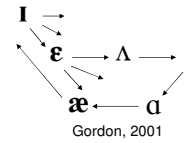
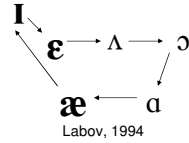


# Local Variability in the Northern Cities Vowel Shift

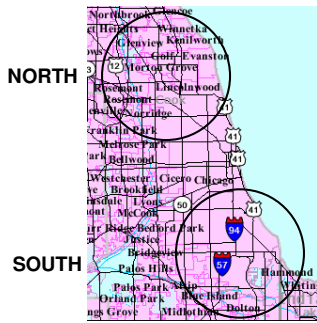
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Evanston, IL  
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## Northern Cities Shift (schematic)



2

## Chicago Regions



3

## Subject Matrix

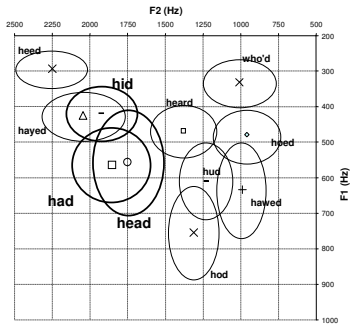
N=18, male, monolingual\*

	GEN 1 (age 74-86)	GEN 2 (age 39-50)	GEN 3 (age 17-20)	Total
<b>NORTH</b>	<b>N=3</b>	<b>3</b>	<b>3</b>	9
<b>SOUTH</b>	<b>3</b>	<b>3</b>	<b>3</b>	9
Total	6	6	6	18

\*2 subjects from GEN 1 South reported limited foreign language experience when children, but had no detectable "foreign accent"

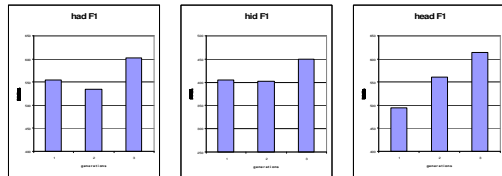
4

F2 vs F1 Plot: Mean all tokens



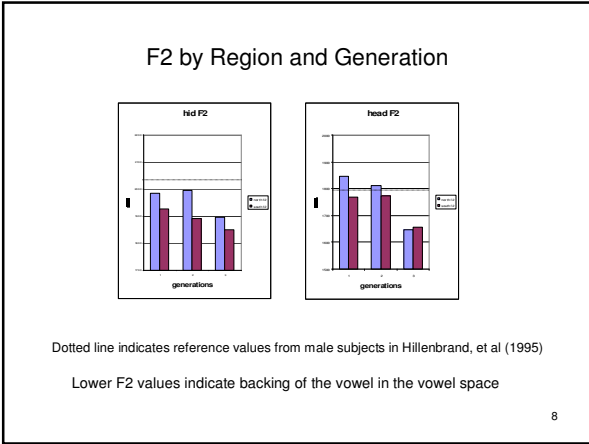
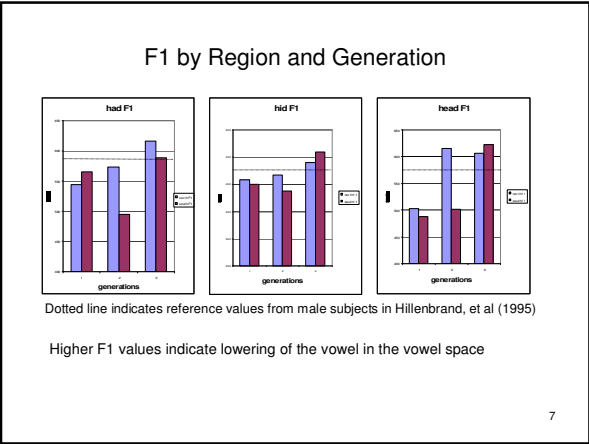
5

## F1 by Generation



Lower F1 values indicate raising of the vowel in the vowel space, so we observe a decrease in the raising of "had", a lowering of "hid", as well as a lowering of "head".

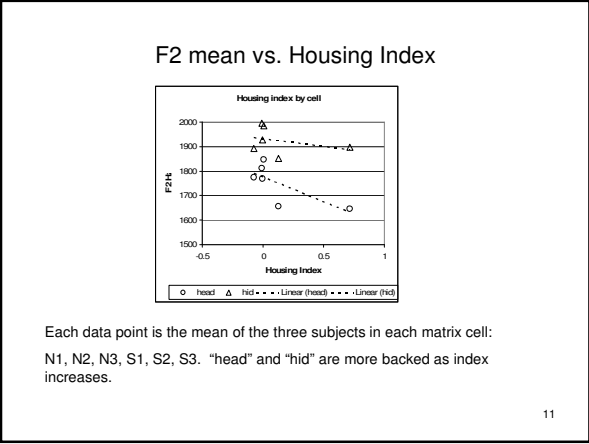
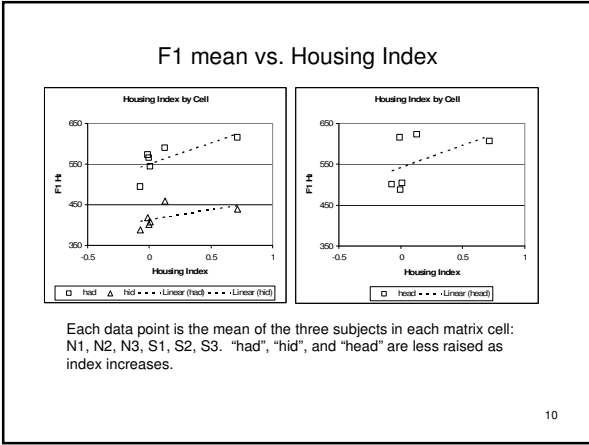
6



### Economic Indicator

- **Census Tract:** A small, relatively permanent statistical subdivision of a county, determined by local census data users in accordance with Census Bureau guidelines. Census tracts generally average 4,000 people. Census tract boundaries are intended to be stable over many decades, so they generally follow relatively permanent visible features.
- **Housing Index:** The median housing value (HV) for owner-occupied dwellings in a subject's census tract is divided by the corresponding figure for the city of Chicago in the same census. Since property values can vary much more than the vowel space, the log of this figure is used as the housing index.
- $\text{Housing index} = \log(\text{Tract HV} / \text{Chic. HV})$

9



### Summary

- The study provides regional and apparent-time dialect data for the Chicago area.
- The study shows how apparent-time data must also take into account social factors to provide a more accurate picture of language variation and change.
- The study provides a housing index, a relatively simple tool for interpreting apparent-time anomalies.

12

## Thoughts on Future Work

- Larger, more diverse sample size! Get a variety of tokens in different phonetic environments and speech styles. This would also be helpful for testing the validity of the housing index.
- Further analysis of data from Gordon, 2001 using tract level census data?
- Characterize social factors for individual subjects (e.g. social network, mobility).
- VARBRUL analysis to look for interactions of factors.

13