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1 Introduction

Charleston has long been known for the distinctive character of its sound system (cf. McDavid 1955, O’Cain 1972). The distinctive phonological features of the dialect have been rapidly disappearing in the last few decades and there is some evidence to suggest that the upper class has held on to some of those features the longest. The association between the traditional form of the dialect and the upper class is fairly strong in the city. When asked about the location of the traditional Charleston accent, a number of informants in this study pointed to the downtown section south of Broad Street, and one of them added, “where all the lawyers’ offices are.” Indeed, Broad Street and the surrounding areas are full of law firms, and the residential area south of it at the tip of the peninsula is the traditional site of the city’s upper class.

2 Methods

The data in the whole project consists of the speech of 100 informants, aged 8–90, representing 5 social classes. The informants were selected through random sampling, except for the upper class—the speakers in this group were approached through three initial contacts (see Kroch 1996). The upper class sample consists of 20 speakers. For some of the analyses they are combined with 14 upper-middle class speakers. The speech of 43 speakers has been analyzed acoustically—there are 15,253 vowel tokens measured.

There has been some concern in American sociolinguistics recently as to whether social class should be used as a factor in the analysis, because supposedly such categorization does not accurately reflect actual divisions in American society, and, as such, cannot help us account for linguistic variation. This may be true to an extent of some communities in the U.S., but it is clearly not true of Charleston. Charlestonians seem to be very sensitive to the differentiation between different social groups and their locations in the city, especially to the contrast between the upper class and the rest. Here is

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how William V., 37, a middle-class Charlestonian, responds to the question of whether there are any differences between different parts of the city:

And then of course you have downtown Charleston, which is, as they say, the true bluebloods, who are *convinced* they are better than everybody [laughter], and are still very friendly but they're friendly to someone like you, an outsider, only if you understand that they're better than you. As long you understand that ground rule there then they're very friendly to you. If you question any of their standards or styles or how they do things, well, then you're wrong and they're right, and you should have known that from the beginning.

Sherry, D., 63, a lower-middle class speaker, offered the following characterization of the highest-status social group:

Now you did have some class differences. You had your elitists, that were those that had the most money, and they lived like near or below Broad. We used to call them, what was it, snobs? What was it? SOBs, south of Broad.

The most important characteristics that the upper-class informants in the sample share are as follows: they live or were brought up downtown south of Broad Street or on plantations outside of Charleston owned by their families; they had full-time maids and nannies; they went to private schools (often boarding schools for secondary school, usually single-sex schools); they go back at least 7 generations in the United States, often as many in Charleston itself—when asked about his ancestry, one of the informants replied, “all the way back to the Mayflower”.

The socio-economic differentiation of the city and the location of the highest-status social group is confirmed by the 2000 Census data. Indicators such as education, occupation, and income point to the area south of Broad Street as the locus of the highest-status social group.

3 Fronting of Back Upgliding Vowels

The traditional phonological features of the dialect have now largely disappeared and usually occur only in the speech of Charlestonians over 65 (Baranowski 2006). The most distinctive of those features was the position and quality of the long mid vowels: the nuclei are high and peripheral and the vowels are monophthongal or ingliding; /ow/, as in *so* and *goat*, was traditionally at the back of the vowel space.

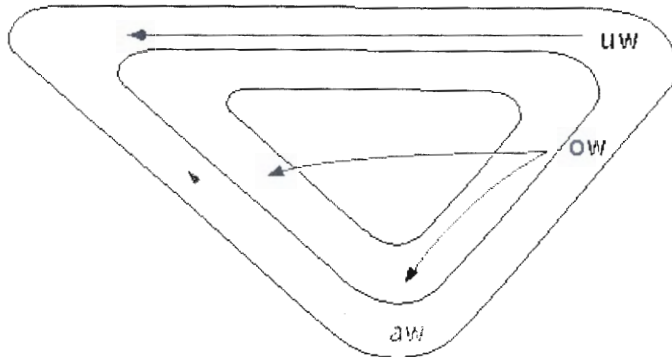


Figure 1: Fronting of back upgliding vowels (Labov, Ash & Boberg 2006)

With the disappearance of the traditional features, is the upper class just like everybody else? It turns out that in some ways the upper class is more conservative—for example, it lags behind in the acquisition of the *pin-pen* merger; for some other features, such as the low-back merger, it is acquiring it at the same rate as the other groups in Charleston (Baranowski 2006). However, in one interesting way the upper class is ahead of everybody else, that is, in the fronting of the back upgliding vowels /uW/ and /oW/.

Charleston, like many other dialects of English, is undergoing the fronting of /uW/, after coronals in words such as *do* and *two* and after non-coronals as in *move* and *goose*, and of /oW/, in free position as in *go* and *so* and in checked position as in *goat* and *boat*. The parallel fronting of these vowels is schematized in Figure 1. Figure 2 presents the typology of American English dialects according to the degree of fronting of the two vowels, showing a range from very conservative, such as Eastern New England, with back /uW/ and /oW/, to very advanced, such as the South or the Southeast. Charleston is in fact the frontest of them all—it is leading American English in the fronting of both /uW/ and /oW/, which is seen even more clearly for speakers between 15–45. In addition, social class turns out to play an interesting and somewhat unexpected role in the fronting of the two vowels.

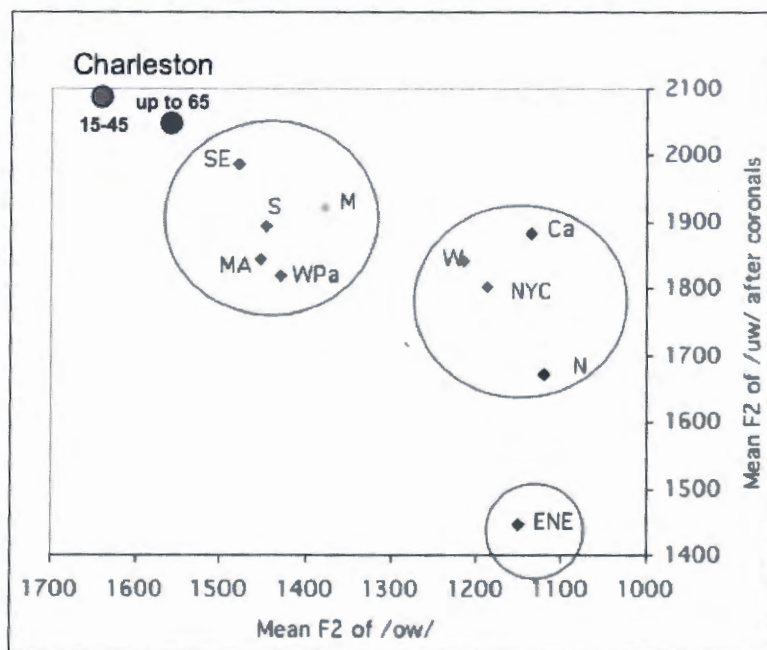


Figure 2: Fronting of /uw/ and /ow/ by dialect (adapted from Figure 12.6 of Labov, Ash & Boberg 2006)

3.1 Fronting of /uw/

The fronting of /Tuw/ (i.e., /uw/ after coronals) is a change nearing completion, with all speakers being very front, though there is still an effect of age: each successive generation of 25 years can be expected to be fronter by 42 Hz. In addition, there is a social class effect—the positive value of the social class coefficient indicates that the higher the social class, the higher the F2, the fronter the vowel (Table 1).

R squared (adjusted) = 14.1%

Variable	Coefficient	prob
Constant	2033	< 0.0001
Age *25 years	-42	0.043
social class	30	0.024

Table 1: Regression coefficients for F2 of /Tuw/ not before /l/

Figure 3 presents the mean F2 values for 5 social classes—there is a big gap between the working and lower-middle classes, being less fronted, and the middle and upper classes, leading the change.

The fronting of /Kuw/, as in *goose*, is a much more vigorous change, with a steep regression line (Figure 4). The effect of age is much greater: again, the negative age coefficient indicates that the vowel is fronting in apparent time. Younger speakers have higher values of F2, which can be expected to increase by 199 Hz with every successive generation of 25 years.

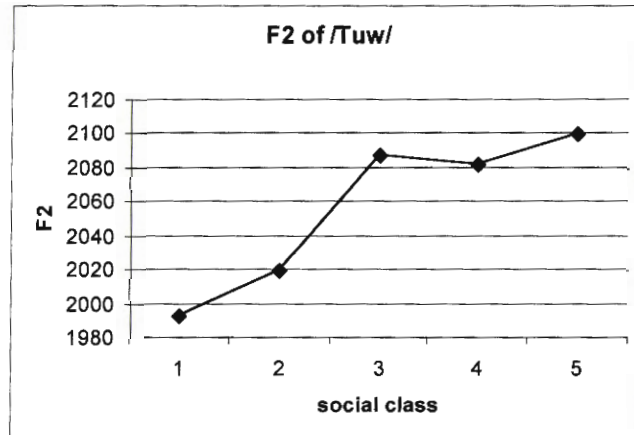


Figure 3: Mean F2 of /Tuw/ for 5 social classes

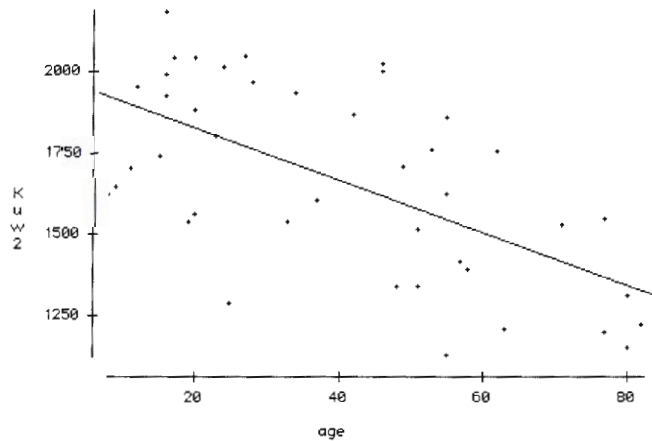


Figure 4: F2 of /Kuw/ vs. age for 43 speakers

Figure 5 presents the vowel system of Frank T., 48, a working-class male. /uw/ after coronals, as in *two*, is quite front, but /Kuw/ after non-coronals, as in *boot*, is still back of center; /uw/ before /l/ is at the back of the vowel space. This is the typical configuration of the allophones of /uw/ seen in most dialects of English: /Tuw/ fronter than /Kuw/, and /uwL/ at the back.

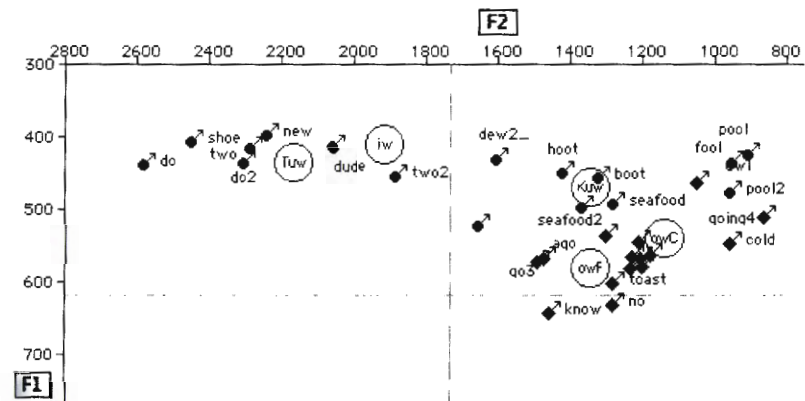


Figure 5: Frank T., 48, Charleston, SC

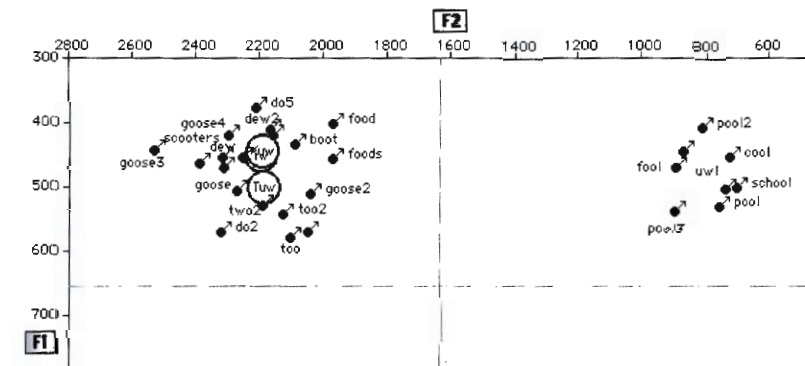


Figure 6: Pam K., 16, Charleston, SC, upper class: /uw/

However, for the youngest generation of Charlestonians both allophones of /uw/, after coronal and after non-coronals, show advanced fronting, while the allophone before /l/ is at the back of the vowel space, as in the speech of Pam K., 16 (Figure 6).

There is a very strong social class effect: the vowel can be expected to be fronter by 316 Hz in the upper class, as compared with the working class

(Table 2). Figure 7 presents the expected values of the F2 of /Kuw/ for 5 social classes, derived from adding the age coefficient for a given class to the regression constant. There is a clear lead of the two highest-status groups and a monotonic relationship between social class and the degree of fronting.

R squared (adjusted) = 57.9%

Variable	Coefficient	prob
Constant	1826	< 0.0001
age *25 years	-199	< 0.0001
UC	316	< 0.0001
MC	188	0.023
WC	0	.

Table 2: Regression coefficients for F2 of /Kuw/

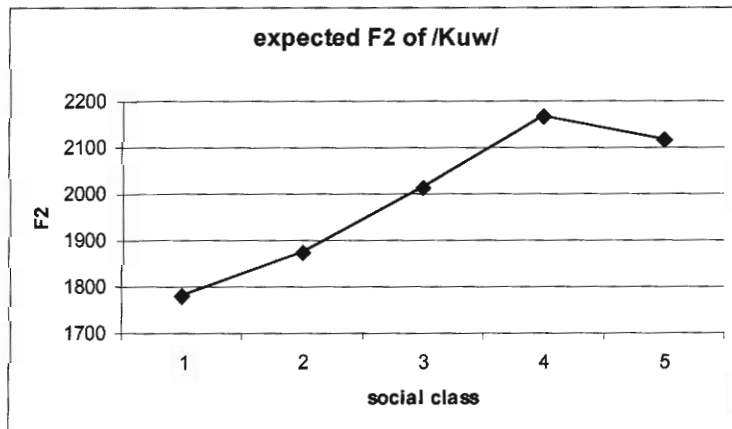


Figure 7: Expected values of F2 for /Kuw/ for 5 social classes (before the effect of age)

3.2 Fronting of /ow/

The fronting of /ow/, as in *go* or *goat*, in parallel to the fronting of /uw/, is another vigorous change occurring in Charleston, with the most advanced speakers leading not only this dialect but also the rest of the country. It ought to be stressed that Charleston in its traditional form is known for high and back nucleus of /ow/, tense and peripheral, which was often monophthongal and ingliding, as in the speech of John E., 85 (Figure 8). For the youngest speakers, however, /ow/ is front of center, as in the speech of Pam K., 16

(Figure 9). Figure 10 includes a scatterplot of the F2 of /owF/ in free position against age for 43 speakers.

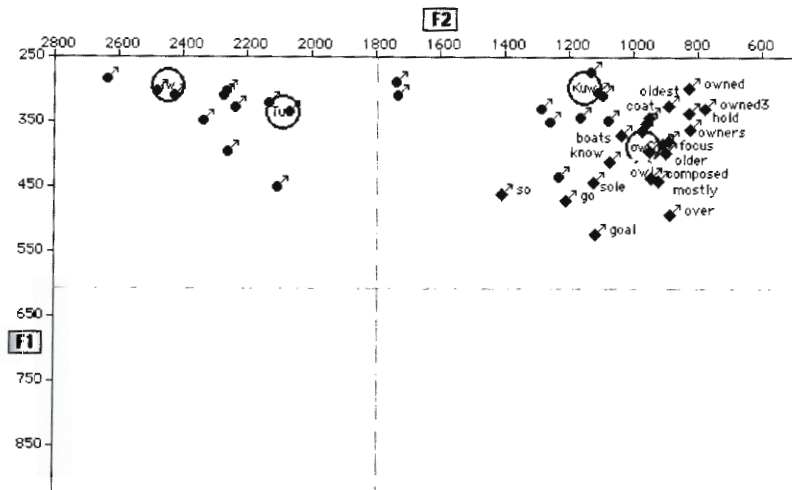


Figure 8: John E., 85, Charleston, SC: /ow/

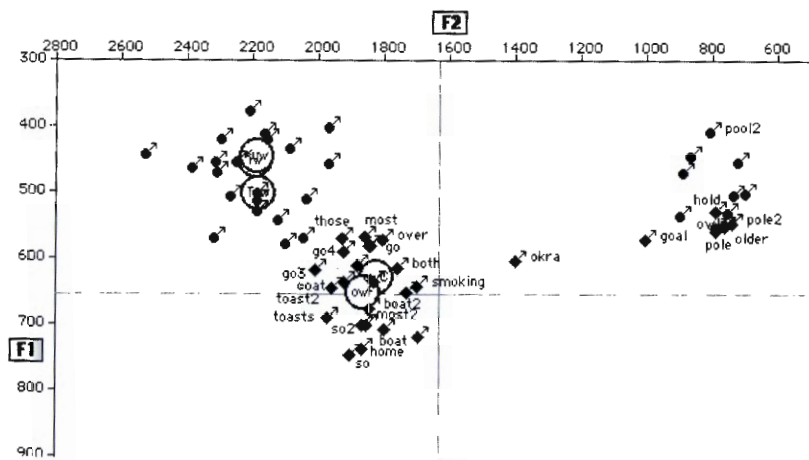


Figure 9: Pam K., 16, Upper class: /ow/

Regression analysis shows that each successive generation can be expected to be fronter by 157 Hz (Table 3). There is also a social class effect—the positive value of the coefficient indicates that the higher the social class the more advanced the fronting of the vowel.

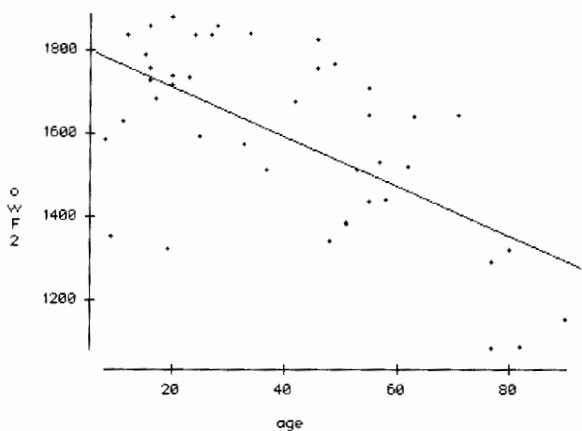


Figure 10: F2 of /owF/ vs. age

R squared (adjusted) = 44.6%

<u>Variable</u>	<u>Coefficient</u>	<u>prob</u>
Constant	1720	< 0.0001
Social class	42	0.021
Age *25 years	-157	< 0.0001

Table 3: Regression analysis of F2 of /owF/

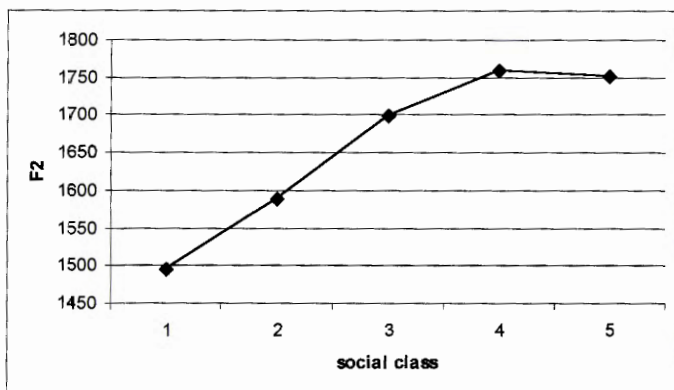


Figure 11: Mean F2 of /owF/ for five social classes for speakers up to 65 y.o.

Figure 11 presents the mean F2 values for each of the 5 social classes. The two highest-status groups are ahead of everybody else, and for the rest, the

lower the social class the less advanced the fronting of /ow/. The dynamics of the change are different for each of the three major social classes—the age coefficient for the upper class is higher than the one for the middle class, and much higher than the one for the working class. In other words, the fronting of /ow/ is the most vigorous for the upper class (Table 4). This is shown graphically in Figure 12. There is a progression for all the classes from conservative and back /ow/ to very front /ow/, but the rates of change for the different classes are different. The upper class seems to have made a jump from very conservative and back, reflecting the traditional dialect, to a position ahead of everybody else for the younger generations, all within just a few decades.

	constant	Age *25 years	<i>p</i>
WORKING CLASS	1593	-43Hz	0.3863
MIDDLE CLASS	1811	-133Hz	0.0245
UPPER CLASS	2058	-239Hz	< 0.0001

Table 4: Age coefficients for F2 of /owF/ for three social classes

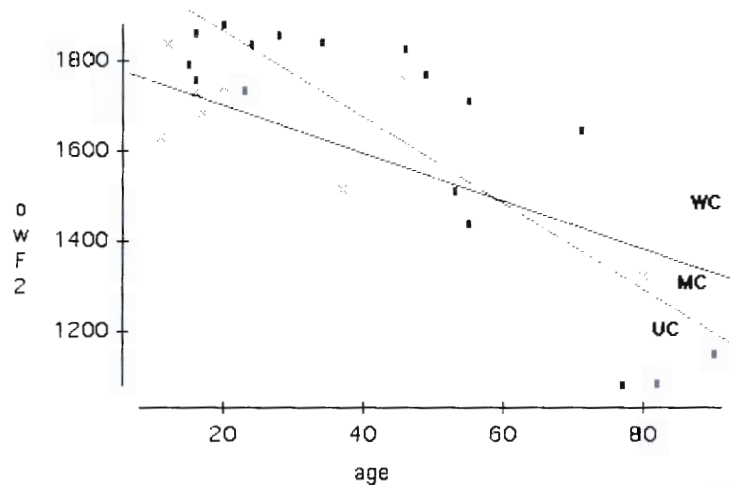


Figure 12: F2 of /owF/ vs. age for 3 social classes: Upper Class, rectangles; Middle Class, crosses; Working Class, circles

R squared (adjusted) = 49.1%

<u>Variable</u>	<u>Coefficient</u>	<u>prob</u>
Constant	1510	< 0.0001
age *25 years	-179	< 0.0001
social class	63	0.003

Table 6: Regression coefficients for F2 of /owC/

The fronting of /owC/ in checked position, as in *goat*, is also a vigorous change, whereby the youngest speakers are much fronter than the oldest ones. The negative age coefficient indicates that the vowel can be expected to be 179 Hz fronter for each successive generation of 25 years (Table 6). Again, there is a social class effect—the higher the class, the more advanced the fronting, and this effect is even greater than in the case of /owF/.

Figure 13 is a graph showing the expected values of F2 for /owC/, derived by adding the age coefficient for each class to the regression constant—there is a clear progression of the fronting along the social class dimension, with the highest-status social group leading the change. The leading of the upper class is brought into sharper focus once we look at the youngest generation of speakers between the ages of 15 and 40: the mean F2 for the upper class is as high as 1782 Hz in that age group—it is considerably higher than in the other social classes (Figure 14).

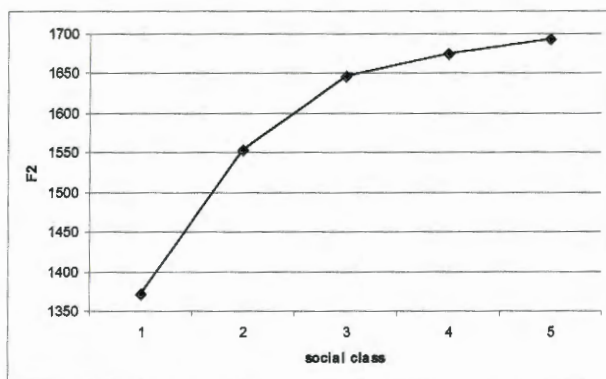


Figure 13: Expected F2 of /owC/ by social class for speakers up to 65 years of age (before the effect of age)

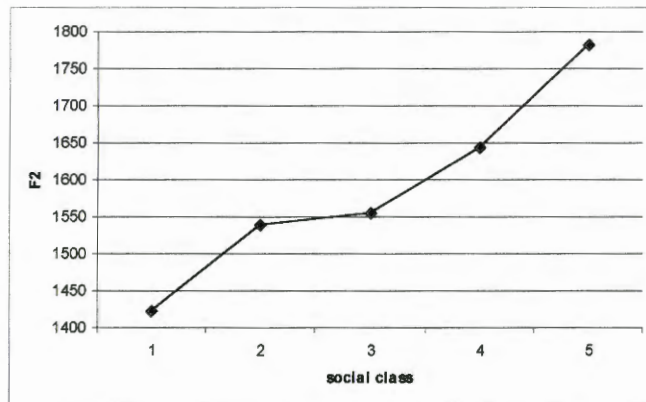


Figure 14: Mean F2 of /owC/ by social class for speakers 15–40 years of age

Upper class men are almost as fronted as upper class women. In fact, the working class is the only class for which there is a significant gender effect for /owF/—the positive coefficient for female indicates that working-class women can be expected to be ahead of working-class men by 158 Hz (Table 7). Similarly, for /owC/, the mean F2 for the upper class men is almost identical to the mean F2 for the upper class women, and much higher than for the other classes (Table 8). The direction of the gender effect is another piece of evidence indicating that the upper class is leading in this change. If the upper class is the leader here, we would expect upper class men to catch up with the women first, or in other words, we would expect the gender differences to be greater in the classes that lag behind in the change.

Variable	Coefficient	prob
Constant	1438	< 0.0001
female	158	0.034

Table 7: Regression analysis of F2 of /owF/ for Working Class

	WC	MC	UC
female	1497 Hz	1600 Hz	1683 Hz
male	1426 Hz	1511 Hz	1685 Hz

Table 8: Mean F2 of /owC/ for three social classes for speakers 15–40 years of age

This leads us to the Curvilinear Principle shown to operate on changes from below, illustrated by the graph in Figure 15, which is based on Labov's study of sound change in Philadelphia (Labov 2001). According to this prin-

change, changes from below originate in an interior social group—neither the highest nor the lowest. The fronting of /uw/ and /ow/ in Charleston appears not to be compatible with this model. This does not necessarily mean, however, that the hypothesis is wrong. Rather, there may be something special about the fronting of the back vowels.

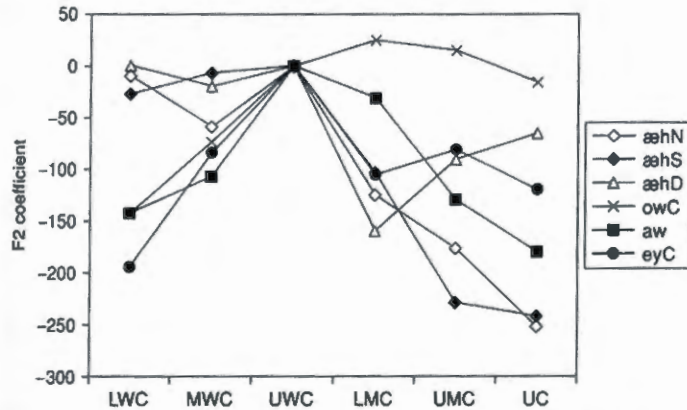


Figure 15: Philadelphia sound changes (Fig 5.7 of Labov 2001)

It is worth noting that /owC/ does not conform to the pattern as well as the other changes in Philadelphia—it is not immediately clear what the pattern is for this change. Labov notices this discrepancy and suggests that “[b]y one means or another, this characteristic feature of the Southern Shift has escaped stigmatization and become associated with middle class norms” (Labov 2001: 187), adding that the fronting of /uw/ and /ow/ seems to follow “a different social pattern from the raising and fronting of the front vowels” (p. 169, footnote 13).

Charleston provides strong evidence that indeed the fronting of the back upgliding vowels follows a different social pattern—the change is clearly led by the highest-status social group. It would be interesting to look closely at other speech communities to find out if the back upgliding vowels are indeed special, or whether what is special is Charleston—a dialect long known for its distinctive character and the special role the upper class has played in it.

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Linguistics & English Language
School of Languages, Linguistics and Cultures
The University of Manchester
Oxford Road
Manchester M13 9PL
England
maciej.baranowski@manchester.ac.uk