

The Quantitative Study of Sociolinguistic Variation

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Sociolinguistic variation is

- A robust social semiotic system
 - A system of pure indexicals
- A mechanism of change
- A design feature of language

Language is

- a social practice.
 - Enabled by, and reproducing, structure.
 - Not something that we “acquire” and then “use”.
 - Not something we take off the shelf and replace unscathed.
- A social-indexical system.
 - Not just a system for communicating propositional meaning.
 - constructs, not just reflects, the social.
- designed for change.
 - Not a system that “just happens” to change.
 - Integral to social change.



First Wave: Developing the big picture

- Large survey studies of geographically defined communities
- The socioeconomic hierarchy as a map of social space
- Variables as markers of macro-social categories and carrying class-based prestige/stigma
- Style as attention paid to speech, and controlled by orientation to prestige/stigma

Eckert, P. (2012). Three waves of variation study: The emergence of meaning in the study of variation. *Annual Review of Anthropology*, 41, 87–100.



The First Wave: Some Urban Studies

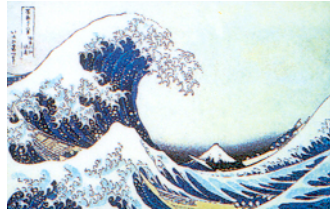
- CEDERGREN, HENRIETTA. 1973. The interplay of social and linguistic factors in Panama, Linguistics, Cornell University: PhD.
- LABOV, WILLIAM. 1966. The social stratification of English in New York City. Washington, DC: Center for Applied Linguistics.
- MACAULAY, RONALD K.S. 1977. Language, social class and education: a Glasgow study. Edinburgh: University of Edinburgh Press.
- MODARESSI, YAHYAH. 1978. A sociolinguistic analysis of modern Persian, University of Kansas: PhD.
- TRUDGILL, P. 1974. The social differentiation of English in Norwich. Cambridge: Cambridge University Press.
- SHUY, ROGER W., WOLFRAM, WALTER A. and RILEY, WILLIAM K. 1967. Linguistic correlates of social stratification in Detroit speech: Final Report, Research Project No. MH 15048-01, National Institute of Mental Health.
- WOLFRAM, WALT. 1969. A sociolinguistic description of Detroit Negro speech. Washington DC: Center for Applied Linguistics.



Second Wave

The ethnographic perspective

- Ethnographic studies of local social categories and configurations.
- Local categories and communities of practice as link between the macro- and the micro-sociological.
- Variables as indexing locally-based groups and categories.
- Style as acts of affiliation.



Third Wave: A focus on meaning

- Studies of individuals and communities of practice.
- Construction of personae links the everyday to community patterns of variation.
- Variables as signs (indexes).
- Styles as constructions that gain their meaning in larger cultural paradigms.

Earlier responses to variation: Ignore it

- Saussure, F. de. (1916). *Cours de linguistique générale*.
- Bloch, B. (1948). A set of postulates for phonemic analysis. *Language*, 24, 3–46.
- Fries, C. C., & Pike, K. (1949). Co-existent phonemic systems. *Language*, 25, 29–50.
- Chomsky, N. (1965). *Aspects of a theory of syntax*. Cambridge MA: MIT Press.

It's there, but ...

- Meillet, A. 1921. *Linguistique historique et linguistique générale*. Paris: H. Champion.
- Martinet, A. 1962. Structural variation in language. *Proceedings of the 9th International Congress of Linguists*.
 - “no one will doubt that man’s changing needs in general will affect his communicative needs which in turn, will condition linguistic structure.... The linguist ... may be excused if, in his capacity as a linguist, he declines the invitation to investigate sociological conditioning.”.

As for change ...

- Saussure, F. de. (1916). *Cours de linguistique générale*.
 - Separation of synchrony and diachrony.
- Bloomfield, L. (1933). *Language*. New York: Henry Holt.
 - The process of linguistic change has never been observed.
 - Change spreads by virtue of density of contact.

- Weinreich, U., Labov, W., & Herzog, M. (1968). Empirical foundations for a theory of language change. In W. Lehmann & Y. Malkiel (Eds.), *Directions for historical linguistics* (pp. 95–188). Austin: University of Texas Press.
 - Variation as change in progress.
 - The social matrix structures the spread of change.
 - “A position of sociological agnosticism in structural linguistics has become obsolete. Sociological factors, solidly formulated, have now been adduced to explain distributions and shifts in linguistic phenomena which, from a structural point of view, would have been seen as random.”

Early studies of variation

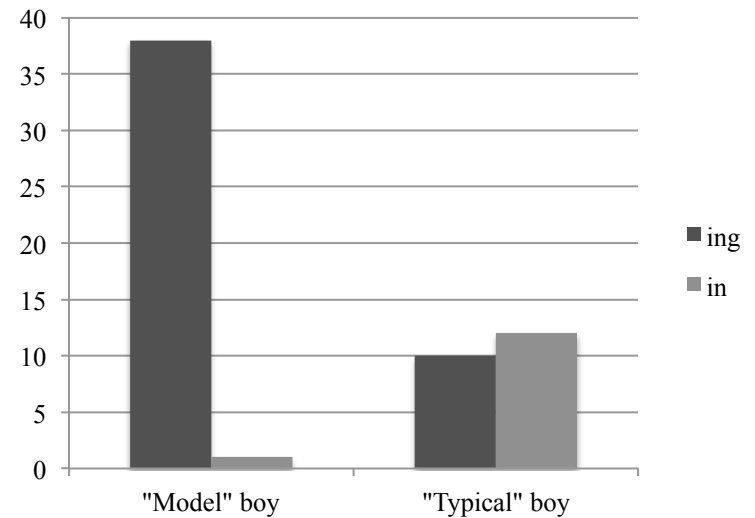
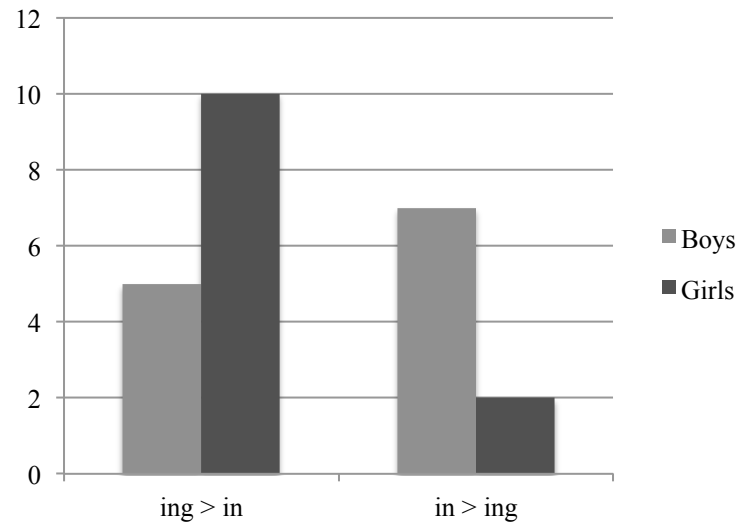
- Gauchat, L. (1905). l'Unité phonétique dans le patois d'une commune. In *Aus romanischen Sprachen und Literaturen: Festschrift Heinrich Morf* (pp. 175–232). Halle.
 - “ Je dois avouer que je me sens un peu isolé cette fois. La question des dialectes a été l'objet d'une vive et savante discussion, la variété qui existe dans la prononciation des représentants d'un même patois local n'a guère été étudiée systématiquement, malgré l'interê qu'elle offre pour la connaissance de l'évolution linguistique.”
 - “Une langue ne contiendrait-elle pas en elle-même, par sa composition phonique, les éléments de son évolution?”

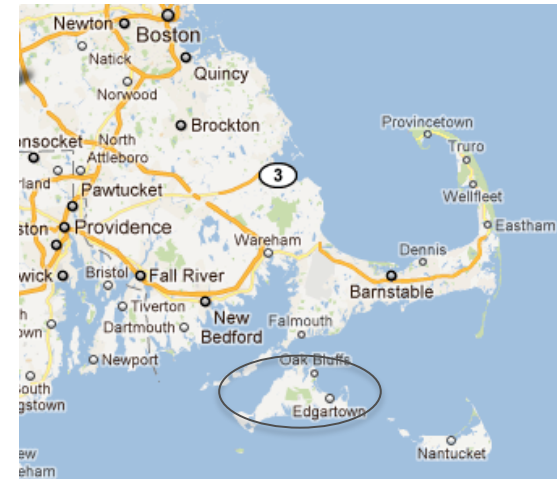
Early studies of variation

- Gumperz, J. J. (1958). Dialect differences and social stratification in a north Indian village. *American Anthropologist*, 60, 668–682.
 - Found friendship contacts as the avenue of linguistic influence.
 - The type of interaction was more important than simple density of contact in explaining linguistic distributions.

Early studies of variation

- Fischer, J. L. (1958). Social influences on the choice of a linguistic variant. *Word*, 14, 47–56.

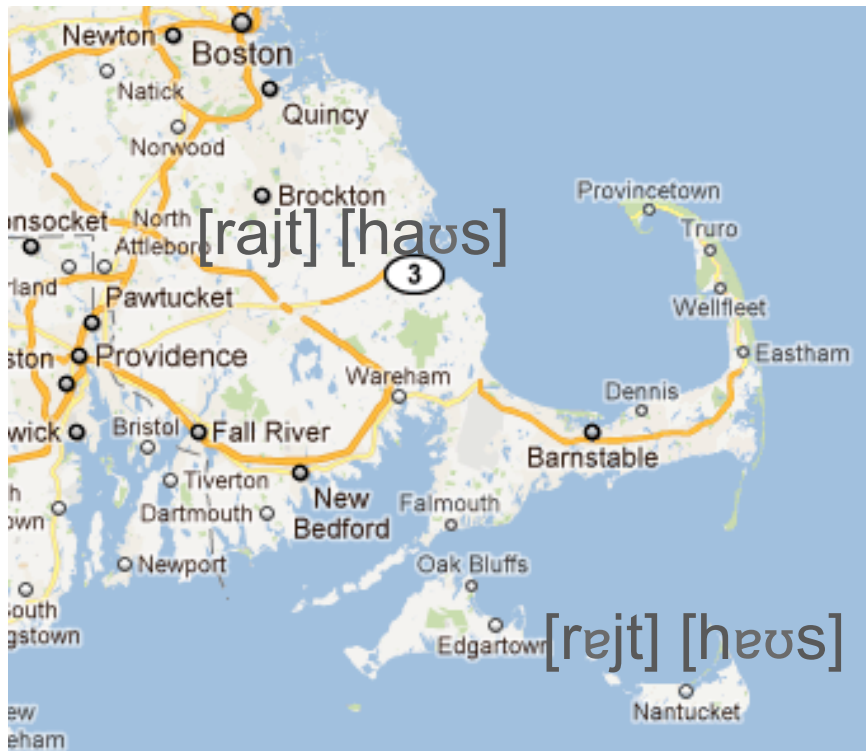




Labov, William. 1963. The social motivation of a sound change. *Word*. 18.1-42.

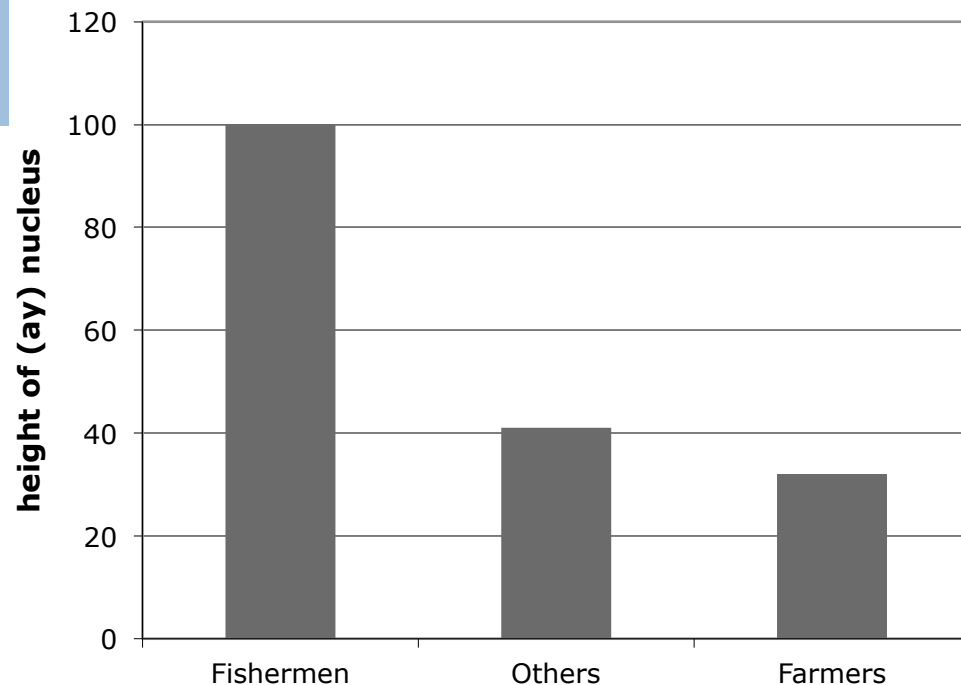
Wolfram, W., & Schilling-Estes, N. (1997). *Hoi toide on the Outer Banks: The story of the Ocracoke Brogue*. Chapel Hill: University of North Carolina Press.

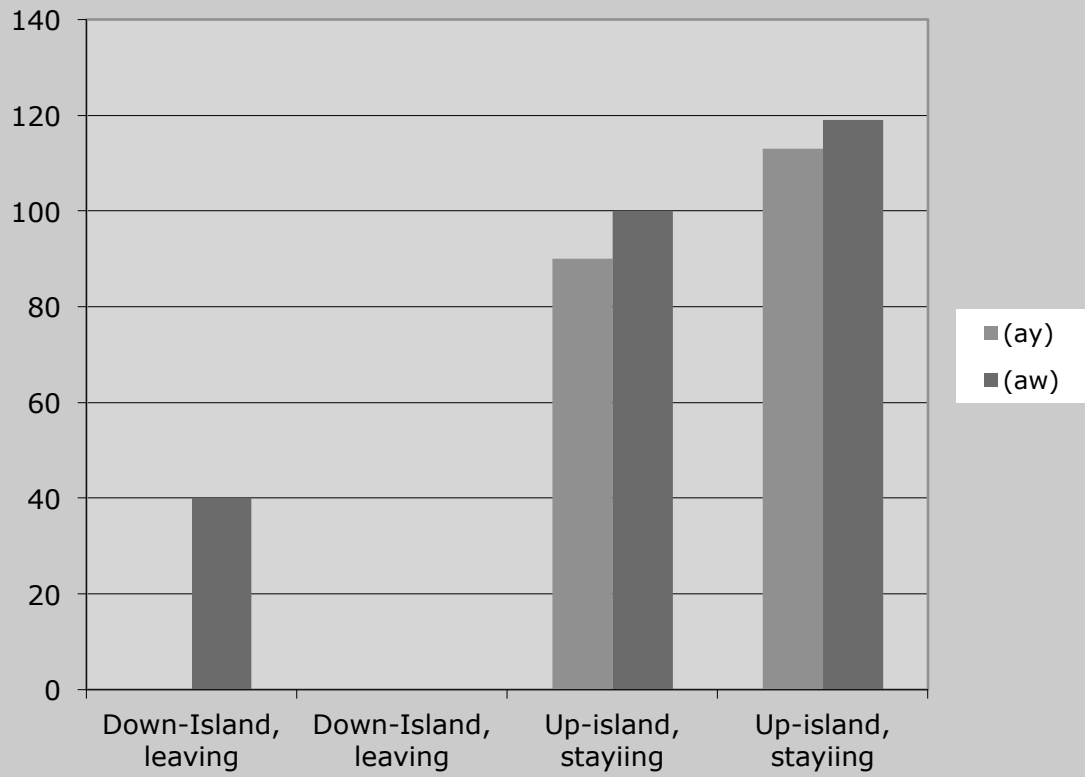
Centralized (ay) and (aw) on the Atlantic Coastal Islands



aw-0	[aʊ]
aw-1	[a [^] ʊ]
aw-2	[eʊ]
aw-3	[əʊ]

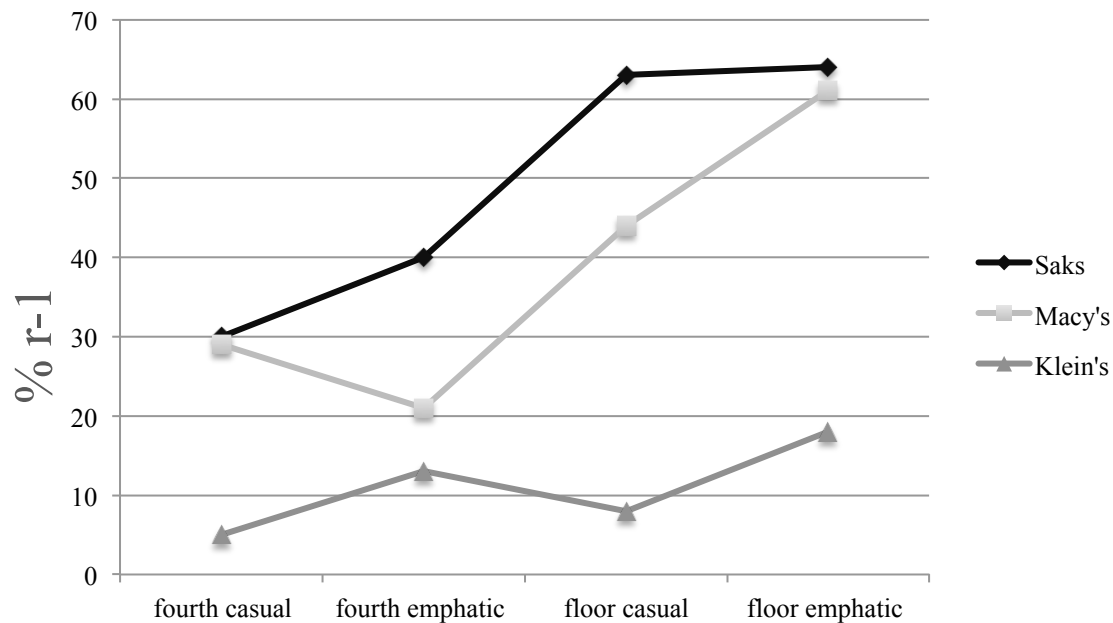
Labov, William. 1963.
 The social motivation of
 a sound change. Word.
 18.1-42.





“...the immediate meaning of this phonetic feature is ‘Vineyarder.’ When a man says [rɛjt] or [hɛʊs], he is unconsciously establishing the fact that he belongs to the island: that he is one of the natives to whom the island really belongs.”

Labov's urban pilot project



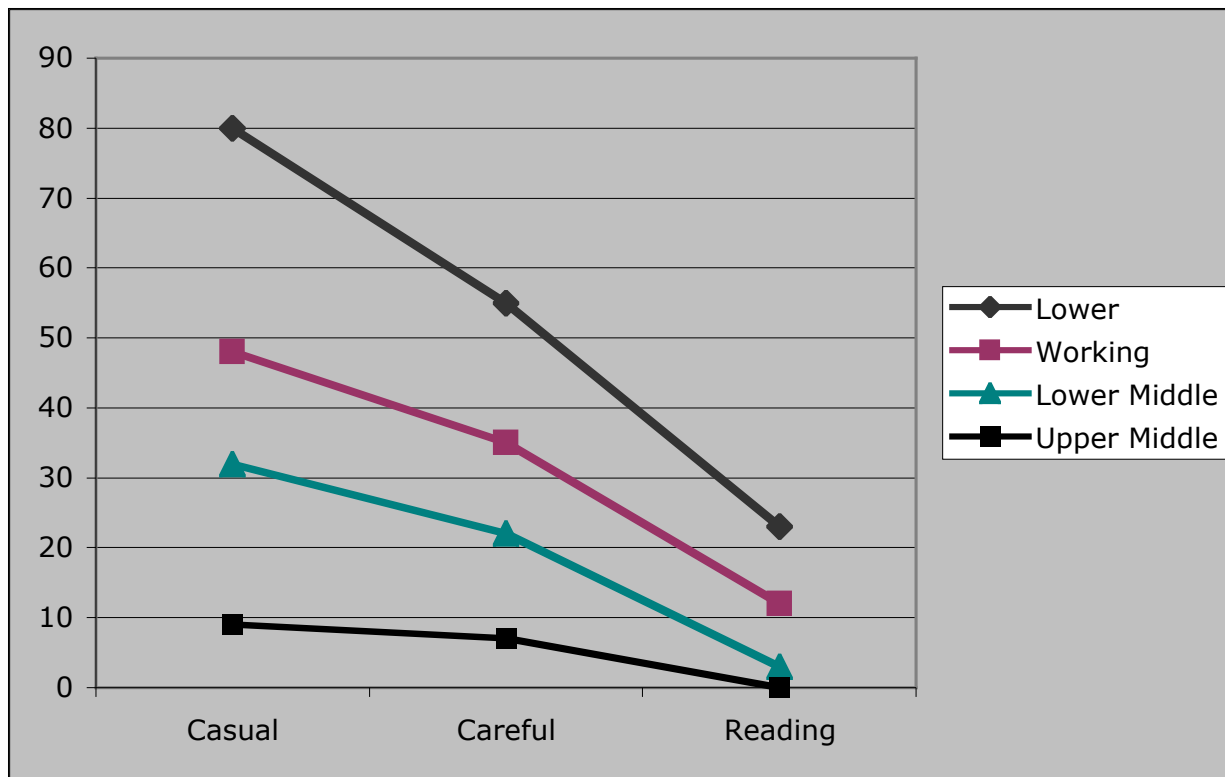
Labov, W. (1972). The social stratification of (r) in New York City Department Stores. In W. Labov (Ed.), *Sociolinguistic Patterns*. Philadelphia: University of Pennsylvania Press.

The sociolinguistic interview

- The observer's paradox
- Controlling for style
 - Casual
 - Careful
 - Reading passage
 - Word list
 - Minimal pair list

Labov, W. (1972). Some principles of linguistic methodology. *Language in Society*, 1(1), 97–120.

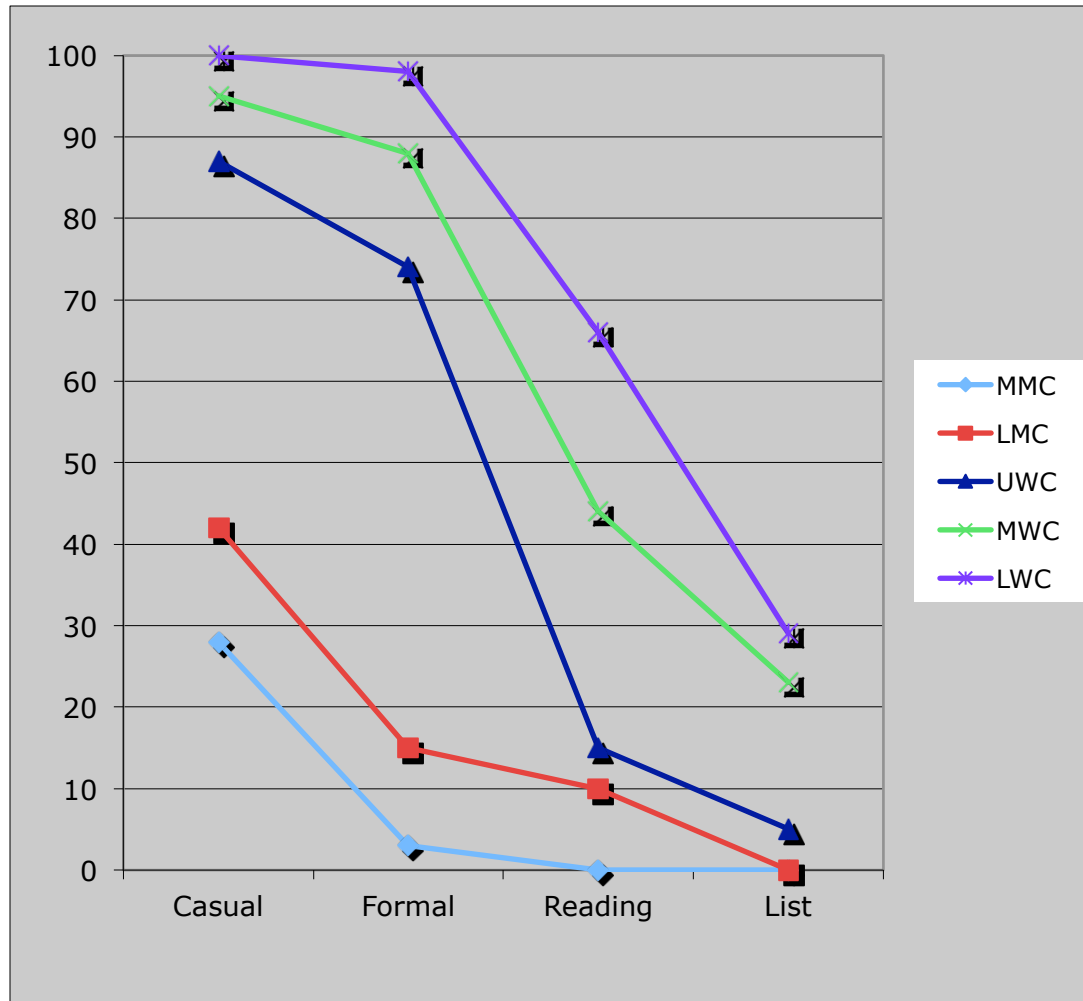
(ING): a stable variable



% apical (ING) in New York

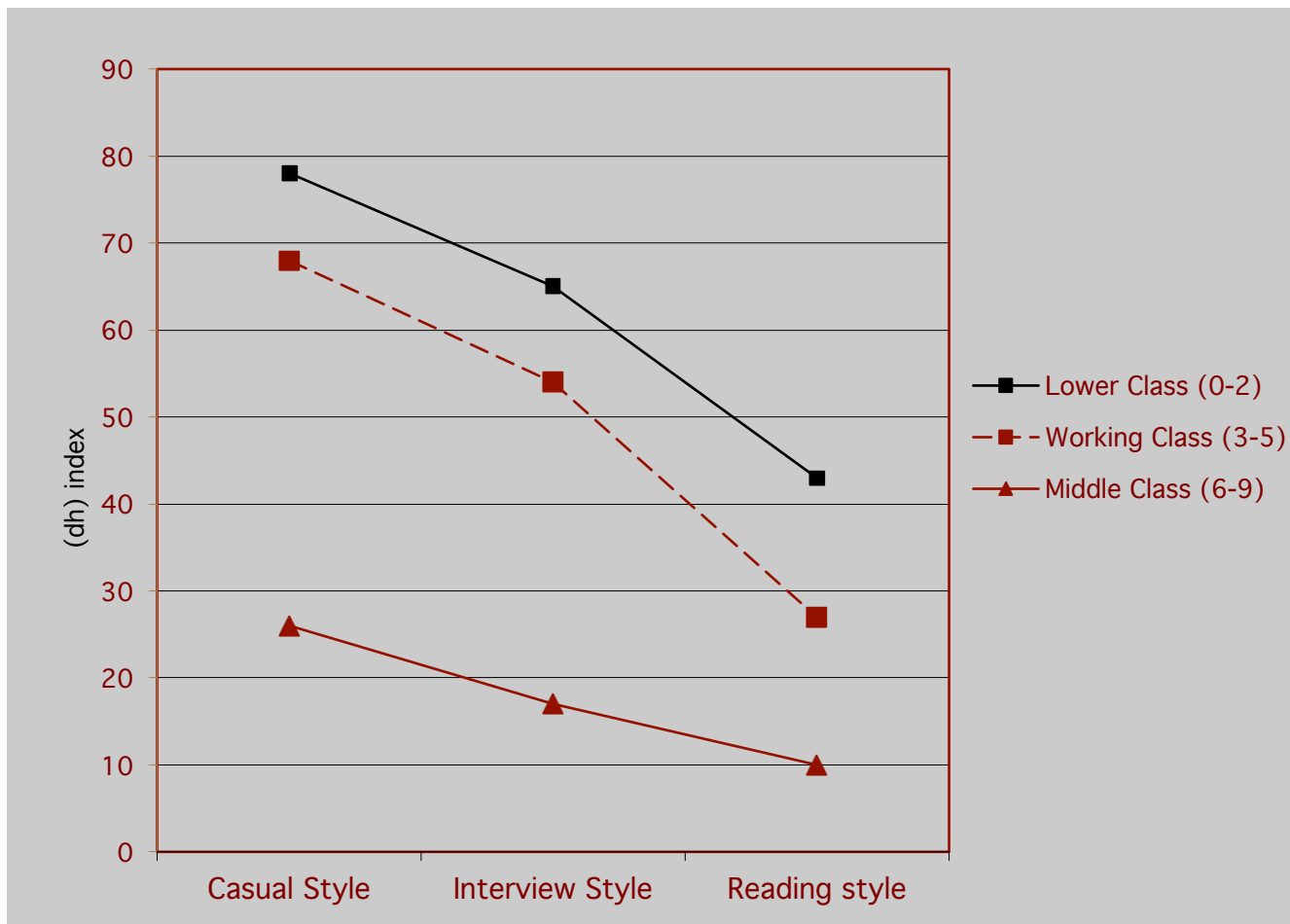
Labov W. (1966) The social stratification of English in New York City.
Washington DC: Center for Applied Linguistics

(ING) in Great Britain



Trudgill, P. 1974. The social differentiation of English in Norwich. Cambridge: Cambridge University Press.

Another Stable Variable



(dh) index

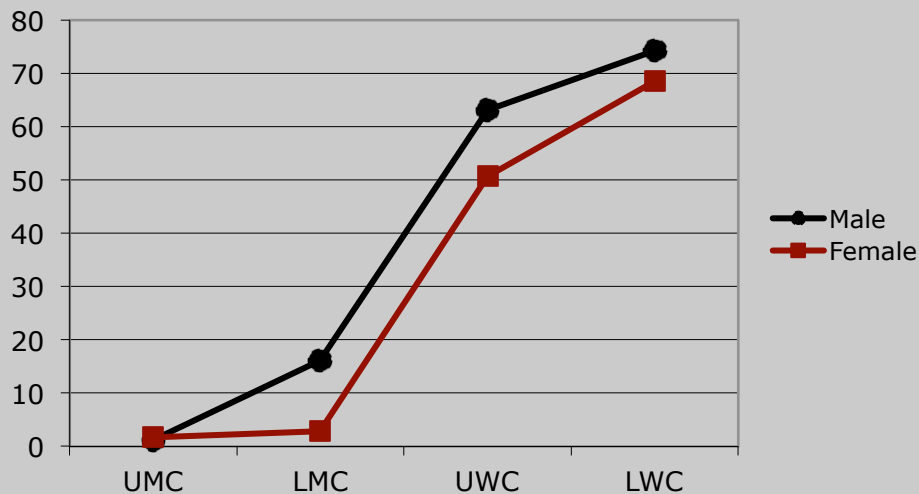
0 [ð]

1 [dð]

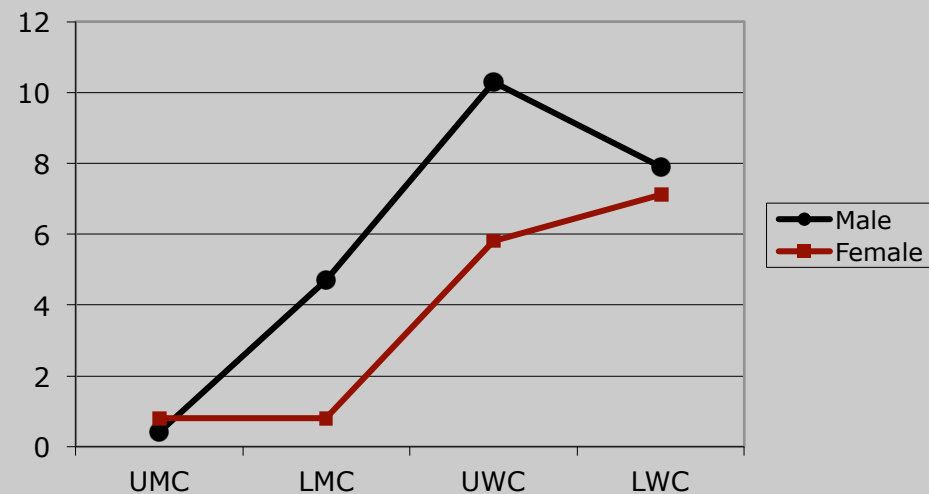
2 [d]

(dh) in New York City

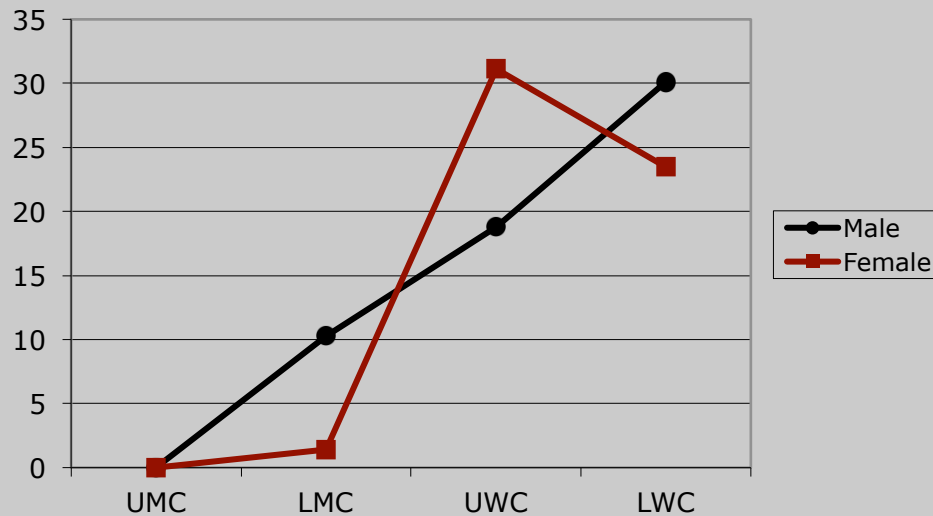
% 3 sg -s absence



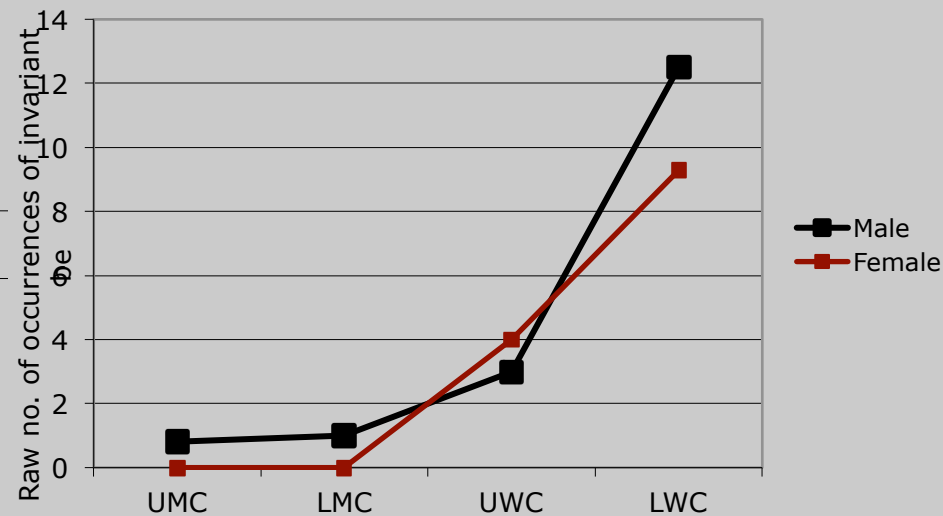
% plural s absence



% poss. s absence



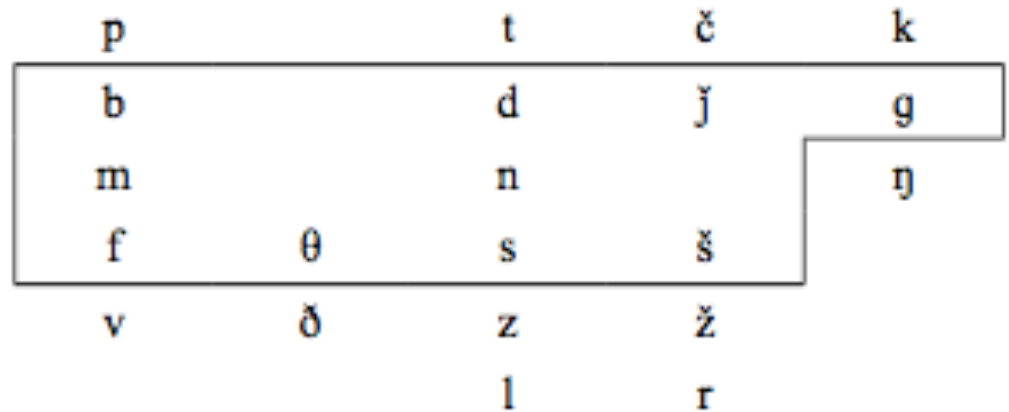
invariant be



Wolfram, W. (1969). *A sociolinguistic description of Detroit Negro speech*. Washington DC: Center for Applied Linguistics.

(ae)	(aeh)
cap	cab
bat	bad
back	bag
bang	bam
	ban
	bash
	bass
have	half
path	hash
Jazz	pass
haggle	hag
wagon	waggin'

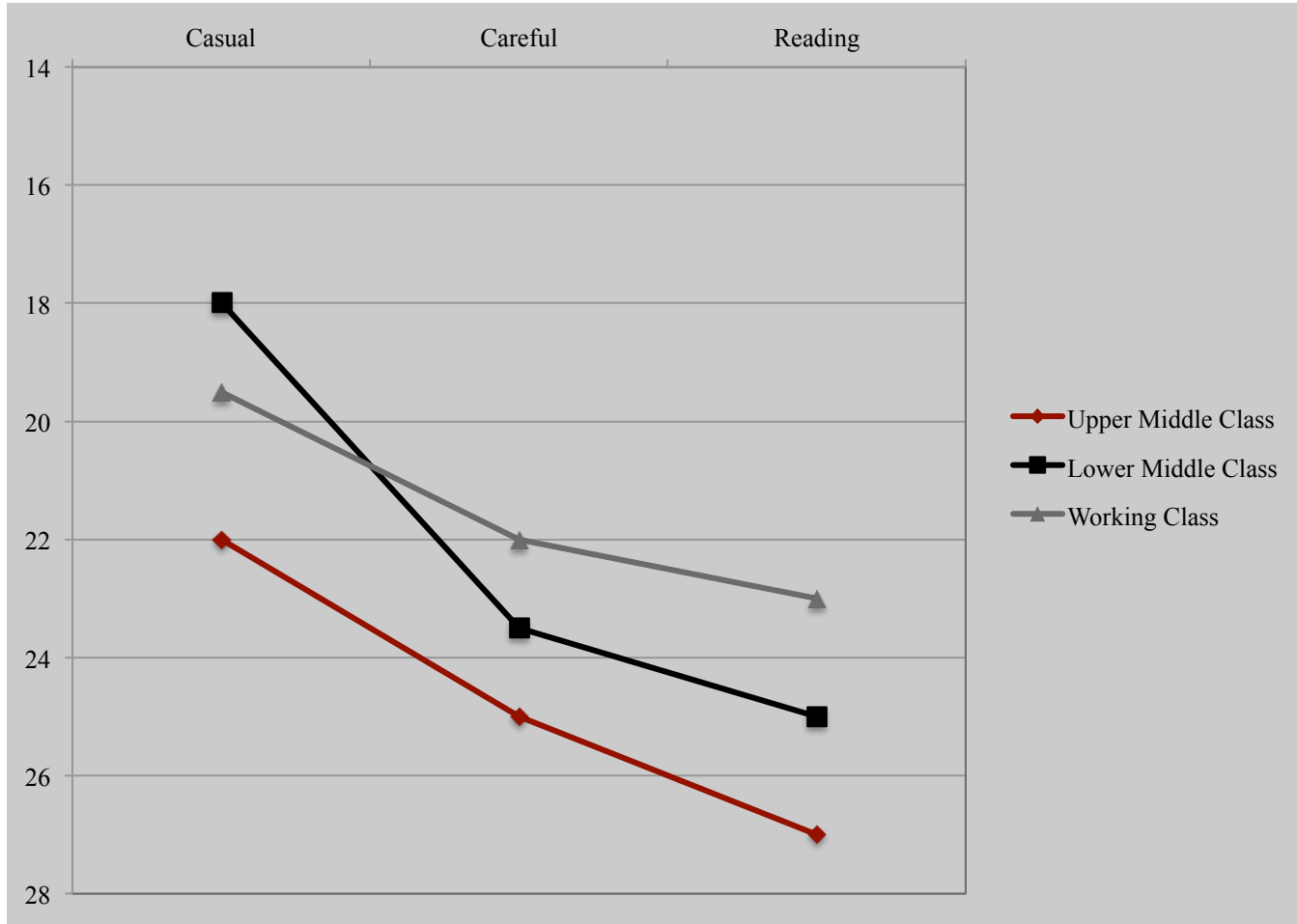
The New York short-a system



Labov W. (1966) The social stratification of English in New York City.
 Washington DC: Center for Applied Linguistics

Becker, K. and Wong, A. 2010. The short-a system of New York City English: An update. University of Pennsylvania working papers in linguistics. 15:2.

(aeh)



(aeh) index

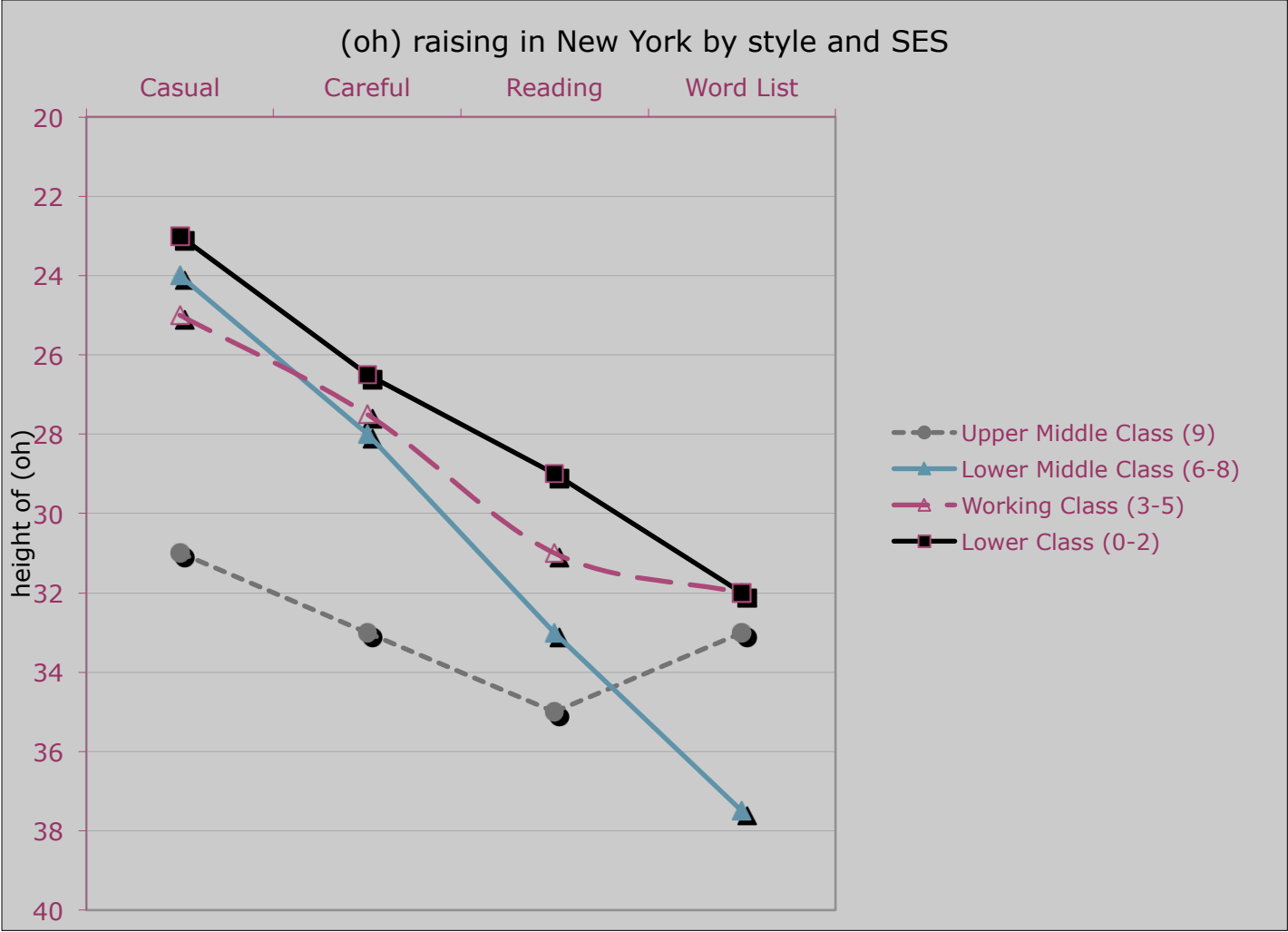
1 [iə]

.

.

4 [æ:]

Change in Progress



(oh)
index

1 [uə]

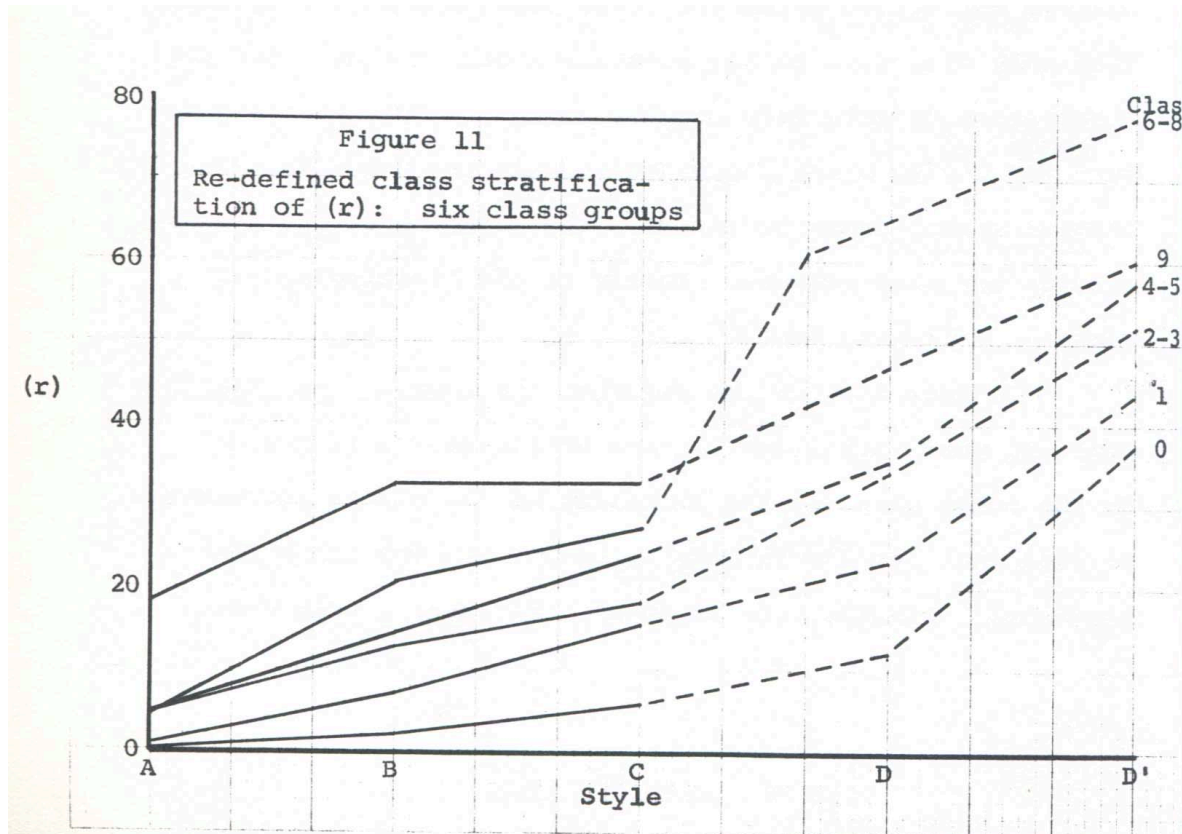
.

.

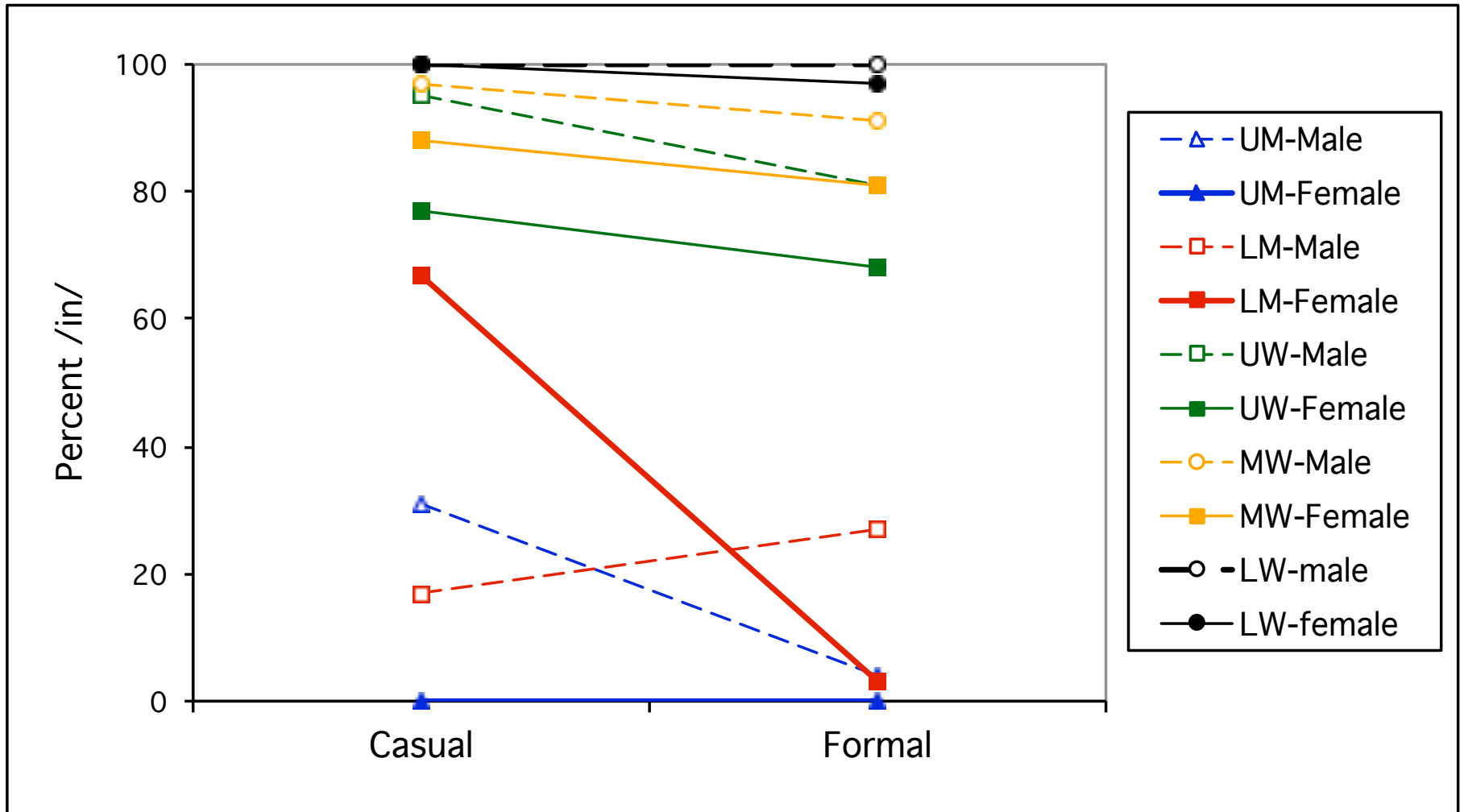
.

4 [ɔ:]

Change from above



(ING) in Norwich by social class, style and gender

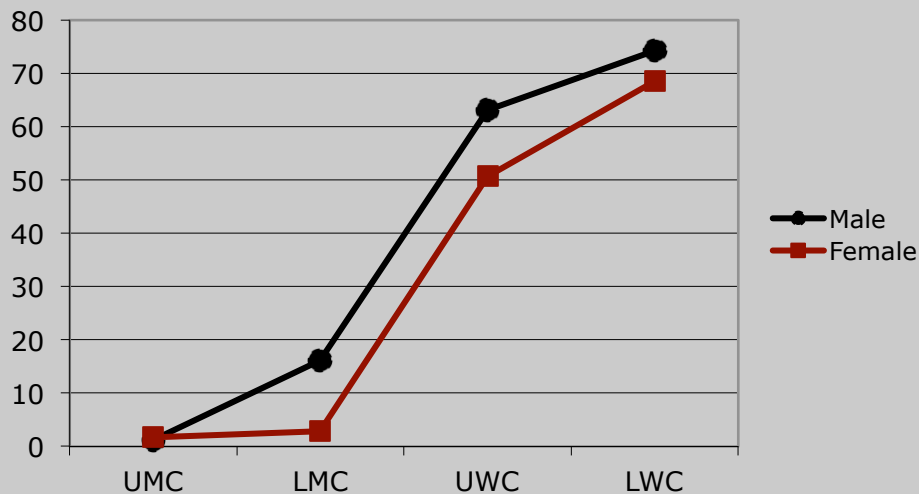


Source: Trudgill 1974

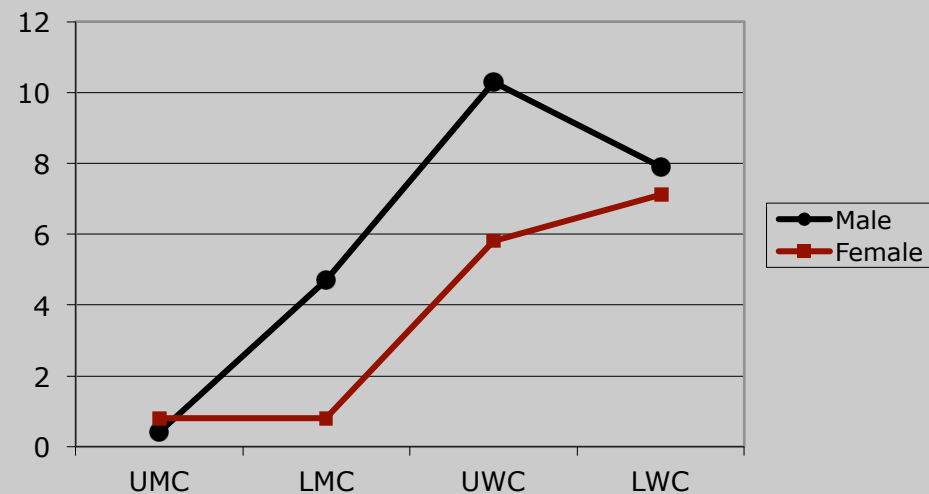
Two common gender patterns

- Gender theory not robust, dependence on male/female binary. Led to Labov's "gender paradox."
 - In the use of stable variables, women use more of the standard variant than men.
 - In sound changes in progress, women use more of the innovative (local, non-standard) variant than men.

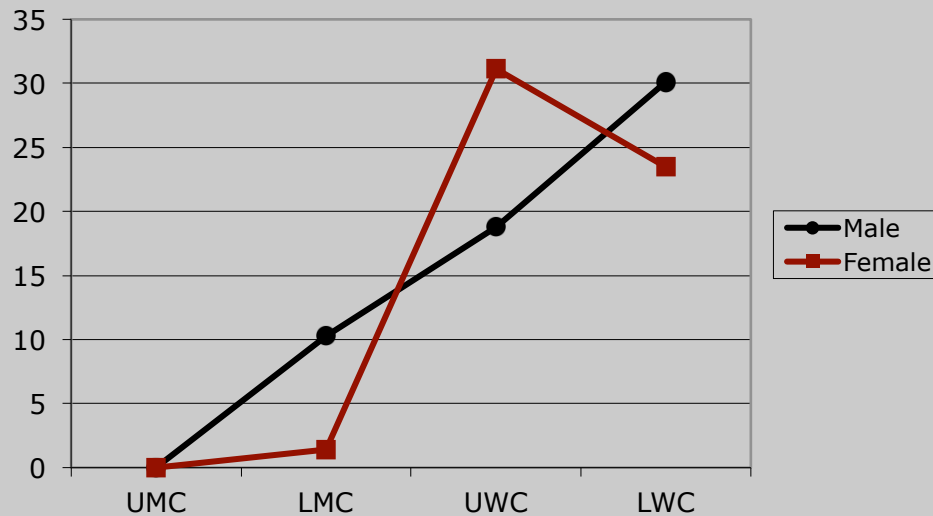
% 3 sg -s absence



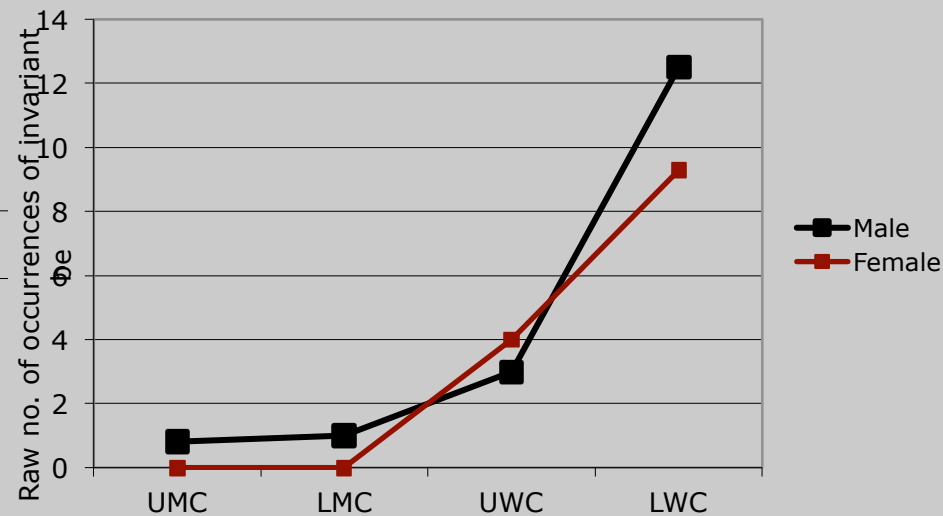
% plural s absence



% poss. s absence

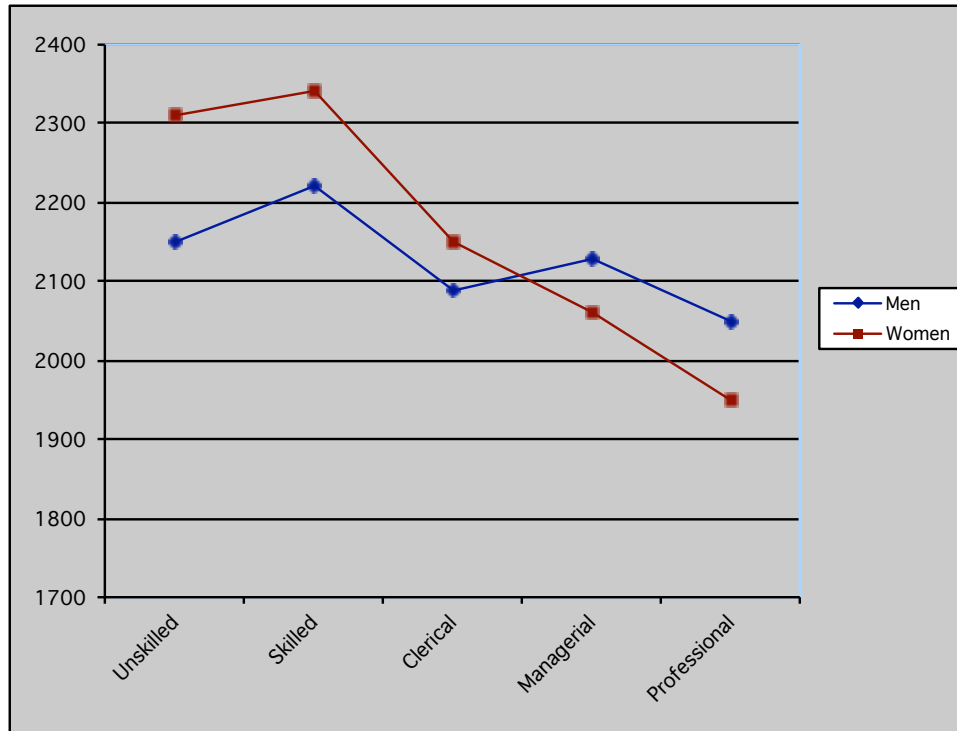


% invariant be



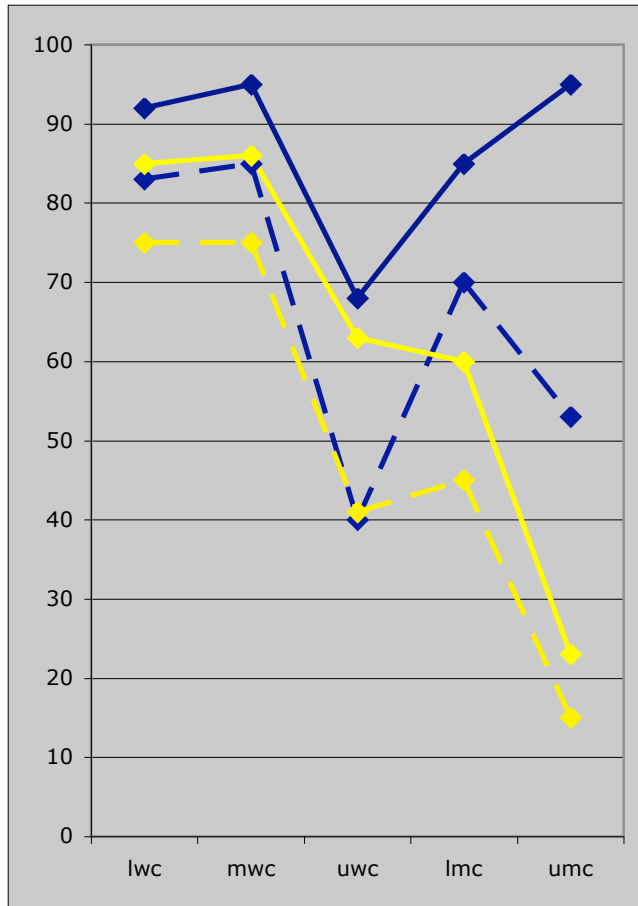
Wolfram, W. (1969). *A sociolinguistic description of Detroit Negro speech*. Washington DC: Center for Applied Linguistics.

(aes) in Philadelphia



Labov, W. (2001). *Principles of linguistic change: Social factors*. Cambridge: Blackwell.

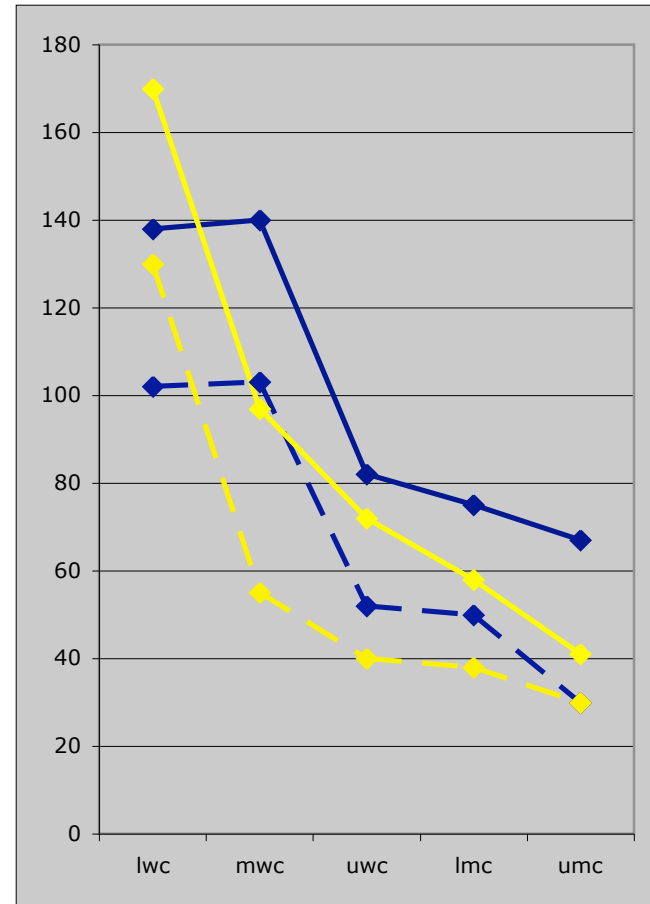
Philadelphia



-ing

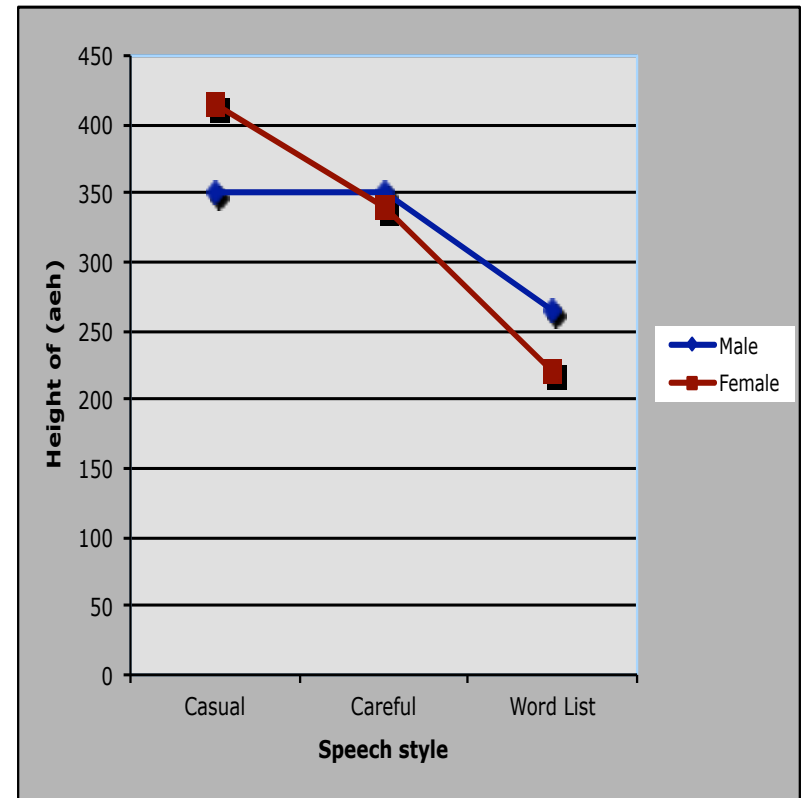
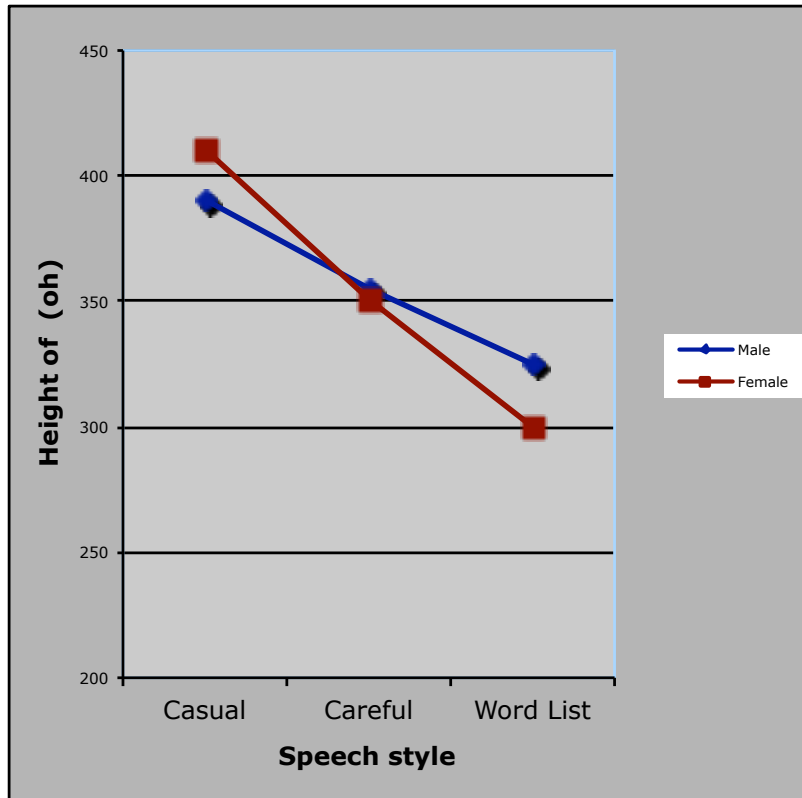
Women/men

----Careful



th/dh

(oh) and (aeh) in New York



Ethnicity

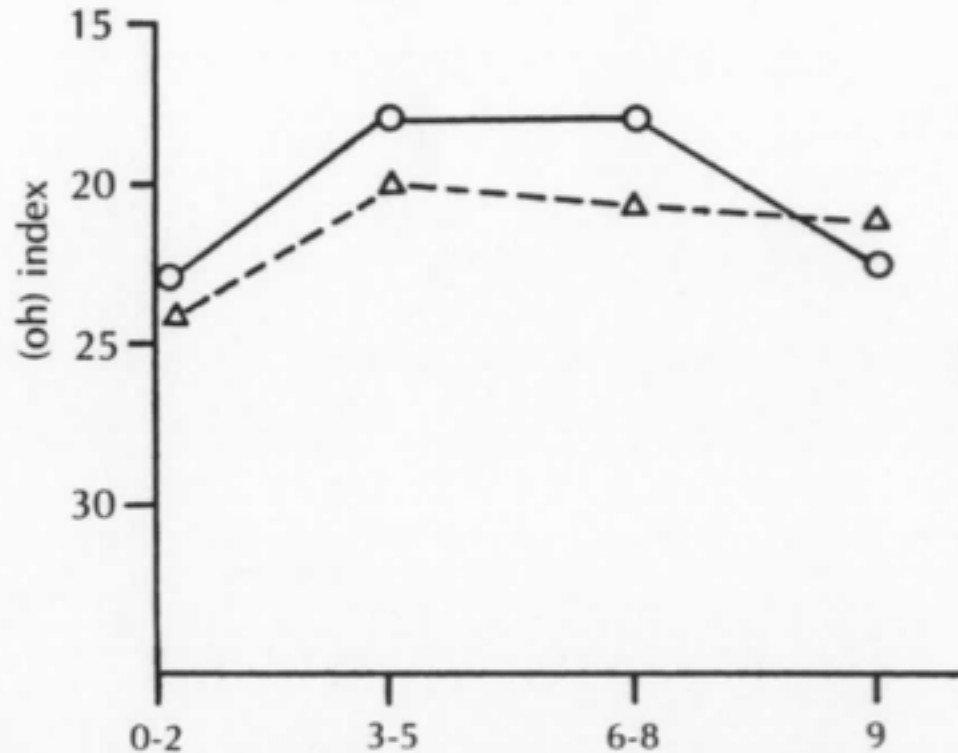


Fig. 7.2. Class stratification for (oh) by ethnic group in casual speech. Solid line, Jews; broken line, Italians. SEC: 0-2, lower class; 3-5, working class; 6-8, lower middle class; 9, upper middle class.

Labov, W. (1972). On the mechanism of linguistic change. In *Sociolinguistic Patterns* (pp. 160–182). Philadelphia: University of Pennsylvania Press.

(dh) stopping in New York

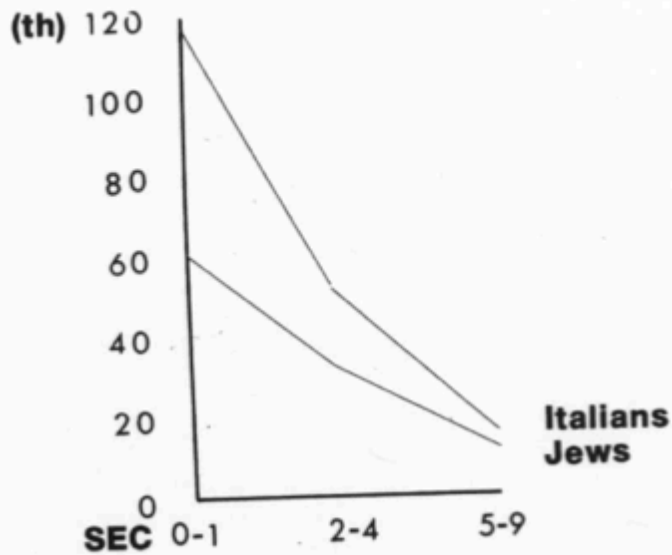


FIGURE 27

Ethnic stratification of (th) in Style B by SEC groups

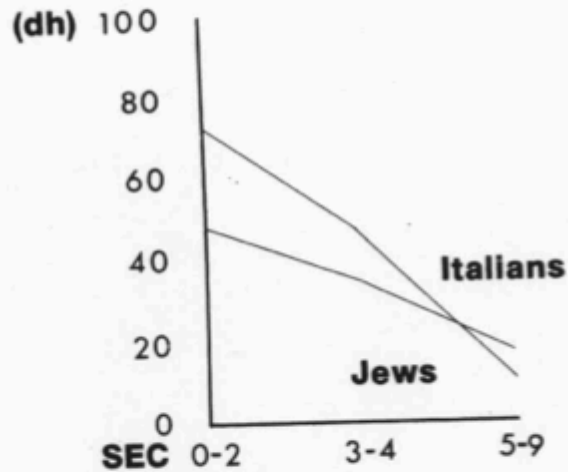


FIGURE 28

Ethnic stratification of (dh) in Style B by SEC groups

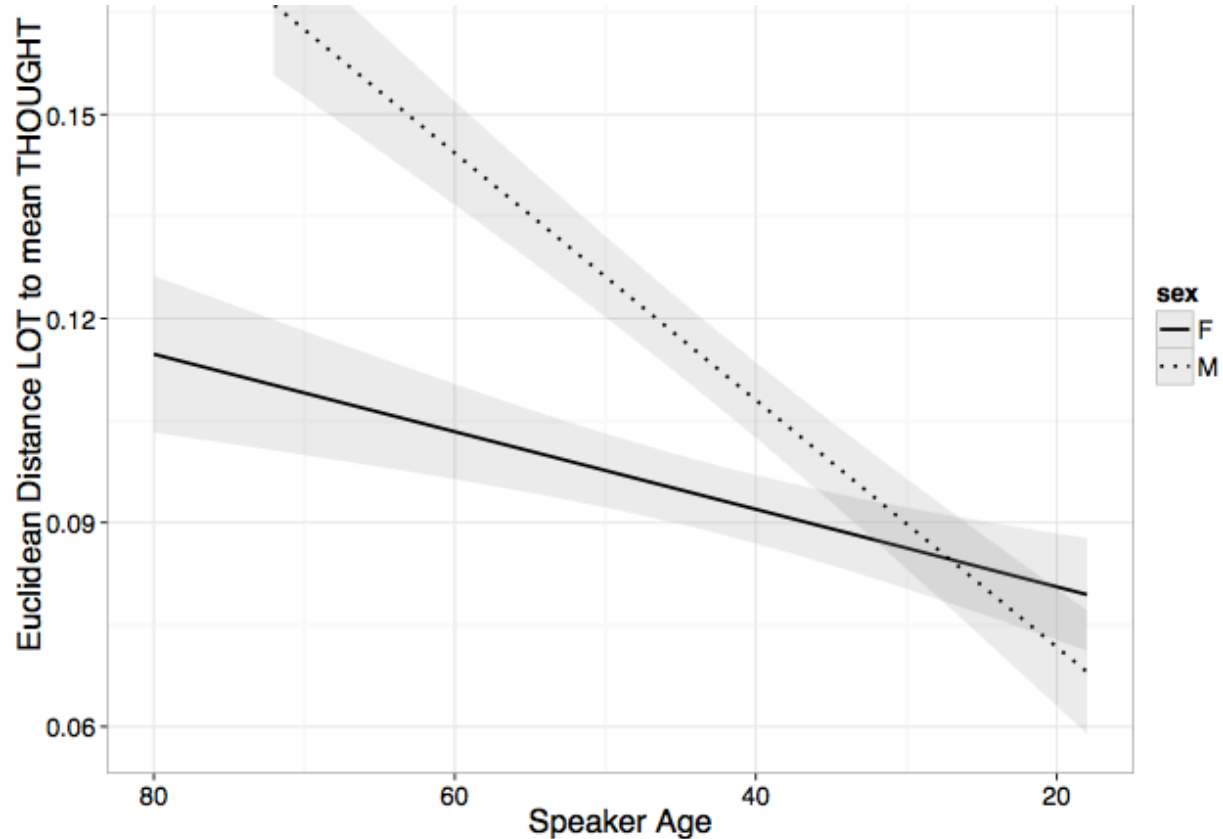
(dh) index

- 0 [ǝ]
- 1 [dǝ]
- 2 [d]

Age

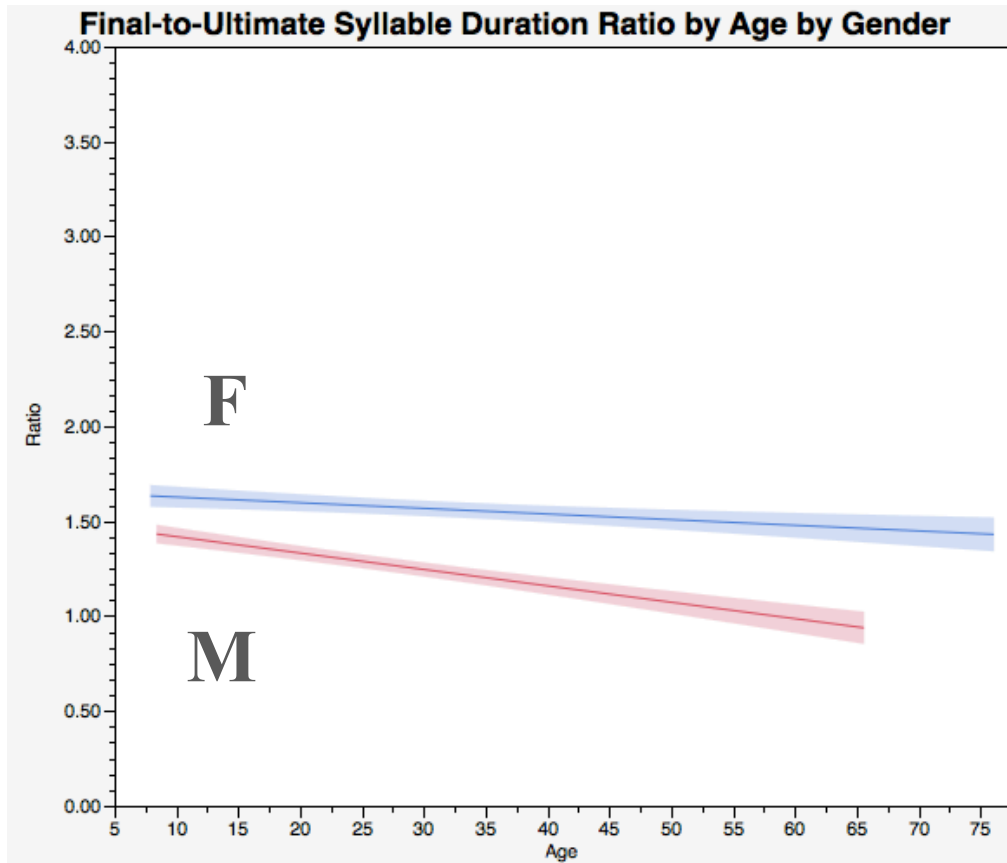
- Historical change in apparent time
 - change in the speech of the community as it moves through time.
- Age grading
 - change in the speech of individuals as they move through life.

Merger of LOT and THOUGHT in California



D'Onofrio, A., Eckert, P., Podesva, R., Pratt, T., Van Hofwegen, J. in press. The low vowels in California's Central Valley. Eds. B. Evans, V. Fridland, T. Kendall A. Wassinck. *Speech of the West*. Vol 1. American Dialect Society.

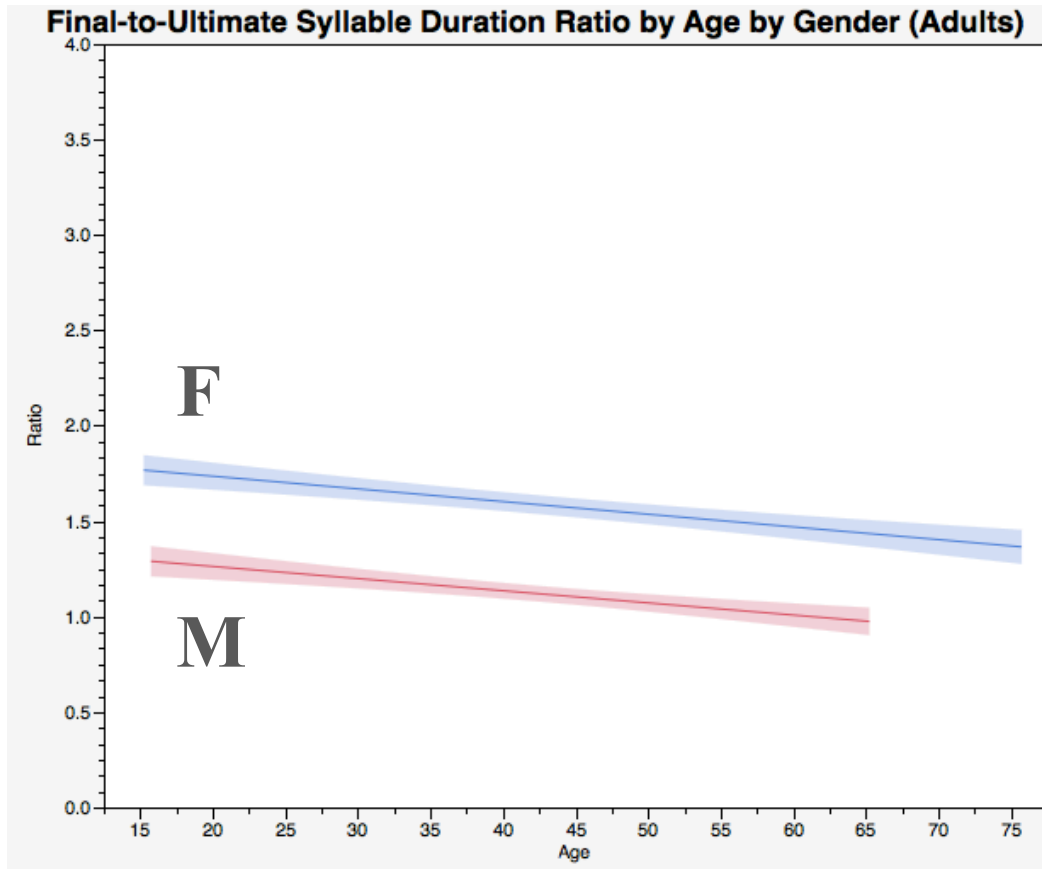
Posttonic lengthening in California



- Lengthening decreases with age
- Gender effect does not reach significance, but suggestive

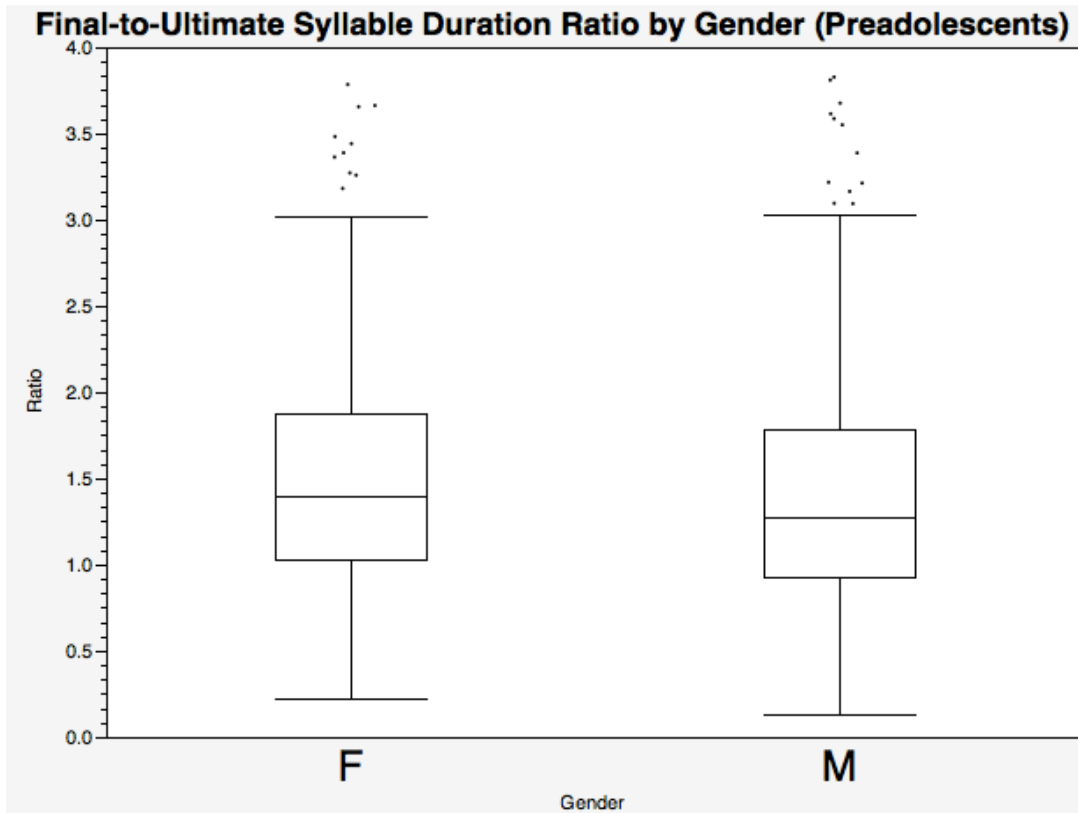
Calder, J., Eckert, P., Fine., J., Podesva, R. The Social Conditioning of Rhythm: The Case of Post-Tonic Lengthening. Paper presented at LSA 2013.

Adult Data



- Lengthening decreases with age ($p > 0.001$).
- Gender is now highly significant, with women leading men ($p > 0.001$).

Preadolescent Data



- Gender difference among pre-adolescents (with girls leading boys) is not significant, though just suggestive ($p > 0.0945$).

uvular (r) in Montreal

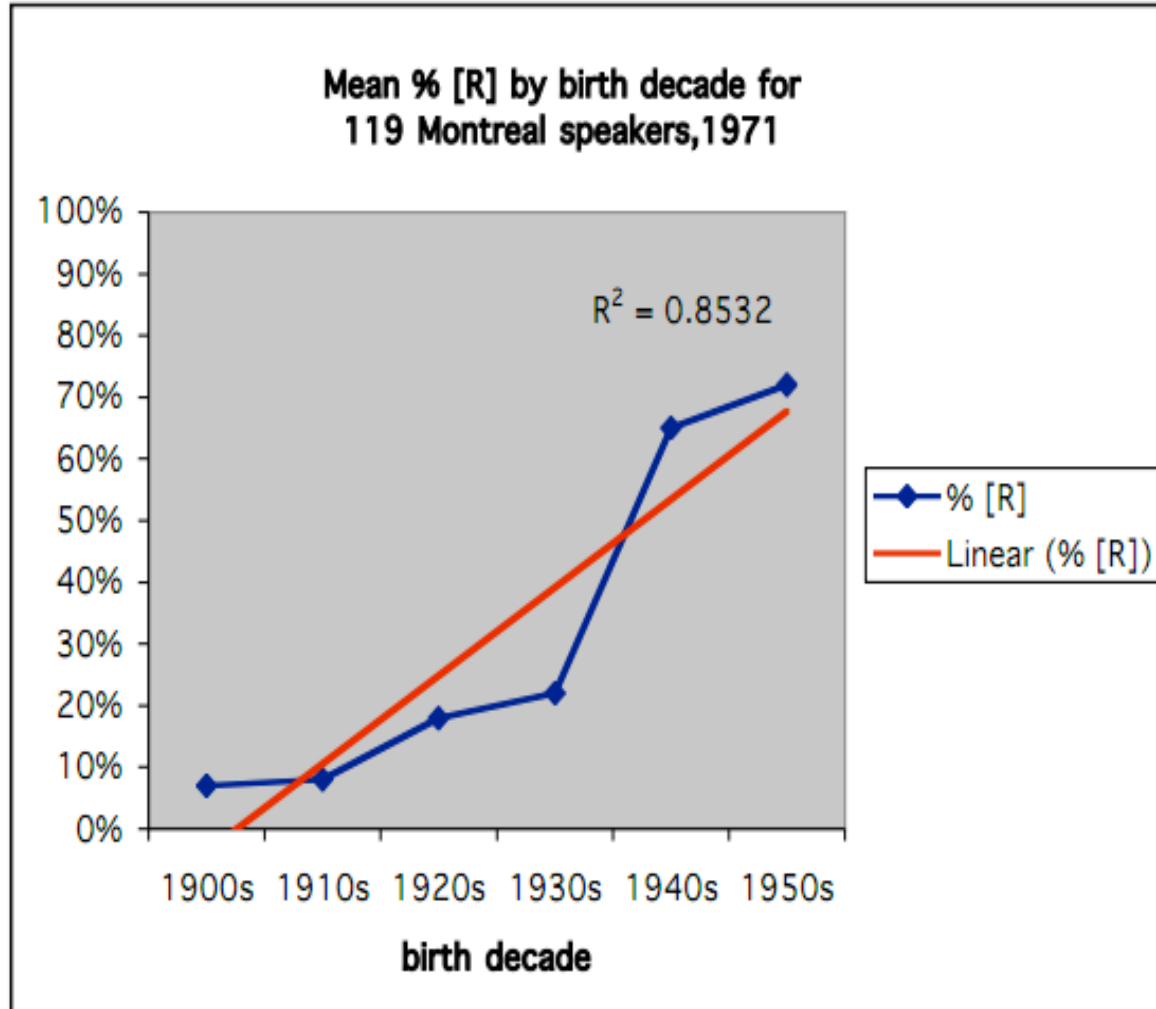
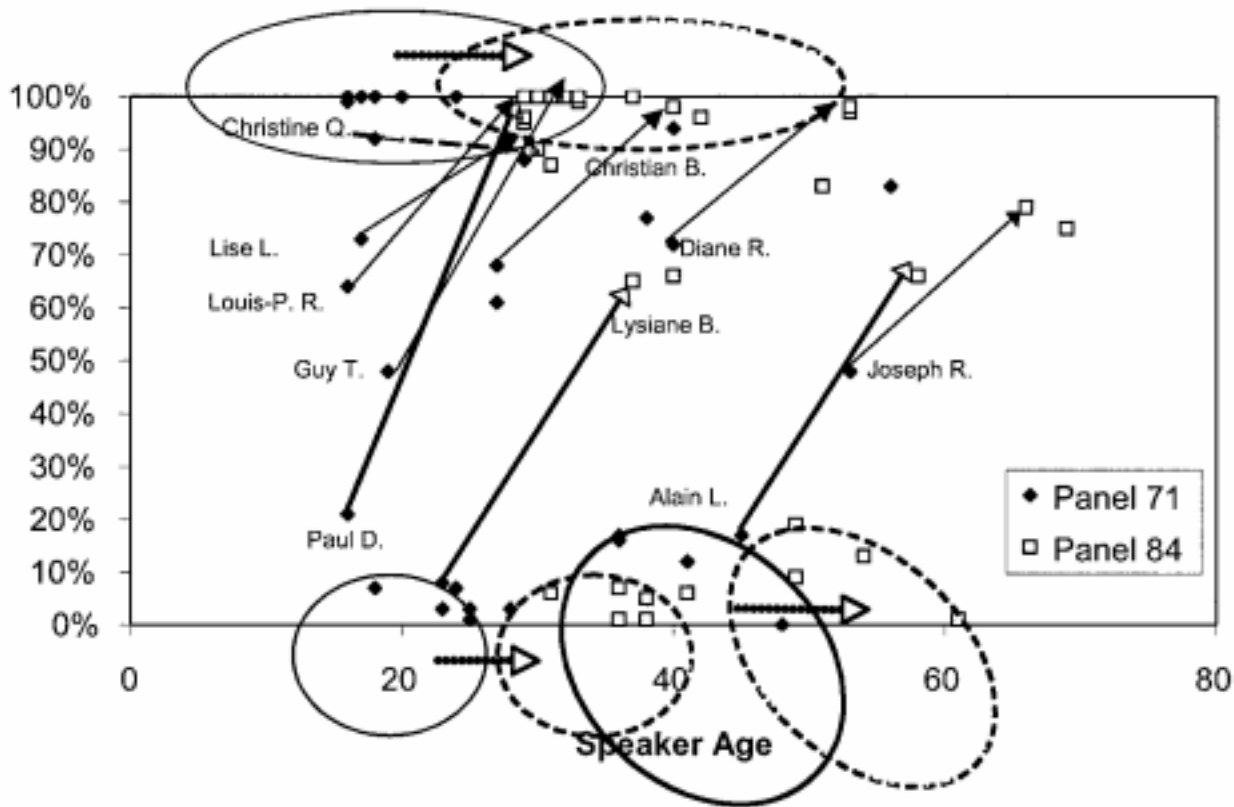


Figure 1. Percentage use of the innovative velar [R] by 119 Montreal French speakers in 1971, grouped by decade of birth [adapted from Clermont & Cedergren 1979].

SANKOFF, GILLIAN.
2006. Age: Apparent time and real time. Elsevier encyclopedia of language and linguistics. Oxford: Elsevier.

Based on CLERMONT, J. and CEDERGREN, H.
1979. Les "R" de ma mère sont perdus dans l'air. Le français parlé: Etudes sociolinguistiques, ed. by P. Thibault, 13-28. Edmonton, Alberta: Linguistic Research.



Individual changes in % uvular (r)

Sankoff, Gillian and Blondeau, H el ene. 2007. Language change across the lifespan: /r/ in Montreal French. *Language*, 83.560-88.

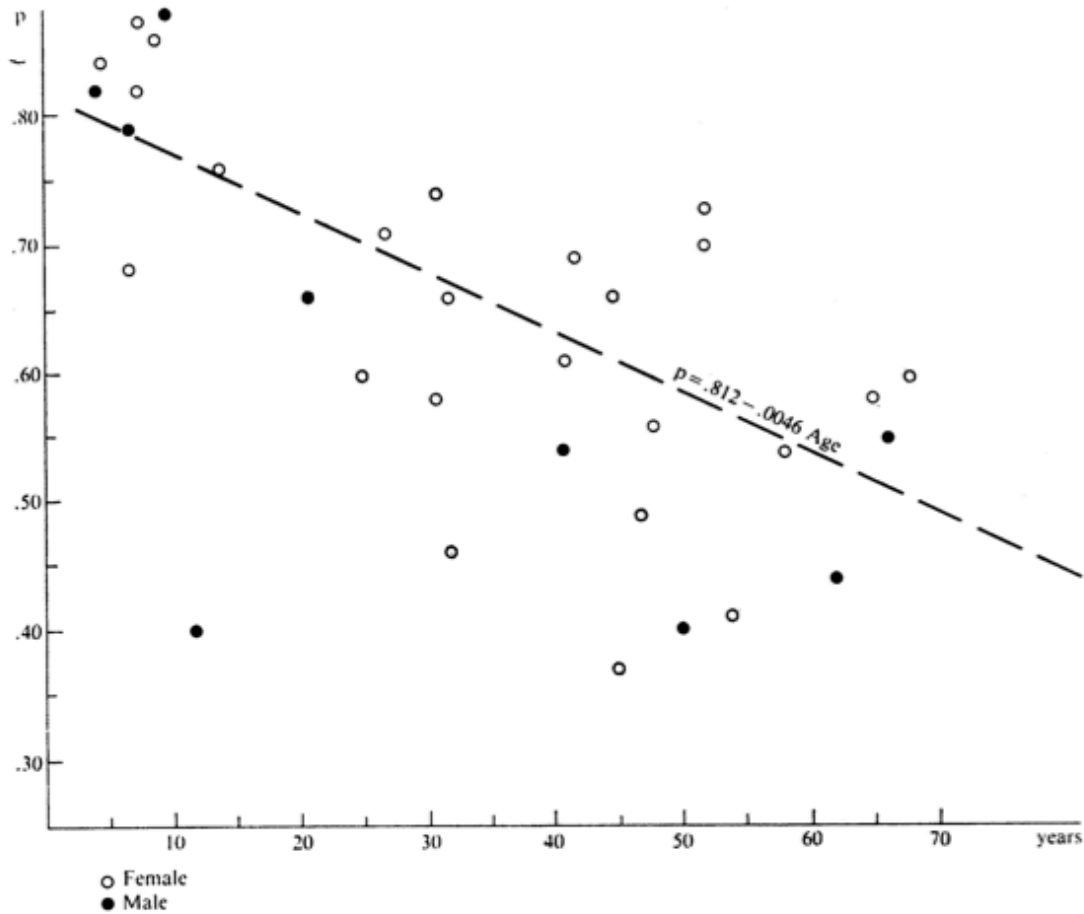


FIGURE 2. Relation between age and probability of deleting /t/ in ambiguous clusters across a derivational boundary in *left*, *kept*, etc.

Sankoff, D., & Labov, W. (1979). On the uses of variable rules. *Language and Society*, 8, 189–222.



First Wave Assumptions emerging from focus on sound change

- Variables as direct markers of predetermined social categories.
- The socioeconomic hierarchy as basic and enduring, and path of spread of change.
- Gender as parasitic on class (the “gender paradox”).
- Meaning limited to class-based prestige/stigma.
- Speech Community as consensual unit.
- Variable rules as community grammar.
- Style as cline of formality, attention to speech.

Variable rules

Cumulative and convergent results of this nature confirm my belief that inter-subjective knowledge about abstract linguistic structures is within the grasp of linguistic theory.

... provide a model for linguistic research which will arrive at decisive solutions to theoretical questions through the use of data from the speech community. I believe that this mode of work can provide the stability and sound empirical base which is a matter of some urgency in linguistics...

Labov, W. (1969). Contraction, deletion and inherent variability of the English copula. *Language*, 45, 715–762.

Kay, P., & McDaniel, C. K. (1979). On the logic of variable rules. *Language in Society*, 8, 151–187.

Sankoff, D., & Labov, W. (1979). On the uses of variable rules. *Language and Society*, 8, 189–222.

A variable rule

FIGURE 2

VARBRUL 2 Analysis of Three Constraints on Final *d* Deletion
for New York City Puerto Rican Male Adolescents

[d] → < ∅ > / < ±Stress > _____ ## < V / ~V > < # / ∅ >

Overall Tendency: .410

<i>Following Vowel</i>	<i>Stress</i>	<i>Grammatical [d]</i>
Present .275	+ .445	Present .451
Absent .725	- .555	Absent .549

Fasold, R.W. 1991. The quiet demise of variable rules. *American Speech*. 66:1. 3-21.

Structuralist tenets

- Goal - to explain internal cohesion that allows societies to be stable.
- Society as a bounded relational construct
 - Its parts (social institutions) work together, constituting social equilibrium.
 - Focus on institutions
 - Family, religion, media, schools, government ...
- Individuals as temporary inhabitants of enduring roles
 - The individual is significant not in and of him- or herself but in terms of place in the system.
 - Outliers and exceptions as noise.

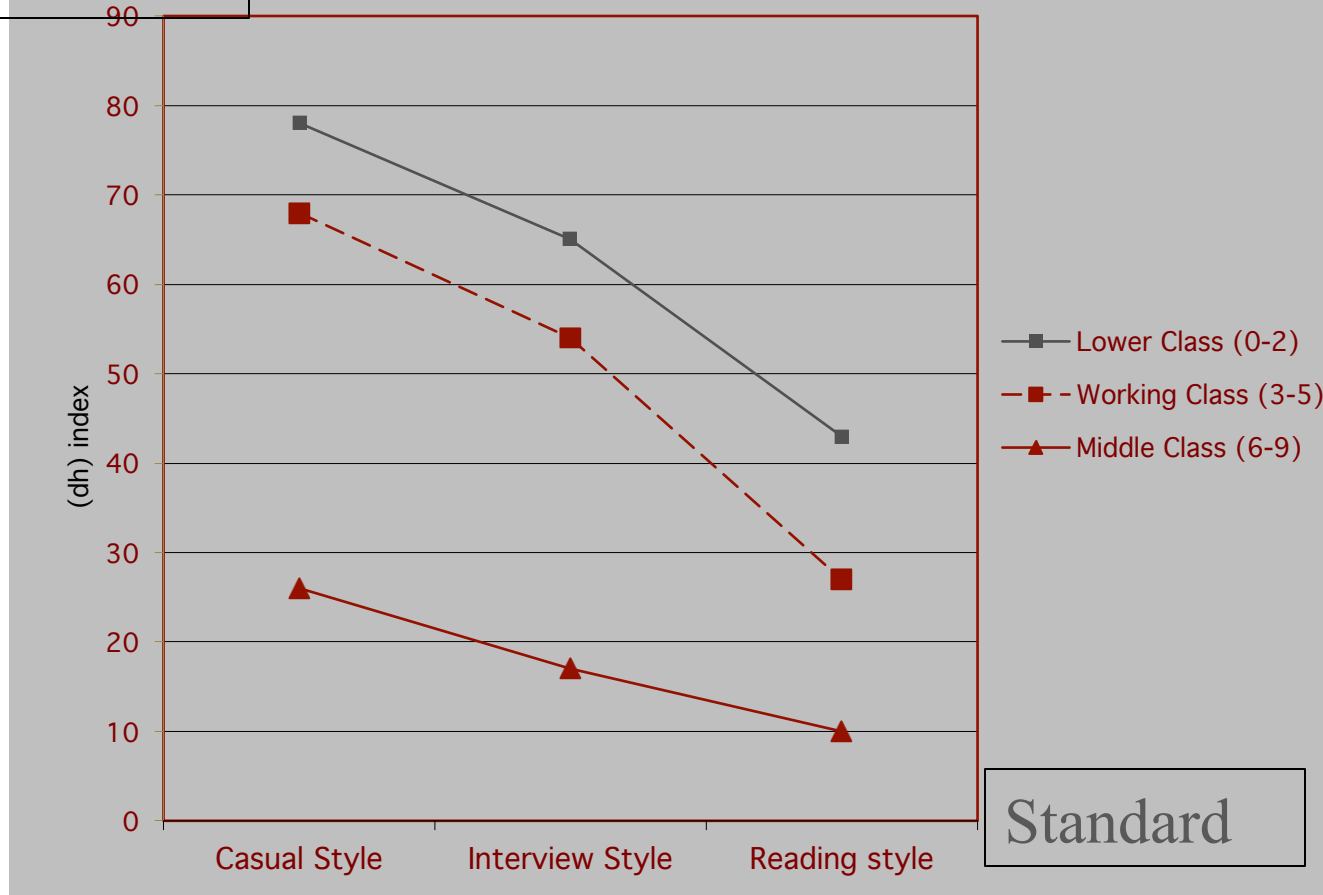
Empiricism

- Replicability
 - Interview protocols to elicit comparable styles.
 - Sampling by, and correlations with, macro-social categories.
 - Quantitative analysis.
- The vernacular as scientific object.

Vernacular: 2 senses

- Classic definition (community vernacular): indigenous or local language used by “ordinary people,” in contrast to a superposed standard or literary language.
- Labov’s (1966) definition (individual vernacular): the language first acquired by the language learner, controlled perfectly, and used primarily among intimate friends and family members.

Vernacular



Standard

Kroch, A. S. (1978). Toward a theory of social dialect variation. *Language in Society*, 7, 17–36.

The vernacular

- The direct output of the unconscious.
 - Systematic, source of regular change.
- Stylistic variation due to resistance.
 - Cognitive dimension: attention
 - Social dimension: avoidance of stigma/quest for prestige
- Qualifies vernacular as natural scientific object.
 - Lack of agency