Complexity in dialect contact outcomes

Robin Dodsworth, North Carolina State University

robin_dodsworth@ncsu.edu

Introduction

- Large-scale contact between dialects can lead to the **reallocation** of linguistic variants to particular social groups or functions (Trudgill 1986, Britain & Trudgill 2005).
- In Raleigh, NC, 50 years of white collar migration from outside the South has motivated the reallocation of southern vowels to the working classes, weakening the Southern Vowel Shift among white collar speakers.
- Hume & Mailhot (forthcoming) predict that complex linguistic forms are more vulnerable to change.
- Are "complex" elements of the Southern Vowel Shift in Raleigh following a different apparent-time trajectory than "simple" elements?

The Raleigh vowel study

- Focus: vowel change over time, with particular attention to the role of socioeconomic class.
- Conversational interviews with 240 native Raleigh speakers recorded since 2008.
- Rapid change over time in middle class front vowel systems found previously (Dodsworth & Kohn forthcoming).
- 47 white collar speakers are examined here (Table 1).
  - **generation 1**: Finished high school before large-scale contact began.
  - **generation 2**: Attended high school with children of non-southerners.
  - **generation 3**: Grew up surrounded by children of non-southerners.

Which elements are "complex"?

- "Complex" variables are defined here as those that show significant internal effects in generation 1 that are **not** significant in generation 3.
- Linear mixed effects models:
  - Dependent variables: Lobanov-normalized F1 and F2 (at nucleus)
  - Fixed effects: preceding place; following place, manner, voice; duration; sex; generation
  - Random effect: speaker
- /ɛ/ is conditioned by following place: Fronted variants occur before coronals in generation 1 (Figure 2).
- /æ/ is conditioned by following place: Raised variants occur before coronals and labials in generation 1 (Figure 3).
- So /ɛ/ and /æ/ are the "complex" variables, while /i/, /ɪ/, and /e/ are the "simple" variables.

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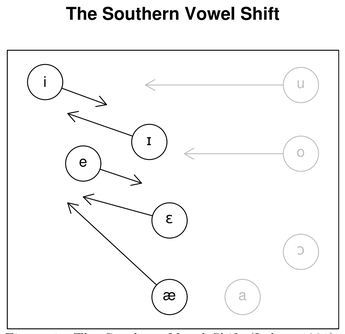

Figure 1: The Southern Vowel Shift (Labov 1991). This study focuses on the front vowel system.

generation	birthyear range	# of speakers
1	1923-1950	18
2	1952-1978	12
3	1983-1989	17

Table 1: Native Raleigh speakers included in the present study

Figure 2: Effect of following place for /ɛ/ across 3 generations

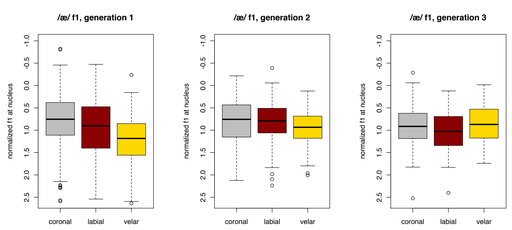

Figure 3: Effect of following place for /æ/ across 3 generations

Rate of change

- The "complex" variables, /ɛ/ and /æ/, have slightly higher birthyear coefficients than 2 of the "simple" variables, /ɪ/ and /e/ (Figure 4).
- /i/ has the rarest southern variant in generation 1 and completes its change within one generation, thus showing a high birthyear coefficient.
- The complex variables do not change more quickly than the simple variables in the first generation; they take until generation 3 to show higher rates of change (Figure 5).
- Rate of change alone does not strongly distinguish the simple and complex variables.

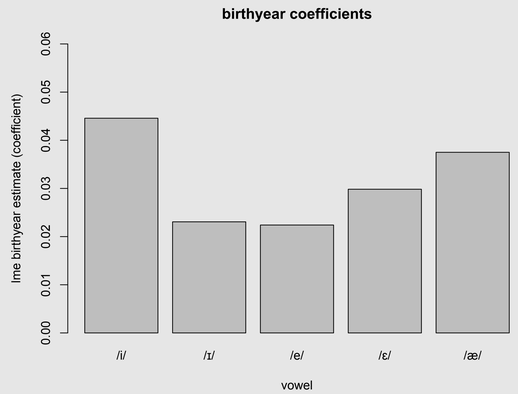

Figure 4: Estimates for birthyear in linear mixed-effects models. /ɛ/ and /æ/ are the "complex" variables.

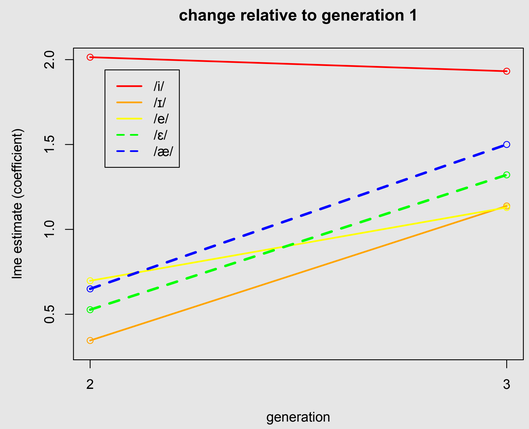

Figure 5: Estimates for generations 2 and 3, relative to generation 1, in linear mixed-effects models. Dashed lines are complex variables.

Conclusions

- Complex variables show higher rates of change than simple variables by the second post-contact generation (i.e., generation 3).
- The simple variables have the predicted variance pattern, but the complex variables do not.
- Complex variables probably have different transmission and diffusion requirements than simple variables (Centola & Macy 2007).

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Variance

- In cases of dialect reallocation, **focusing** should occur (Trudgill 1986, Britain & Trudgill 2005).
- So the overall variance for each front vowel should decrease from one generation to the next.
- This is true for the simple variables, but the complex variables finish focusing within one generation (Figure 6).
- The simple variables show clear reduction in between-speaker variance over time, but the complex variables do not (Figure 7).

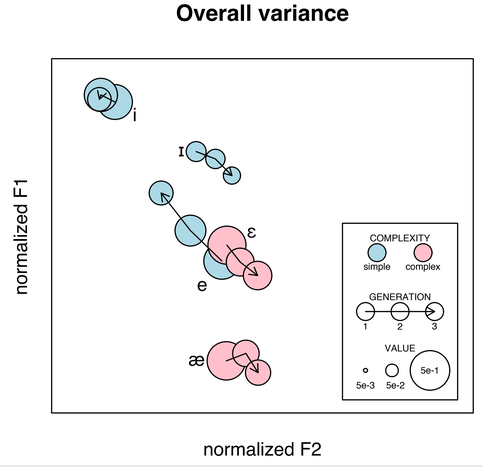

Figure 6: Variance in dominant formant values at each generation. Larger circles indicate greater variance.

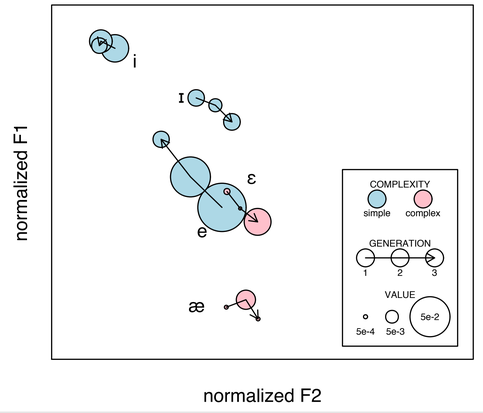

Figure 7: Variance in speaker intercepts from linear mixed effects models at each generation. Larger circles indicate greater variance.

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