

**Canadian and Californian:**  
*The case for “Experimental Dialectology”*

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## 2 Overview

- “Experimental Dialectology”
- Canadian vs. American English
- Method, speakers for present data
- Acoustic correlates of dialect and dialect differences in Californian and Canadian
  - Low-back Merger (“LOT-CLOTH”)
  - Lowering/retraction of /æ/ (“TRAP”)
  - Centralization of /u/ (“GOOSE”)

### 3 Regional atlas (or survey) project

- Linguistic Atlas Projects ([us.english.uga.edu](http://us.english.uga.edu))
- Direct fieldwork collections of local variants
- Invariably time consuming (generations)
- Sampling/observer bias problems
- Lexical/phonetic 'judgments' in transcription, reporting, etc.

## 4 Labovian (variationist) sociolinguistics

- Language variation reflects socio-historical patterns (of change)
- Correlate phonological or grammatical variant with social dimension (gender, age, status, ethnicity, etc.)
- Depends on 'asking the right question the right way'
- Correlation vs. causation and predictive power

## 5 The problem (in the phonetic domain)

- When a researcher reports that (for instance) /u/ is fronted or /æ/ is retracted, what does that mean?
- What are the standards of comparison?
- How do you decide magnitude of difference from an unspecified or potentially variable standard of comparison?
- How can we make direct, empirical comparisons based on different people's reports of their perceptions?

## 6 Experimental Dialectology

- Analysis of speech collected under controlled conditions
- Reproducible measurement techniques rather than careful listening and transcription
- Informs theoretical and descriptive applications
  - Quantifiable norms
  - Quantifiable variants
- Does not replace traditional methods, but complements them

## 7 Background - Canadian English (history)

- Early Canadian history
  - Atlantic Canada – Ireland, Northern England
  - Ontario – Southern England, Scotland
- Settlement of western Canada
  - Displaced Ontarians
  - Scots
  - American Loyalists

## 8 Background – “Undifferentiated West”

- Labov’s (1991) “Third Dialect” group
  - Fronting of /u/ (also seen in Southern Shift)
  - Lack general tensing or raising of /æ/
  - Merger of low-back vowels
- “Most of Canada” and “west of the Mississippi” have similar (shallow) time-depth and historical influences

## 9 Background – “Canadian Shift”

- Clarke, Elms & Youssef (1995)
  - Drag-chain, triggered by low-back merger
  - Retraction of /æ/
  - Lowering of front lax vowels
- Observed in ‘General Canadian’ population (mostly from southern Ontario)
- Compared with reports (from sociolinguistic interviews) from Bay Area (reported in Hinton et al. 1987, Luthin 1987)

## 10 About these Bay Area studies

- Individual transcribers rate degree of deviation from 'agreed upon' targets
  - for a given vowel, 0 if 'near target'
  - +1 if raised (or fronted) 'one degree' from target
  - +2 if raised (or fronted) 'two degrees' from target
- All ratings averaged together, into an 'index' of raising or fronting
- What are these 'agreed upon' targets? How did they agree on them? How does a person decide what is 'a degree' of difference? Inter-rater reliability?
- "+1" could mean an equal number of "+2" and "0" judgments, or it could mean everyone agrees on "+1"

## 11 Questions

- Are the Canadian and Californian vowel systems really as similar as Clarke et al (1995) suggest?
- Is the Canadian Shift observable in Californian English?
- Is Canadian Shift observable in other varieties of General Canadian?
- Is there a Canadian Shift going on at all?

## 12 Method (1) - speakers

- University-aged men and women
  - 5 men, 9 women from southern California
  - 5 men, 5 women from Winnipeg, Manitoba
- Self-reported monolingual English
- Ethnoculturally diverse

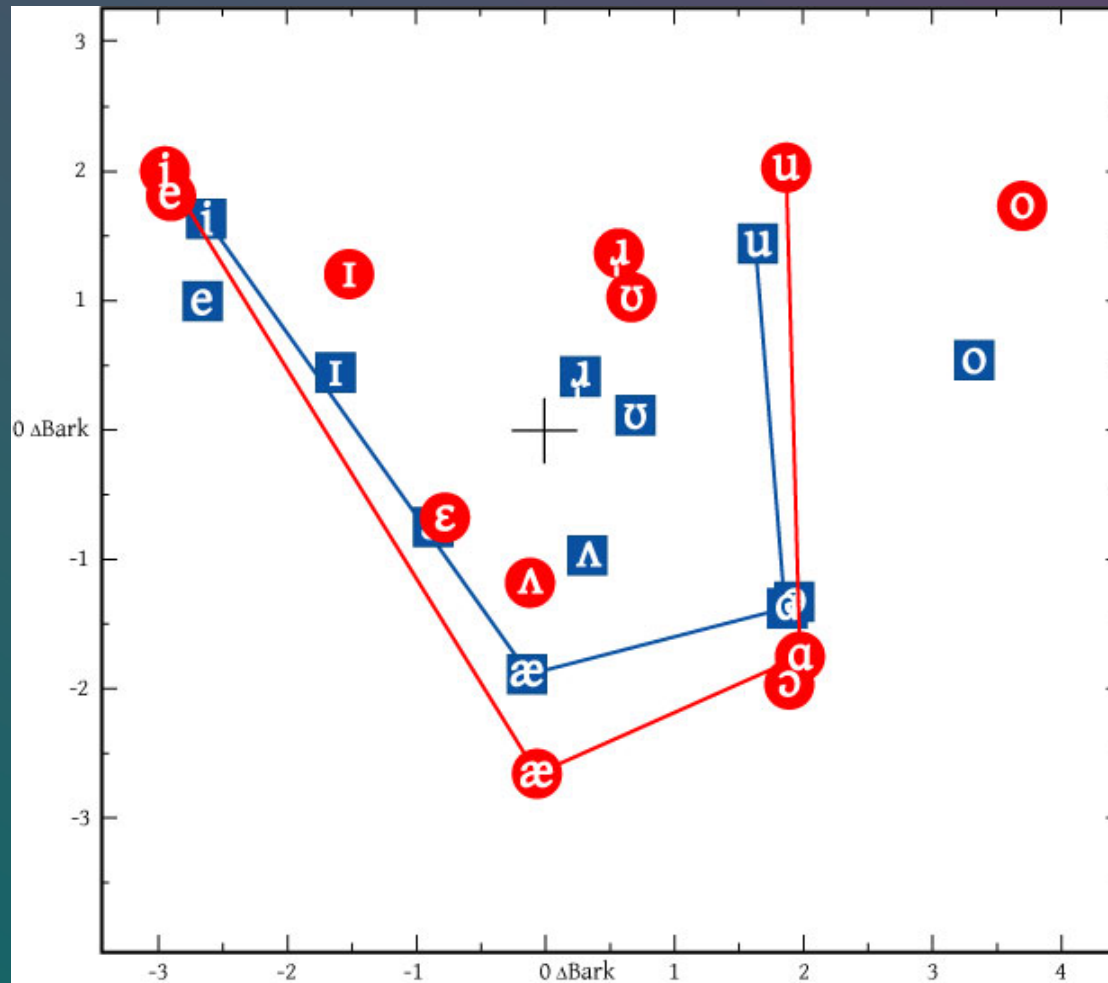
## 13 Method (2) - materials

- Vowels in /hVd/ or /hVt/ context 10 contrasting monophthongs & syllabic /r/
- Multiple repetitions, random order, in a frame (“cite \_\_\_ twice” or “say \_\_\_ once”)
- First four formant frequencies measured at three timepoints per vowel (25, 50, 75% of vowel duration)

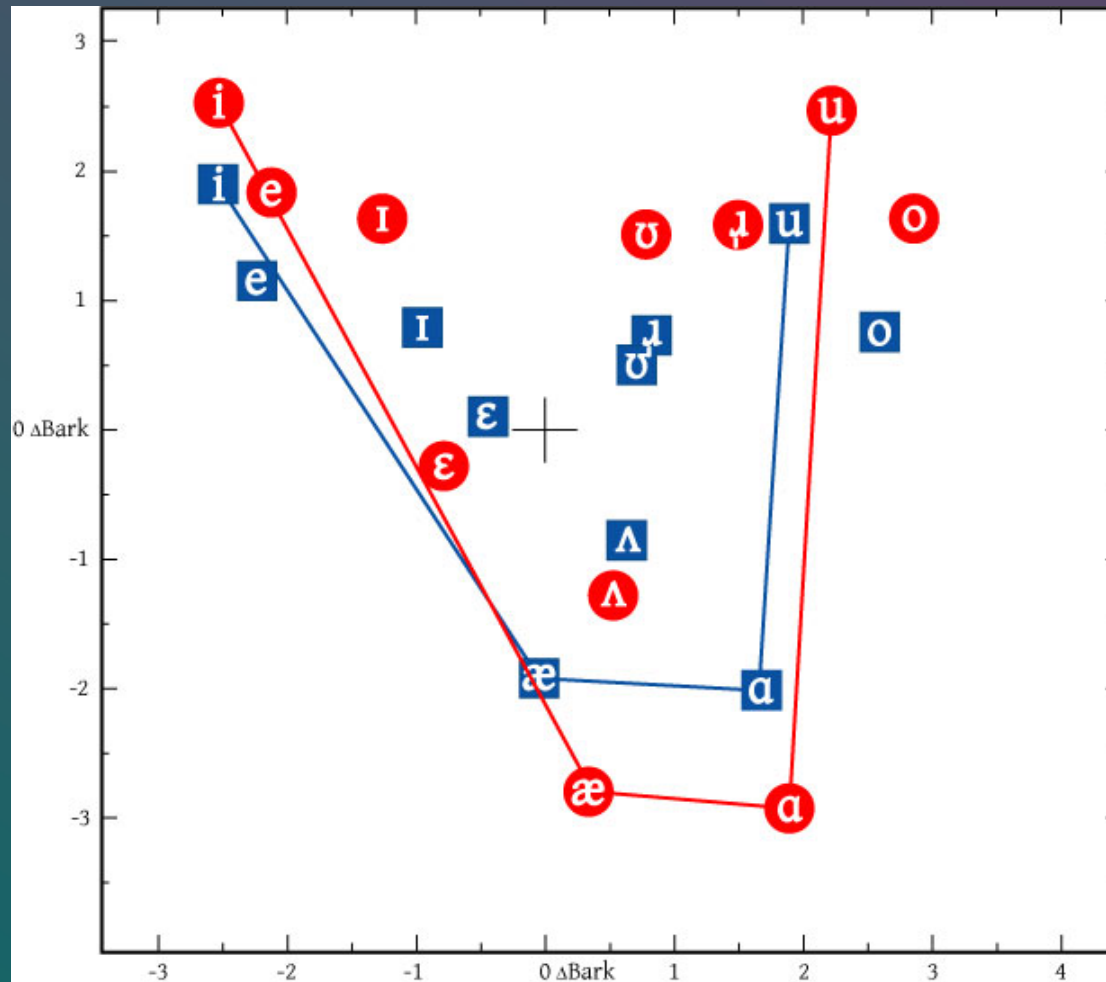
## 14 Formants and perceptual dimensions

- Formants correlate with perceptual dimensions
- First (lowest) formant to vowel height
  - Low frequency F1 = high vowel
  - High frequency F1 = low vowel
- Second formant to vowel backness/rounding
  - Low frequency F2 = back/round vowel
  - High frequency F2 = front/unround vowel
- Pictures based on 'transform' of measurements



# 15 The Canadian English vowel space



# 16 The Californian English vowel space



# 17 Compare

	Canadian	Californian
/ɑ/		
/æ/		
/u/		
/o/		

## 18 Canadian vs. Californian

- Californian /ɑ/ is lower and more central (fronter) than Canadian /ɑ/
- Californian /æ/ is lower and more central (backer) than Canadian /æ/
- No real evidence of lowering of lax vowels in either sample
- /o/ participates in fronting or centralization of back vowels in Californian, but not in Canadian

## 19 Findings

- Overall similarity between Canadian and Californian, typical of “Third Dialect” features
- Canadian and Californian realize “Third Dialect” features differently
  - Merged low-back vowel in Californian unlikely as trigger of /æ/ retraction
  - “Canadian Shift” is not going on in California, despite similarities
  - “Canadian Shift” may not be going on in “Canada” at all

## 20 Why Experimental Dialectology

- Comparing one person's perceptions of one dialect with somebody else's perceptions of another is clearly a dangerous method
- Quantifiable and reproducible (experimental) measurements *can* serve as a standard of comparison
- Experimental dialectology replaces vague and subjective descriptions with verifiable, objective facts
- Experimental dialectology offers ways to quantify variation—not only that it exists, but to what degree

Thank you

*Canadian and Californian*

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