

# Perceptions of Dialect Change in the Speech of Adult Canadians Living in Alabama\*

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## Introduction

Evidence indicates that speakers of a particular dialect may modify their speech when they move to a new dialect region. Chambers (1992), for instance, observed changes in choices of lexical items and in the pronunciation of certain words in the speech of adolescent immigrants. However, relatively little is known about phonetic changes in the speech of adults. It might be expected that adjustments to the segmental and prosodic features of adult immigrants' speech would be comparable to those seen in adult second language (L2) learners. Considerable research indicates that adult L2 learners almost never learn to pronounce their second language like native speakers, even after years of immersion in the L2 environment (see e.g., Flege, Munro, & Mackay, 1995), though they do often show evidence of phonetic learning (Munro, Flege, & Mackay, in press). Similarly, adult learners of a second dialect might be unlikely to develop pronunciation patterns identical to native speakers of their new dialect, while nonetheless exhibiting a tendency to "approximate" the phonetic norms of the new dialect (see Flege, 1980).

In this study we addressed the issue of dialect change in adults by examining listeners' ratings of the speech of Canadians who had immigrated to Birmingham, Alabama. Although several different dialects (defined often along racial and socio-economic lines) are spoken in metropolitan Birmingham, the white, middle-class speech to which the speakers in the study were almost certainly exposed has a number of distinctive properties, including the use of the monophthong [ɑ] for the Canadian English diphthong [aj], the neutralization or near-neutralization of the distinction between [æ] and [e], distinctive vowel-colouring before [ɪ], and the frequent use of rising final intonation in statements. Of course, Canadian English also differs from Birmingham English in its use of the "raised" diphthongs [ʌj] and [aw] before voiceless consonants (Chambers, 1973).

Our hypotheses were 1) that adult speakers of Canadian English living in Alabama would eventually adopt some of the segmental and prosodic pronunciations of the speakers in their new dialect area; 2) that these changes would be noticeable to phonetically untrained Canadian speakers who had not moved to a new dialect area; and 3) that the speakers would tend to approximate rather than fully adopt the new dialect.

## Methods

In order to test the three hypotheses proposed above, we used a listening task in which native Canadian listeners rated the

"Americanness" of the speech of Canadians, Alabamians, and Canadians living in Alabama.

**Recordings.** Speech samples were elicited from three groups of ten speakers (5 female, 5 male) each. Group CE consisted of adult native speakers of Canadian English living in Edmonton. Group AB consisted of residents of Birmingham, Alabama, who had been raised in the American South. Group CB consisted of speakers of Canadian English who had taken up residence in Birmingham after the age of 18 years. The mean length of time spent in the US was 7.7 years, with a range of 1 to 23 years. Five of the participants from Group CB had lived in other US cities besides Birmingham (in Illinois, Indiana, Missouri, Oregon, and Tennessee).

Individual recordings were made with high fidelity audio equipment in a sound booth. Participants were presented with a series of cartoons (without dialogue) depicting an amusing story about a hunting trip. The speakers were asked to describe the story in a short narrative, providing as much detail as they wished.

Despite a careful examination of the 30 speech samples, we were able to find only marginal indications that any specific lexical items or grammatical structures might have betrayed the place of origin of any of the speakers. Rather the differences in the speakers' productions seemed to be confined mainly to pronunciation in both the segmental and the prosodic domains.

**Listening Task.** To facilitate random presentation of the speech samples to the listeners, the narratives were digitized on a Macintosh computer and saved as audio files. An excerpt of 10 - 14 sec from each speaker's narrative was selected from the beginning to be used as a stimulus in the listening task. A stimulus tape was then prepared. Four example tokens (narratives from speakers whose voices were not used in the study) were recorded first, to be used as a practice set for the listeners. Next, 8 randomly-selected tokens from the actual stimulus set were recorded to allow the listeners to "warm up." The listeners were not informed of this, however, and the ratings of these tokens were excluded from the subsequent analyses. Finally, the actual randomized stimulus set, consisting of two tokens of each narrative, was recorded.

The listeners were 22 native speakers of Canadian English living in Edmonton at the time of the experiment. During a listening session conducted in a quiet room, they were instructed to rate how "American" each speech sample sounded by circling a number on a response sheet from 1 to 9 where 1 = "Very Canadian" and 9 = "Very American." They were told that they would be hearing speech from Canadians, Southern

Americans, and Canadians living in the American South. They had no prior knowledge, however, of the place of origin of any specific speakers.

### Results

The distribution of all 1320 ratings according to speaker group is illustrated in Figure 1. The ratings of the CE speakers tended to cluster near the left side of the scale: more than half were ratings of 1. Very few ratings higher than 4 were assigned to this group, and none of the ratings was higher than 7. In sharp contrast, the modal rating category for the AB group was 9, and very few ratings lower than 6 were assigned. The ratings of the CB group's productions showed much less of a tendency to fall at the extremes of the continuum. The mean ratings assigned to the three groups are given in Table 1.

Table 1: Mean Ratings by Speaker Group

Group	Mean	Range
CE	2.1	1.3 - 3.5
CB	4.0	2.1 - 6.7
AB	7.6	5.4 - 8.9

The CB group was assigned a mean rating intermediate to that of the other 2 groups. A repeated measures of Analysis of Variance on the mean scores assigned by each of the 22 listeners to the three groups (pooled over talkers) revealed a significant effect of speaker group [ $F(2, 42) = 514.46, p < 0.001$ ]. Post hoc (Tukey HSD) tests indicated that all three groups differed significantly from each other ( $p < 0.01$ ). In short, the CE group was rated as most Canadian-sounding and the AB group was rated as most American-sounding. The CB group received an intermediate rating that differed significantly from the ratings assigned to the other groups. Furthermore, every listener showed the same ordering of mean ratings (CE < CB < AB).

An examination of the data for the individual speakers yielded similar results. A one-way ANOVA on the scores from the 10 speakers in each group revealed a significant effect of speaker group [ $F(2, 27) = 61.44, p < 0.001$ ]. Tukey HSD tests indicated that the mean score assigned to every group differed significantly from the mean for every other group ( $p < 0.01$ ). As can be seen from Table 1, the ranges of mean scores assigned to individual speakers overlapped somewhat. Some of the CB speakers were heard as more American-sounding than others. Moreover, some received mean ratings comparable to those assigned to members of the CE group, while others were rated as American-sounding as some of the AB speakers.

### Conclusions

With respect to the three hypotheses offered above, the first two were clearly confirmed. The adult Canadians who had immigrated to the United States showed evidence of American pronunciation patterns that were clearly noticeable to the Canadian listeners.

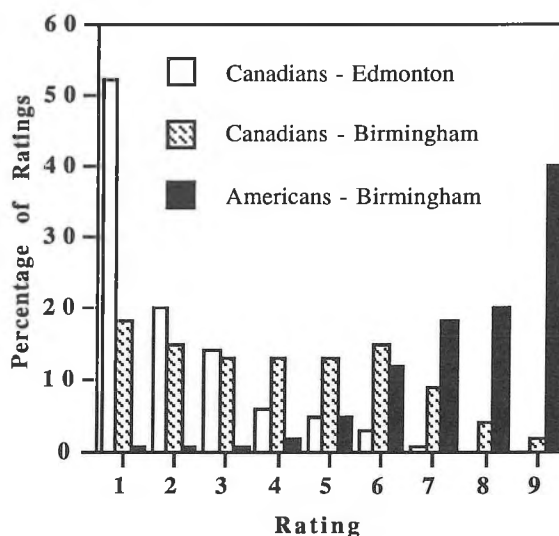


Figure 1: Distribution of Ratings by Group

The listeners had very little difficulty distinguishing the CE from the AB speakers, and they tended to rate the CB speakers as having an intermediate degree of American-sounding speech. Further analysis of the speech samples used in this study may reveal more about the segmental and prosodic cues that were available to the listeners when they made their judgements.

The data also generally support the third hypothesis, that the CB group would approximate, rather than fully adopt, the new dialect. However, some of the CB speakers were judged to be just as American-sounding as some of the AB speakers. While this may mean that some CB speakers had indeed become indistinguishable from Alabamians, firm conclusions are not possible here, given the short speech samples that were used. A full evaluation of this hypothesis would, of course, require an analysis of judgements from native Alabamians in order to determine whether they too would perceive some members of the CB group as indistinguishable from other Alabamians.

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