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# The Myth of the New York City Borough Accent: Evidence from Perception

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# The Myth of the New York City Borough Accent: Evidence from Perception

## **Abstract**

A common language ideology in the United States is that New York City English (NYCE) displays reliable geographic variation across the city's five boroughs, what we call the Borough Accent Ideology (BAI). In direct contrast, linguists argue that borough accents do not exist, but instead serve as a proxy for socioeconomic differences in NYCE (Hubbell 1950, Bronstein 1962, Labov 1966, Labov, Ash, and Boberg 2006:234). This paper contributes the first empirical evidence related to the BAI, with an analysis of perceptual data from an interactive website where listeners heard short audio samples of native New Yorkers and assigned them to one of the city's five boroughs. The results confirm that listeners cannot accurately discern a talker's borough of provenance, but also that listeners are not guessing when they vote. Based on the descriptive patterns, we hypothesized that listeners create a binary opposition between Manhattan, which is the borough that is least-aligned with traditional NYCE, and the outer boroughs, where listeners expect to hear higher rates of NYCE features. A regression analysis confirms this hypothesis, and finds specifically that a talker's use of variable non-rhoticity and BOUGHT-raising are significant predictors of votes, with more rhoticity and less-raised BOUGHT predictive of votes for Manhattan. In addition, there is no significant difference between native and non-native New Yorkers in voting behavior, suggesting that this binary strategy is accessible to speakers from both within and outside New York City. Overall, the results confirm that the BAI remains an ideology and not a linguistic reality, at least for the task in question.

# The Myth of the New York City Borough Accent: Evidence from Perception

Kara Becker and Luiza Newlin-Lukowicz\*

## 1 Introduction

New York City English (NYCE) is one of the most-studied varieties in North American dialectology, as well as one of the most notorious in the popular imagination: it is both highly recognizable and highly stigmatized (Niedzielski and Preston 2003). That salience and stigma has made NYCE a rich site for indexical processes and language ideologies for natives and non-natives alike. A common language ideology is that NYCE displays reliable geographic variation across the city's five boroughs, what we call the Borough Accent Ideology (BAI). However, speakers' folk ideologies do not always align with the available linguistic evidence, as is the case for the BAI. Motivated by this discrepancy, this paper explores the linguistic reality of the BAI by investigating whether listeners can accurately match New York talkers to their native boroughs.

Linguists who work on NYCE frequently encounter the BAI, and to counter it can incite a passionate response. William Labov recounted his experience with the BAI in a 2005 *New Yorker* profile,<sup>1</sup> saying: "People want me to tell them which block [they are from]... The fact is—but don't write this, because it will enrage people—Brooklynese is exactly the same whether it's spoken in the Bronx, Queens, and Staten Island or in Brooklyn. Or the Lower East Side." Indeed, linguists are in agreement that there exists no empirical evidence of systematic differences in NYCE across New York City's five boroughs. These boroughs – the Bronx, Brooklyn, Manhattan, Queens, and Staten Island – do differ for characteristics like population density, demography, and reputation, among other things. A common opposition is between Manhattan and the four "outer boroughs," due to Manhattan's status as the cultural and financial center of New York City. In fact, scholars argue that a belief in borough differences serves as a proxy for perceived socioeconomic class differences in NYCE. When listeners hear a traditional NYCE accent, they laminate that voice onto a borough where they expect traditional NYCE to predominate. As a result, the popular term "Brooklynese" does not directly index borough residence, but rather, the social groups that align with a stereotypical Brooklynite, including a working-class social address. Though other borough-specific terms (i.e. "Bronxese") exist, Brooklynese is the most common, and its first attestation dates back to 1893.<sup>2</sup> Since that time, linguists have consistently commented that the BAI is a proxy for social stratification in NYCE (Bronstein 1962: 17, Labov 1966, Shulman 1996, Labov, Ash, and Boberg 2006: 234). A representative quote comes from Hubbell (1950):

There is no evidence, as far as I have been able to discover, that any purely geographical variation in speech patterns really occurs within the city...The "Brooklyn Accent" is merely uncultivated New Yorkese: it may be heard in all the boroughs, and in Jersey City and Hoboken as well...It certainly is not the accurate expression of any linguistic reality. (11)

Though socioeconomic stratification is certainly central to the BAI, the indexical field (Eckert 2008) of meanings for terms like Brooklynese also includes other social categories that are indexed by high rates of NYCE features, including race/ethnicity (i.e., "white ethnic" New Yorkers, a term that includes the descendants of pre-Civil War Irish and German, and post-1880 Italian, Russian, Polish, Ukrainian, and Eastern European Jewish immigrants, many of whom self-identify simply as "white") and age (i.e., older New Yorkers, particularly in the context of change in progress away from NYCE's traditional features (Becker and Wong 2009, Becker 2014a, 2014b)). This constellation of socio-demographic categories aligns with the "classic New Yorker" persona identified in the perception experiments in Becker (2014b), which found that one NYCE feature,

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\*Enormous thanks to Byron Binkley for creating and managing [www.newyorkcityaccents.com](http://www.newyorkcityaccents.com).

<sup>1</sup><https://www.newyorker.com/magazine/2005/11/14/talking-the-tawk#ixzz1vzz41mkF>

<sup>2</sup>From the satirical magazine *Town Topics*: "It should be mentioned here that the people of Brooklyn talk Brooklynese. Brooklynese is a language that is a mixture of Bowery, Pittsburgh, and Zulu."

raised BOUGHT, indexed an older, white ethnic New Yorker *from the outer boroughs* who was mean and aloof (emphasis added). This holistic persona helps to explain why younger New Yorkers are reversing the change in progress for BOUGHT-raising in apparent time: these speakers are motivated to distance themselves from the “classic New Yorker.” The inclusion of the outer boroughs in this persona is relevant here, as it reinforces the idea that traditional speakers of NYCE will be found outside of Manhattan. Newman (2014) adds to this perspective with an analysis of speakers from Brooklyn and Queens, arguing that the withdrawal from traditional NYCE is happening but progressing more slowly than in Manhattan.

Popular representations of the BAI suggest that some lay listeners make use of this broader indexical field, laminating far more than class onto borough. One example of this rich process is captured in a popular YouTube video entitled “The accents of NYC - a guide and a tour,” published in 2009, which currently has almost 1 million views.<sup>3</sup> For space reasons, below is a broad transcript of just two of the borough sketches, provided by a native New York woman who performs each borough’s accent while describing it:

First you got the Bronx, you know what I mean, the Bronx is dark, it’s in the back of your throat, and you’re dropping your final r’s, and you have a heavy initial emphasis on your consonants, because the Bronx is a very tough borough, and so you go “a hey-ho,” and then you punch your initial consonants, you got it? Cause it’s tough there. You know?

Queens is more nasal, the thing with Queens is - you live there, so you have to press into your nose because there’s a pain living in Queens, cause it’s so boring. So you’re there, and you’re living there, and you’re putting up with living there, and you tell your friends “I’m from Queens! I live here and it’s not fun.” So, that’s what happens when you live in Queens and if you want you can press even more into your nose depending on what part of Queens you live in.

These borough accent descriptions illuminate the direct indexes (stances, acts, and attributes (Ochs 1992)) that constitute a stereotyped resident of that borough. For this New Yorker, people from the Bronx are tough, so the Bronx accent not only directly indexes toughness, but draws on the iconic potential (Eckert 2012) of the fortition of initial consonants (“you punch your initial consonants, you got it?”) to construct that toughness. Nasality functions similarly for the Queens accent, in which residents “press into their noses” to iconically represent the “pain” of living there.<sup>4</sup> In the description for the Bronx, this speaker provides metalinguistic commentary that Bronx residents’ use variable non-rhoticity, and the “heavy initial emphasis on your consonants” most likely includes the stopping of interdental fricatives, traditional features of NYCE that were widespread across the city (Labov 1966). However, in this performance and others,<sup>5</sup> laypeople often make use of suprasegmental resources like voice quality, nasality, speech rate, and intonation to highlight borough differences, instead of traditional NYCE phonology. This is another discrepancy between folk beliefs and linguistic description, in which NYCE speakers are differentiated through variable use of its core phonological features, including variable non-rhoticity, raised BOUGHT, and the NYCE split short-*a* system.

Despite the frequent mentions by linguists, and despite the public’s fascination with borough accents, to date no linguistic study has explicitly investigated borough differentiation. Though production data would most clearly put the BAI to rest, the current study contributes the view from perception, with an interactive “Boroughs Quiz” that provides listeners with the opportunity to demonstrate their ability to discern borough differences in a controlled setting.

<sup>3</sup><https://youtu.be/1hrA9-6o4tI>

<sup>4</sup>The link between nasality and Queens was certainly fixed by the popular show “The Nanny,” in which Queens native Fran Drescher performed a character who made extensive use of this resource.

<sup>5</sup>c.f. Fred Armisen’s 2014 stand-up routine: <https://youtu.be/jZcDLedMRKw>

## 2 Methods

### 2.1 The Boroughs Quiz

We built an interactive website, [www.newyorkcityaccents.com](http://www.newyorkcityaccents.com), which invites participants to listen to native NYCE talkers and assign them to one of the city's five boroughs. Visitors to the homepage were told that the site “explores the common idea that New Yorkers can identify what borough other New Yorkers are from based on the way that they talk” and invited to take a series of quizzes. Each quiz included three talkers. To start a quiz, listeners were taken to a page like that in Figure 1, where they listened to a native New Yorker reading a short passage, and then selected the borough they believed the talker to be from. Before seeing how other listeners had voted for this particular talker, they were asked to self-identify as either a native New Yorker or not,<sup>6</sup> and then they categorized the final two voices in the quiz. Before finding out which borough each talker was from, listeners were asked to opt-in to our research. If they chose to do so, listeners created an account and filled out a demographic survey. Native New Yorkers were also invited to submit their own speech samples by leaving a voice message through the service Twilio, with the intent to collect additional talker samples through a modified snowball sampling method and add them to the site at a later date.



Figure 1: Screenshot of a voting page from [www.newyorkcityaccents.com](http://www.newyorkcityaccents.com).

The site was designed to allow anyone to engage with the Boroughs Quiz in a fun and interactive way, with the hope that a large enough subset of both native and non-native New Yorkers would opt-in to our research. The use of quizzes and the “reveal” of the correct borough was designed to engage listeners and keep them on the site for as long as possible. The choice to group three talkers per quiz was made to dissuade listeners from expecting to encounter all five boroughs in a single quiz, and to free them to choose from all five boroughs when encountering a new talker.

<sup>6</sup>We gave the following definition: “For our purposes, being a “Native New Yorker” means: 1) I was born in New York City or moved to New York City before I was 5 years old, and 2) I have never lived outside of New York City for more than 10 years.”

## 2.2 The Listeners

Listeners were recruited through word of mouth, on social media, and through media coverage. At the time of publication, over 5,000 listeners have visited the site and categorized at least one talker. However, only 595 listeners both opted in to the research and completed at least one quiz. Of these, a subset of 178 listeners went on to complete Quiz 2. Table 1 shows the breakdown of this listener pool into native and non-native New Yorkers for Quizzes 1 and 2.

	New Yorkers	Non-New Yorkers	Total
Quiz 1	161	434	595
Quiz 2	54	124	178

Table 1: The Listener Pool.

## 2.3 The Talkers

In constructing the talker sample, we aimed to recruit talkers who were as similar as possible with respect to common socio-demographic categories (age, race/ethnicity, sex/gender, and level of education), and who differed only for borough. Informed by prior research on the “classic New Yorker” persona, our initial recruitment targeted white, middle-aged men from across the five boroughs, with the goal of adding quizzes with more diversity of voices in the future. From the available options, we grouped males who were as similar as possible into two sets of three (Table 2). The first quiz grouped three talkers who were similar in age and for level of education, creating a relatively homogenous group. The second quiz is less homogenous, as there was only a single sample from a Bronx native, who is more working-class (based on level of education and occupation) than the other talkers. The talkers are all native New Yorkers who have lived the majority of their life in a single borough. A third quiz, with female voices, is live on the site but is not included in this analysis due to low *ns*.

	Borough	YOB	Occupation	Education	Race/Ethnicity
Talker 1A	Manhattan	1955	Business Owner	College	Jewish
Talker 1B	Brooklyn	1954	Theater Director	College	Irish (Catholic)
Talker 1C	Staten Island	1959	Writer/Artist/Teacher	College	White
Talker 2A	Bronx	1968	Custodian Engineer	High School	Caucasian
Talker 2B	Queens	1983	Gardener	Master’s	White
Talker 2C	Queens	1984	Marketing	College	White

Table 2: The talkers’ self-reported demographic information.

The talkers read a modified Please Call Stella passage, into which we incorporated as many NYCE features as possible, including embedded minimal and near-minimal pairs targeting features of interest (e.g. Don/dawn, sauce/source, coffee/copy, Career/Korea, half/have):

Please call Don. Ask him to carry the things he bought back from the store: half a pound of coffee, six cans of sauce, a scoop of ice cream, five hats, a jumping robot for the kids, and a copy of “Career Source” magazine. He can hang the bags on the door before we go see his boss, arriving at dawn in Korea town. What time is he coming?

After submitting their recordings, the talkers were evaluated for the presence of three well-known NYCE phonological features: variable rhoticity (the ratio of non-rhotic codas to all codas with an underlying /r/), BOUGHT-raising (in normalized F1), and the NYCE split short-*a* system (measured as the Euclidean Distance between tense BAD and lax BAT). For split short-*a*, the BAD and BAT classes are composed of words considered tense and lax according to the traditional NYCE short-*a*

split (Labov 2007). Although younger speakers are moving away from this system and adopting a nasal pattern (Becker and Wong 2009), all the talkers in this study appear to follow the traditional system. A summary of the NYCE measures for each talker is given in Table 3. As can be seen, the talkers vary greatly in their use of variably non-rhoticity, from a rhoticity ratio of .2 (highly non-rhotic) up to 1 (categorically rhotic). For BOUGHT, all talkers exceed the threshold for BOUGHT-raising ( $F1 < 700$  Hz) as outlined in the Atlas of North American English (Labov, Ash, and Boberg 2006), though there is some variation, and a speaker like 2A might be categorized as an extreme BOUGHT-raiser. For short-*a*, most talkers show a fairly extreme split between NYCE BAD and BAT, though there is some variation, including one talker (1B) who has a much less extreme split.

Talker	Rhoticity ratio	BOUGHT mean height	ED of BAD/BAT
Talker 1A	.2	637 Hz	212
Talker 1B	.4	655 Hz	66
Talker 1C	1	642 Hz	167
Talker 2A	.2	550 Hz	284
Talker 2B	1	630 Hz	205
Talker 2C	.8	647 Hz	255

Table 3: The talkers' NYCE measures.

### 3 Results

#### 3.1 Overview of Voting Behavior

Table 4 provides an overview of the votes for all six talkers displayed as the percentage of overall votes for each talker across the boroughs, with natives and non-native New Yorkers compared by borough. Figure 2 displays the same information visually, with the proportion of votes plotted on the y-axis for each borough, and with each talker in a separate panel.

Talker	Bronx		Brooklyn		Manhattan		Queens		Staten Island	
	native	non-native	native	non-native	native	non-native	native	non-native	native	non-native
1A	17%	23%	33%	23%	10%	9%	22%	25%	18%	20%
1B	14%	13%	23%	23%	9%	11%	39%	31%	15%	22%
1C	4%	3%	7%	4%	72%	77%	13%	9%	4%	7%
2A	24%	32%	37%	35%	0%	2%	19%	23%	20%	8%
2B	9%	9%	16%	19%	29%	20%	31%	27%	15%	25%
2C	13%	11%	11%	16%	45%	41%	22%	15%	9%	17%

Table 4: The proportion of votes by borough for each talker.

There are several observations to be made from this overview. First, the distribution of votes makes it immediately clear that listeners are not correctly identifying any talker's borough of provenance, by any benchmark. This confirms the impression from linguists that while listeners *believe* they can identify a New Yorker's borough based on the way they talk, they are unable to do so, at least using the samples we provided. The listeners are simply not converging on a single borough when they vote, correct or not: no borough receives a majority of votes for any talker except Talker 1C, who receives 72% (from natives) and 77% (from non-natives) of votes for Manhattan. Since this talker is from Staten Island, some other information must be impacting voting behavior.

Further support that listeners have a strategy is that the distribution clearly shows that listeners are not guessing. In some cases, like for Talker 1C, listeners have a clear preference. In other cases, listeners have a clear dis-preference for a particular borough. For example, Talker 2A, from the Bronx, receives almost no votes (only two votes out of a total of 178) for Manhattan. A similar but less extreme pattern can be observed for Talkers 1A and 1B, who receive a low proportion of votes

for Manhattan (and note that Talker 1A is actually from Manhattan). In fact, many of the patterns of preference or dis-preference relate to the borough of Manhattan. To confirm that listeners are not guessing – a hypothesis that would translate into an even distribution of 20% votes across the five borough options – a chi-square test of given probabilities was conducted on the voting behavior for each of the six talkers. These tests confirm that listeners are not guessing at chance for any of the talkers ( $p < .001$ ).

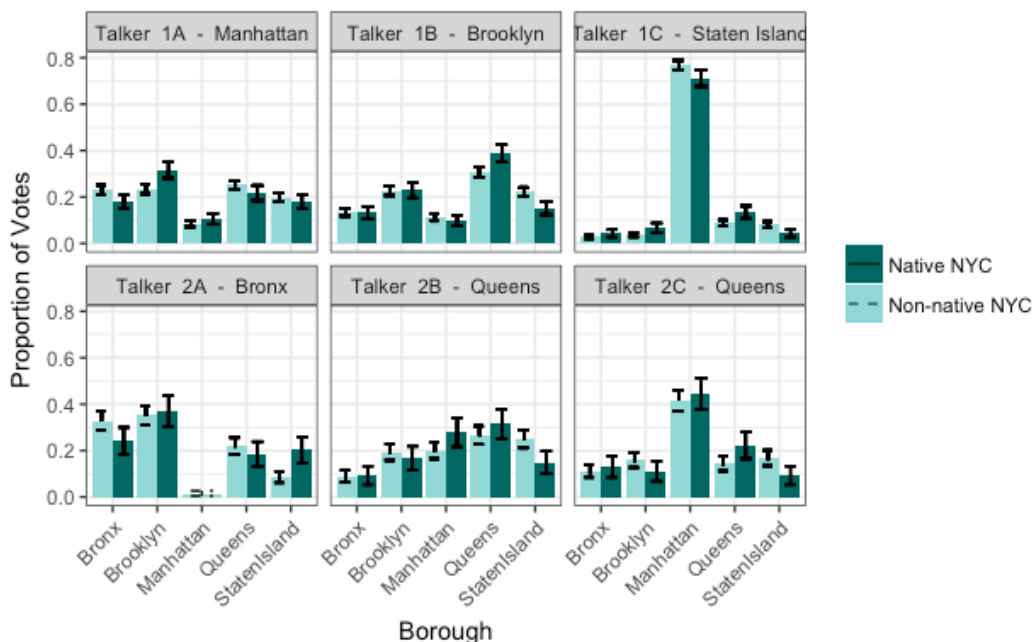


Figure 2: Overall voting behavior for all talkers.

A third observation from Figure 2 is that native and non-native New Yorkers appear to show quite similar patterns in their voting behavior. This is confirmed through chi-square tests conducted on the voting behavior for each talker comparing native New Yorkers and non-natives, which find no significant difference between the two groups for any of the talkers ( $df = 4$ ,  $p$  ranges from .06 to .52). This is perhaps surprising, because even though linguists are skeptical that New Yorkers can distinguish borough accents, one might hypothesize that native New Yorkers have access to some local linguistic information that would impact their voting behavior. Instead, it appears that the listener pool as a whole has some strategy or set of strategies for assigning a native New York talker to a borough.

Based on the descriptive patterns, we hypothesized that our talkers' relative rates of NYCE features were prompting listeners to assign less heavily-accented voices to Manhattan, and more heavily-accented voices to the outer boroughs. This strategy would explain why Talker 1C, who is categorically rhotic and produces a lower BOUGHT and less extreme short-*a* split than most of the other talkers, is overwhelmingly assigned to Manhattan, while Talker 2A, who uses the lowest rate of rhoticity in the sample, at .2, has the highest mean height for BOUGHT, and the largest short-*a* split, receives almost no votes for Manhattan. To test this hypothesis, we turn to mixed-effects modeling.

### 3.2 Mixed Effects Binomial Regression

We conducted mixed effects modeling to probe what social and linguistic factors influence listeners' voting behavior. Recall our hypothesis based on the information in Section 2: that listeners use a binary strategy of 1) selecting Manhattan for talkers who use less of the traditional NYCE features or 2) selecting an outer borough for talkers whose speech approximates the traditional NYCE dialect. To explore this hypothesis, we treated the response variable as a binomial variable with two levels



(i.e., Manhattan vs. Outer Borough). The models considered two demographic variables as fixed effects: the Listener's Native Status (native New Yorker vs. non-native) and the Talker's Year of Birth. Although we solicited extensive demographic information from the listeners who opted in to our research, not all gave us complete information. In this analysis, we opted to use a larger sample with incomplete listener information. However, all listeners did self-identify as either a native New Yorker or not, and as discussed above we hypothesized that native New Yorkers would display differential patterns for borough voting. From the talker information, we selected Year of Birth because we felt there was enough variation to explore the hypothesis that listeners might use perceptions of age in borough assignment. For other talker demographic information, namely level of education and racial/ethnic identity, we did not feel there was enough variation in our small sample.

In addition to these social factors, we included the three NYCE features measured in Table 3: rhoticity, BOUGHT-raising, and the short-*a* split between BAD and BAT. To standardize the range of fixed effects, we scaled the linguistic factors and Talker's Year of Birth. Finally, we included Talker as a random effect. The mixed effects modeling followed a step-down analysis, during which social and linguistic factors were subtracted one by one. ANOVA model comparisons determined whether factors were included in the best fit.

The winning model included BOUGHT-raising, rhoticity, and Talker's Year of Birth, summarized in Table 5 below. Listener's native status was not a significant predictor of votes, confirming the finding in Section 2 above that there is no difference in voting behavior between native New Yorkers and non-natives. In addition, the Euclidean Distance between BAD and BAT is not a significant predictor of Manhattan vs. outer borough votes.

Predictor	Estimate	Standard Error	z value	p value
(Intercept)	-1.3443	0.2299	-5.847	<.001
BOUGHT-raising	4.6724	1.9435	2.404	0.016
rhoticity	1.3065	0.2756	4.740	<.001
Year of Birth	-5.5267	1.9105	-2.893	0.004

Table 5: Summary of results of mixed effects modeling.

For BOUGHT, the model indicates that as F1 values increase (i.e., as BOUGHT lowers), the likelihood of a vote for Manhattan increases. For rhoticity, as the ratio increases (i.e., more rhoticity), the likelihood of a vote for Manhattan increases (and this is a highly significant predictor of Manhattan votes). Finally, as Year of Birth increases (i.e. as speakers get younger) the likelihood of a vote for Manhattan decreases.

The means in Table 6 supplement these findings by showing the mean values for each metric for Manhattan versus the outer boroughs. The mean value for BOUGHT is higher for Manhattan, consistent with the model's finding that a higher value (i.e., a lowered vowel) predicts Manhattan votes. The mean rhoticity ratio for Manhattan is also much higher than for the outer boroughs, consistent with the model. For Year of Birth, the mean year of birth for Manhattan is actually slightly larger than the mean for the outer boroughs, inconsistent with the model results.

Variable	Manhattan (mean)	Manhattan (SD)	Outer Boroughs (mean)	Outer Boroughs (SD)
BOUGHT (mean F1)	642	7.3	633	30.5
Rhoticity (ratio)	0.86	.26	0.44	.29
Year of Birth	1962	9.8	1960	10.3

Table 6: Means for predictors of votes.

The direction of these results aligns with our hypotheses, with one exception. A raised BOUGHT vowel and less rhoticity are consistent with traditional accounts of NYCE, and align with the hypothesis that these features would prompt listeners to select an outer borough, or to use the relative converse in selecting Manhattan. However, the results for age do not fit with our hypothesis: talkers perceived as younger are less likely to be assigned to Manhattan, and more likely to receive a vote

for the outer boroughs. One possibility for this finding is that the factor Talker Year of Birth is related to some other piece of information that listeners are tuning in to. While the Talker's Year of Birth predicts the voting data, it is important to remember that this relationship is mediated through the listeners' perceptions. Listeners don't know how old the talkers are; they only can make an attempt to categorize based on the audio sample. In our sample of voices, all the talkers could be placed into the broad category of "middle-aged," ranging in age from 34 to 64. It is possible that these perceptions of age, which do significantly impact voting, are mediated by some other unidentified factor. A larger sample with more age variation would also help to further explore this finding.

#### 4 Conclusion

This paper set out to provide the first empirical evidence related to the linguistic validity of the BAI, or the common belief that New York City's five boroughs can be differentiated based on accent alone. The results are resoundingly clear: for this task, no listeners can accurately identify the borough of provenance of an NYCE talker, even if the listeners themselves are New Yorkers. From this perspective, the results confirm the prior consensus from the literature that the BAI is not a linguistic reality.

Despite these clear results, we acknowledge the possibility that borough differentiation does in fact exist. It is possible that linguists have yet to uncover systematic differences by borough in production. If that is the case, then the short samples we provided to listeners may not include the relevant acoustic information that they need to identify borough-based accents. We are skeptical that this is the case, as there is no indication from linguists who work on NYCE as to what these as-yet-uncovered features might be. However, the public performances cited in Section 1, as well as the metalinguistic commentary included in them and elsewhere, do often focus on suprasegmental features, an area of the system that is underexplored in NYCE. This might be a fruitful avenue for future researchers seeking to explore NYCE borough differentiation.

Regardless, in these data listeners appear to adopt a binary strategy in assigning native New York talkers to boroughs. Our regression results confirm that listeners are more likely to assign talkers to the outer boroughs if their speech displays greater relative use of features that have been traditionally associated with NYCE, particularly non-rhoticity as well as a raised BOUGHT. Conversely, those talkers with lower relative use of these features were more likely to be assigned to Manhattan, the borough that many New Yorkers see as the "least New York-y" due to factors like gentrification and its status as a financial hub. In future work, we hope to delve within this binary pattern, in particular to investigate what strategies listeners use in selecting an outer borough. It is possible that this is a place where native New Yorkers have access to local strategies, either based on general exposure to NYCE, or even based on an individual listener's own borough of residence or other demographic information and experiences. We asked native New Yorkers to tell us which borough they themselves are from, and while we have incomplete information, with a large enough sample we could test the hypothesis that listener borough impacts borough voting.

Taken together, these results confirm the impression from linguists that listeners use borough as a proxy for social stratification in the NYCE accent. Our research aligns with works like the Atlas of North American English, which asserts that

Many members of the public are convinced they can recognize a Queens or Bronx or Jersey accent, but it appears that these geographic labels are in fact labels for perceived social class difference. (Labov, Ash, and Boberg 2006: 234)

We agree that the BAI is not in synch with the available linguistic evidence. However, a more targeted comparison of production data would be needed to fully confirm or disconfirm the presence of borough differences. Specifically, a comparison of a range of talkers per borough, contrasting in terms of race/ethnicity, sex/gender, age, and other social characteristics, could add important insights to the present analysis. In addition, more perceptual or qualitative data, including meta-linguistic commentary, could supplement the proposal that the BAI utilizes borough as a proxy, and explore what additional indexical attributes are accessed by listeners when assigning talkers to boroughs. In our view, the BAI makes use of a broader range of indexical information than socioeconomic status, and we look forward to exploring these processes in future work. What is clear from

this analysis, however, is that differential rates of traditional NYCE features provide listeners with a strategy for assigning native New Yorkers to boroughs, opposing Manhattan to the outer boroughs. This strategy, though consistent for both native and non-native New Yorkers, is not linked to any talker's actual borough of provenance, providing empirical support to the consensus that New York City Borough accents remain a popular linguistic myth.

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