduates
Persons in professional occupations
Median household income
Persons in poverty
Median rent
Housing value
Number of housing units
Households with single-sex partners
Persons aged 30-44

Instead of simply recycling this principal-component model, this paper sought to improve on the HWM. To accomplish this, 1980-1990 data from IPUMS, based on the original model,

was used to create a decision tree. For simplicity, census tracts coded as “gentrified” or “maybe gentrified” were recoded as “gentrified”. Tracts coded as “poorly gentrified” or “not gentrified” were coded as “not gentrified”. For each tract, the change in the variables from listed in Table 1 were used as predictors. Surprisingly, the model discarded all but one predictor, finding that tracts with 29.8% more housing units in 1990 than in 1980 were “gentrified”. The resultant tree was had a total accuracy of 89.9%. This tree was then used to predict census tracts in New York County that had gentrified between 1990 and 2000. The results are displayed in Figure 1, below.

Figure 1. Gentrification in New York County, 1990-2000



Multilevel Model

Following the lead of H. Gibbs Knotts and Moshe Haspel, this analysis will use to logistic multilevel model to assess the impacts of gentrification on voting behavior in New York County. This allows for the control of individual-level predictors like age, race, and sex while also controlling for neighborhood-level effects brought by gentrification. Voting behavior will be expressed as a binary representing whether or note a resident voted in the 2004 General Election. The model and its congruences to the Knotts-Haspel Model (KHM) are explained below.

The KHM uses age – greater than 24 years old to help eliminate issues arising from new voters and new residents – dummy variables for gender (female) and race (black) – an attempt the mobilization of black and women voters for the black and female candidates – and a dummy variable for longstanding voters at Level 1. A longstanding voter is defined as someone registered to vote before 1995. This analysis is not concerned with the impact of the candidates, thus there is no need to control for gender or race; their effects may be examined in early iterations of the model to test for significance, however. Further, following the recent work of Brian McCabe, we will redefine the longstanding voter as someone who voted in five previous elections.

At Level 2, the KHM uses their gentrification metric derived from the HWM and their own principal-component model. The KHM also uses percentage of homeownership in a neighborhood, this metric has been disproved by McCabe – homeowners are not better citizens than renters. Instead, length of housing tenure is most important for understanding community investment. However, this data is not available. We will attempt to use date of voter registration in the city as a proxy for tenure. The KHM also uses the percentage of neighborhood residents with a college degree and number of neighborhood organizations per 1,000 people as Level 2

predictors. The former is a good proxy given the lack of individual-level education data. The latter is an attempt to measure neighborhood cohesiveness and grassroots activism. For the sake of brevity, these will not be included in this analysis but should be reexamined in the future.

Finally, the KHM uses a cross-level interaction term to measure the effects of gentrification on longstanding voters. This is quantified as gentrification times longstanding voters. This term will be crucial in understanding if the disruptive effects of gentrification outweigh its mobilizing effects.

Results

Table 2, below, shows the final reduced model. The first column depicts the coefficients for the chosen variables; the coefficients represent changes in the odds of a resident voting, holding all other variables constant. The results also indicate that all coefficients are statistically significant at a significance level of 0.05. Consistent with the KHM, this analysis shows that increases in age will increase the likelihood that a resident votes. This is also consistent with the literature which supports the idea that older residents are more politically active. Contrary to the KHM, we see that the effect of gentrification on voting is both positive and significant. While the effect is small, living in a gentrified census tract does appear to increase the likelihood of a resident voting. We also see that longtime residents of New York County, as measured by date of voter registration, have large and significant positive effect on voting. This supports McCabe's research that it is housing tenure, not homeownership, that increases political activity.

This analysis also found that those that have voted in the past five elections had a lower likelihood of voting. This is unexpected and contradicts both the KHM and common sense; we would think that those that have a history of voting should be more likely to vote. Finally, the interaction between longstanding voters and gentrification is negative and significant. This is

consistent with the KHM and is evidence that the disruptive effects of gentrification do outweigh its ability to mobilize longstanding residents.

Table 2. Impact of Gentrification on 2004 General Election Voter Turnout in New York County

	Coefficient	Standard Error	Z-value	P-value
Gentrification (1)	0.054	0.007	7.577	0.000
Age	0.003	0.000	13.789	0.000
Longtime Resident (1)	1.192	0.009	139.381	0.000
Longstanding Voter (1)	-1.181	0.011	-108.021	0.000
Longstanding Voter x Gentrification (1)	-1.072	0.014	-78.690	0.000
Intercept	-0.903	0.008	-113.583	0.000

*(1) indicates a binary variable where the coefficient expresses the presence of said variable.
Source: New York State Board of Elections, 2017

Discussion

This research compliments and adds to the limited previous research on gentrification and voter turnout. In some respects it confirms the previous research, as is the case for the effects of age and longstanding voters in gentrified census tracts. In other respects is contradicts previous research, notably in the case of longstanding voters and the presence of gentrification in a census tract. And finally, it adds to the research by including a new measure of tenure. This analysis also looked at how to identify gentrification from decennial census data and found that gentrification is synonymous with a proportional increase in the number of housing units in a census tract. These results illustrate how contextual change may shape the political culture in urban America. They also show that there may be political consequences associated with gentrification.

There exist multiple avenues for further research. As stated in the Introduction, this analysis will expand to examine all of New York City's five boroughs. It should also include education level and organizational presence as Level 2 predictors, as in the Knotts-Haspel Model. It would also be beneficial to examine the effects of gentrification on voting turnout

longitudinally. Perhaps early in the gentrification process, mobilization increases turnout only to decrease later. At some point after gentrification has concluded, turnout would again rise as average housing tenure in the tract also increased. Another avenue of interest would be localized context and political consequences. For instance, how does gentrification affect the reelection of local incumbents? How does gentrification affect local planning processes, like the approval of new construction or variances? Do pro-gentrification policies early in the process lead to anti-gentrification policies later?

It would also be beneficial to reexamine the decision tree used to predict gentrified census tracts. While the decision tree improved on the Hammel-Wyly Model, it's simplification of the process is troublesome. Gentrification is typically thought of as a change in the demographics of a neighborhood. As such, we would expect to see changes in demographics reflected in the decision tree. The absence of demographics may mean that we do not fundamentally understand gentrification, or that we need a better way to qualitatively identify gentrifying census tracts.

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