

Linguistic stability and variation across the lifespan

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American Dialect Society Annual Meeting
 5 January 2007

ADULT LINGUISTIC STABILITY

- ▶ Widely assumed by linguists
- ▶ Has methodological ramifications
 - ▶ Apparent time construct
 - ▶ Sampling methodologies
- ▶ Testing adult linguistic stability
 - ▶ Obvious choice is a longitudinal panel study
 - ▶ This study simulates that using longitudinal archival data

DATA

- ▶ Recorded religious addresses
 - ▶ Conferences of The Church of Jesus Christ of Latter-day Saints
 - ▶ All delivered in the same format and style to similar audiences
- ▶ Each decade from 1940 to 2000 sampled
- ▶ Consonants studied
 - ▶ *r*-lessness
 - ▶ Aspiration of /hw/
 - ▶ Word-final /t,d/
 - ▶ Word-medial /nt/

SPEAKERS STUDIED

Speaker	Year of birth	Years sampled
JRC	1871	1940 1950 1960
DOM	1873	1940 1950 1960
LGR	1886	1940 1950 1960 1970 1980
JLW	1893	1940 1950 1960
MEP	1900	1950 1960 1970 1980
DBH	1906	1970 1980 1990 2000
GBH	1910	1960 1970 1980 1990 2000
BRM	1915	1950 1960 1970 1980
MJA	1915	1970 1980 1990
TSM	1927	1970 1980 1990 2000

r-LESSNESS

- ▶ 60+ tokens per speaker per year
- ▶ F0 through F4 measured
- ▶ Index of *r*-fulness (IR) values determined (following Ocumpaugh)
 - ▶ IR below .56: "normal" (*r*-ful)
 - ▶ IR between .56 and 1.28: "acceptable" (*r*-ful)
 - ▶ IR above 1.28: "high" (*r*-less)
- ▶ Overall results (all speakers, all years)
 - ▶ IR values 43% normal, 33% acceptable, 23% high
 - ▶ Speakers are generally *r*-ful
- ▶ Within subjects testing
 - ▶ Significant differences between years
 - ▶ Strong significance for all speakers
- ▶ Between subjects testing
 - ▶ Somewhat less trustworthy
 - ▶ No significant differences between subjects
- ▶ Pairwise comparisons
 - ▶ Speakers became more *r*-ful 1960 to 1970, and 1980 to 1990
 - ▶ Possible trend toward *r*-fulness over time

r-LESSNESS TRENDS

Speaker	Trend decade to decade	
JRC	1940 ↗ 1950 = 1960	1970 ↗ 1980 ↘ 1990 = 2000
DOM	1940 = 1950 = 1960	1960 ↘ 1970 = 1980 ↗ 1990 = 2000
LGR	1940 = 1950 = 1960 ↗ 1970 ↘ 1980	1950 ↗ 1960 ↗ 1970 ↘ 1980
JLW	1940 ↘ 1950 = 1960	1970 ↘ 1980 = 1990
MEP	1950 ↗ 1960 = 1970 = 1980	1970 ↗ 1980 ↗ 1990 = 2000
DBH	1970 ↗ 1980 ↘ 1990 = 2000	1960 ↘ 1970 = 1980 ↗ 1990 = 2000
GBH	1960 ↘ 1970 = 1980 ↗ 1990 = 2000	1950 ↗ 1960 ↗ 1970 ↘ 1980
BRM	1950 ↗ 1960 ↗ 1970 ↘ 1980	1970 ↘ 1980 = 1990
MJA	1970 ↘ 1980 ↗ 1990 = 2000	1970 ↘ 1980 ↗ 1990 = 2000
TSM	1970 ↘ 1980 ↗ 1990 = 2000	1970 ↘ 1980 ↗ 1990 = 2000

Key: ↗ increasing *r*-fulness / = no change / ↘ increasing *r*-lessness

Note that DOM showed an increase in *r*-fulness from 1940 to 1960

VOICING (I.E., LACK OF ASPIRATION) OF /hw/		
Speaker	Tokens	Rate of voicing
JRC	190	61.6%
DOM	212	37.3%
LGR	160	35.0%
JLW	98	66.3%
MEP	135	62.2%
DBH	108	47.2%
GBH	271	48.3%
BRM	119	44.5%
MJA	86	80.2%
TSM	202	92.1%
Overall	1,581	56.4%

ANALYSIS OF /hw/

- ▶ Increase in voicing over apparent time
- ▶ Three significant factor groups in VARBRUL analysis
 - ▶ Year the recording was made
 - ▶ Preceding sound
 - ▶ Syllable stress
- ▶ Year of recording gave better model fit than year of birth
- ▶ Analysis of individual speakers
 - ▶ Four speakers: Year recorded is a (for some, only) significant factor
 - ▶ All other speakers: Preceding sound and syllable stress are significant

WORD-FINAL /t,d/ DELETION		
Speaker	Tokens	Rate of deletion
JRC	91	1.1%
DOM	92	3.3%
LGR	154	9.7%
JLW	90	6.7%
MEP	122	6.6%
DBH	122	6.6%
GBH	224	12.1%
BRM	123	5.7%
MJA	91	12.1%
TSM	223	8.1%
Overall	1,332	7.8%

ANALYSIS OF /t,d/

- ▶ Data balanced for morphemic status of variable
- ▶ Three significant factor groups in VARBRUL analysis
 - ▶ Preceding sound
 - ▶ Following sound
 - ▶ Year of birth
- ▶ Year of birth gave better model fit than year of recording
- ▶ Analysis of individual speakers produced no significant results

WORD-MEDIAL /nt/ SIMPLIFICATION

Speaker	Tokens	Rate of deletion
JRC	90	0.0%
DOM	91	0.0%
LGR	145	0.0%
JLW	91	1.1%
MEP	96	0.0%
DBH	93	0.0%
GBH	191	4.2%
BRM	120	0.0%
MJA	94	1.1%
TSM	184	7.1%
Overall	1,195	1.9%

ANALYSIS OF /nt/

- ▶ Data balanced for morphemic status of variable
- ▶ Too many knockouts for meaningful VARBRUL analysis

SUMMARY

- ▶ Apparent time
 - ▶ Increase in r-fulness and voicing of /hw/
 - ▶ Weak evidence for increased deletion of word-final /t,d/
- ▶ Real time
 - ▶ Also explanatory for increasing r-fulness
 - ▶ Provides a much better model for voicing of /hw/
- ▶ Individuals
 - ▶ No consistent pattern for r-fulness
 - ▶ Limited number of patterns for voicing of /hw/
 - ▶ Relative stability for word-final /t,d/ deletion

REMAINING QUESTIONS

- ▶ Is this irregular behavior or natural variability?
- ▶ What is the best cut-off for statistical testing?
- ▶ Can we assume a normal distribution?
- ▶ When are speakers representative of themselves?