

WICKED FAR

Analyzing the impact of polling place accessibility in Boston, Massachusetts



Introduction

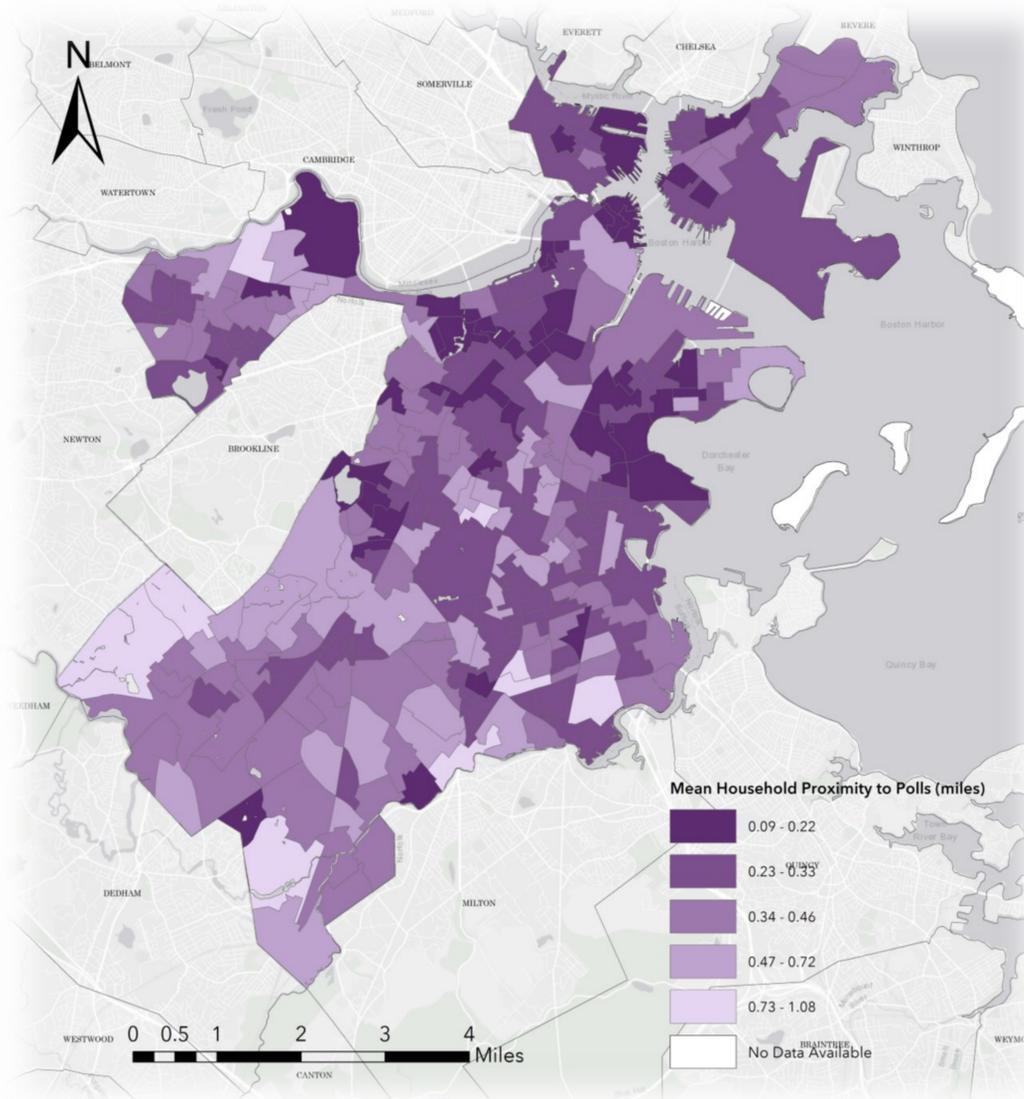
In December 2019, the *Atlanta Journal-Constitution* reported that precinct relocations and closures between 2012 and 2018 more than doubled the average Georgia voter's distance to their polling place. The *AJC* estimated these changes prevented between 54,000 and 85,000 voters from casting ballots in the state's 2018 gubernatorial election, which the Republican candidate, Brian Kemp, won by 54,723 votes.

Recent scholarship confirms that, in general, proximity to the polls is negatively correlated with one's propensity to vote (Gimpel & Schuknecht, 2003; Brady & McNulty, 2011). Differences of less than a mile in the distance to Atlanta residents' polling places had a statistically significant effect on their likelihood to vote in the city's 2001 mayoral election (Haspel & Knotts, 2005). This seemingly minor feature of election administration thus has significant potential to impact who participates, and is represented, in our democracy.

Methodology

Municipal settings are particularly fertile subjects for study, as they offer a diverse and densely populated electorate, as well as elections with narrow margins: In December 2019, Julia Mejia won election to the Boston City Council by a single vote.

This analysis uses address data of the more than 65,000 households in Boston with at least one registered voter, provided by the city's Elections Department. It also includes publicly available information about the polling place for each of Boston's 255 electoral precincts. Households and polling places were geocoded on ArcMap using TIGER files from the U.S. Census Bureau. The mean distance of voting residences in each



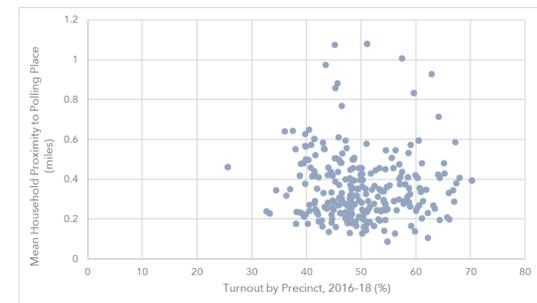
precinct to their polling location was calculated using ArcMap's Network Analyst function.

Voter turnout for each of Boston's precincts is averaged from three recent general elections: 2016 (presidential), 2017 (municipal), and 2018

(midterm). A regression analysis was calculated for the correlation between mean household proximity to the polls and voter turnout. Demographic and socioeconomic data was acquired from the 2017 American Community Survey.

Results

A regression analysis of the relationship between the mean voting household's proximity to the polls and voter turnout for each respective precinct yields little evidence of correlation, with a coefficient of -0.021.



These results are inconclusive, however, as there is likely significant error from a number of factors. Data on voting populations was analyzed by household, rather than by individual, and thus ignored the potentially cumulative impact on multi-voter households. Moreover, an estimation of voters' routes to their polling place did not factor in non-street options, such as walking paths.

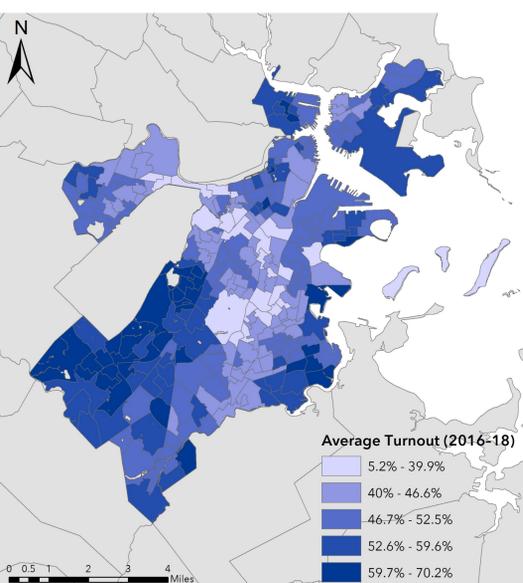
Conclusions

This analysis does not find a correlation between the distance Boston voters travel to cast their ballots and their likelihood to do so, as past studies have done. Nonetheless, it offers a spatial representation of the communities that would likely be impacted if such a relationship does exist.

There remain many subjects for future research. Subsequent analyses should weight households' proximity to the polls based on the number of registered voters living there. Research should also hold equal factors that have a large impact on voting, such as income and education.

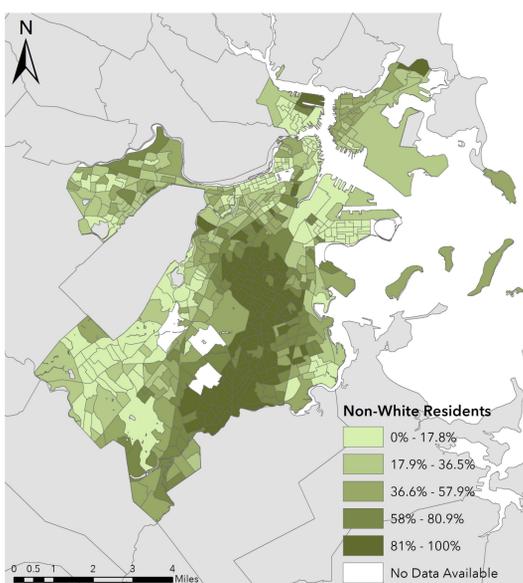
Voter turnout

Voting rates in the three elections were consistently high in southwest Boston, where many precincts averaged over 65 percent turnout. Interestingly, residents of these communities also faced some of the longest distances between their homes and polling places. Future studies should address whether these voters are more likely to drive to the polls, given their potentially more suburban neighborhoods.



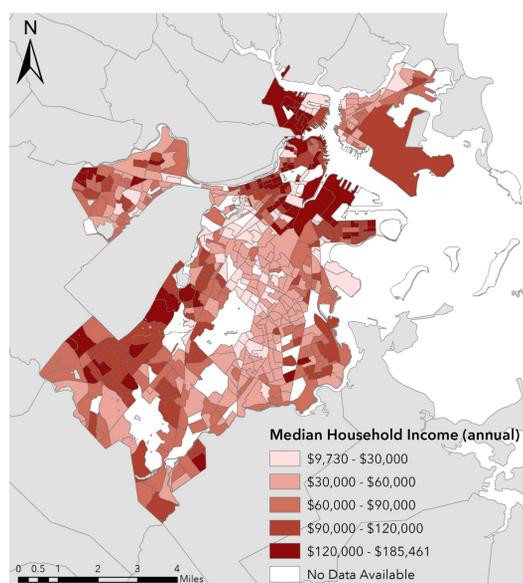
Racial demographics

Boston's minority populations are concentrated in its southern neighborhoods, including Dorchester and Mattapan. Black communities were significantly impacted by the closure of Georgia polling places before the 2018 gubernatorial election. Since American Community Survey data does not include local precincts as spatial units, however, this analysis cannot find a correlation between racial demographics and proximity to the polls.



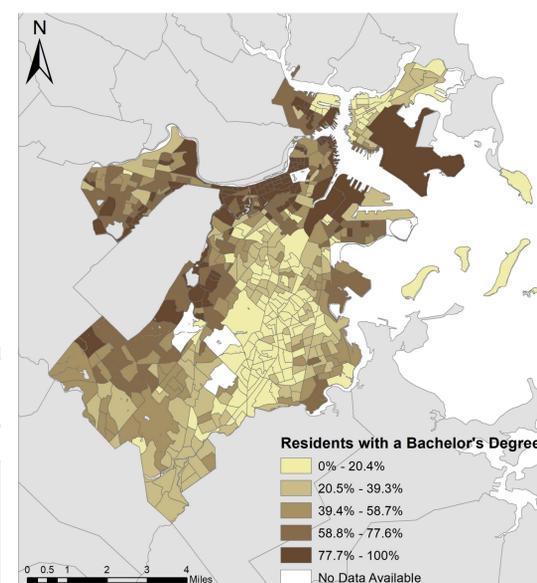
Income

Many of Boston's highest-earning wards are located near its financial downtown and the technology hub of Cambridge. These neighborhoods comprise some of the city's highest turnout areas. It is difficult, however, to draw any conclusions about whether this dynamic is related to the locations of their respective polling places.



Educational attainment

Unsurprisingly, many of the wards with high median household incomes also have the highest proportions of residents with at least a bachelor's degree. Like the models of racial demographics and median household income, it is unclear whether there is a correlation between Boston communities' educational attainment and the distance to polls therein.



Projection: NAD 1983 StatePlane Massachusetts Mainland FIPS 2001
Data Sources: City of Boston, U.S. Census Bureau, American Community Survey (2017), Esri

References
Brady, Henry E., and John E. McNulty. "Turning Out to Vote: The Costs of Finding and Getting to the Polling Place." *The American Political Science Review*, vol. 105, no. 1, Feb. 2011, pp. 115-34.
Gimpel, J. G., and J. E. Schuknecht. "Political Participation and the Accessibility of the Ballot Box." *Political Geography*, vol. 22, 2003, pp. 471-88.
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ClipArtMag, "Boston Skyline Drawing." (image)

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