Language Contact and the Birth of an Ethnolect

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Aims of the Project

- Determine how interference features develop into a new dialect of a target language
- It's more complicated than a contrastive analysis of the two languages would indicate
- Which features are kept and which are discarded?
- Why do features behave differently?
  - Emphasis on phonetic features
  - A few non-phonetic features are still undergoing analysis

Long-term Effects of Language Contact

- Thomason & Kaufman (1988) proposed a model that opposes *borrowing* and *interference*
- *Borrowing* happens when a group does not shift its language; lexicon is affected most
- *Interference* happens when a group does shift its language; phonetics/phonology and morphosyntax are affected most
- Interference leads to *substrate* effects

What's Missing from Earlier Studies

- Historical linguists discuss substrate effects, but their work can't watch the process as it happens
- Some phoneticians have worked on interference, usually for just one feature at a time; concerned with age of acquisition and with production vs. perception
- Sociolinguists have studied language contact situations in North America, Europe, and Australia, but they typically examine only one or a few features
- You can't generalize about the social structure of a community based on so few variables because different variables show different patterns and social meanings

North Town:
The Local Environment

The railroad tracks that divide the two sides of town

Typical local vegetation, a species known as chaparro prieto—note the big thorns

North Town History

- Before 1900
  - Town founded in 1882 in southern Texas
  - Original Anglo settlers were mostly "Hill Southerners" (roots in Tennessee, Arkansas)
  - considerable immigration from Mexico, largely to ranches
  - System of Anglo *patron*/Mexicano workers developed

- 1900s-1920s
  - Mixed economy of small farmers & ranchers
  - Anglos and Mexicanos segregated – in all aspects of life
- 1920s-1950s
  - Economic transformation due to ecological, marketing, technological, and population changes
  - Movement of people off of ranches & farms and into town
  - Migrant workers (South to North)
  - Separation of town by railroad tracks
  - Anglo side/Mexican side

← ranch land outside town

North Town History, cont.

- 1950s-1960s
  - Schools segregated up until 7th grade
    - Mexican side – Anglo side
  - Middle class Mex. families began to move across the tracks
  - Mexicans became more vocal and active civically
  - Public works began to "fix" Mexican side of town
    - Paved streets, drainage, street lights, etc.

- 1970s
  - Farming (peanuts, cotton, sorghum, etc.) & Ranching, Oil, Hunting
  - Schools integrated 1969-1971
  - Effort by Mexican Americans to take over town government failed amid great acrimony
- 1980s – present
  - Mexican Americans now hold nearly all political offices
  - economy is fairly sluggish, so the community is not currently attracting many immigrants from Mexico
  - currently a mecca for non-local deer hunters, who have bought up much of the rural thorn scrubland
  - very recently, there's been a fracking boom

← street view on the "Mexican" side of town

Exploitation

- Mexican Americans were exploited and oppressed in numerous ways
- The town constable during the 1930s & 1940s (an Anglo fluent in Spanish) exemplified some of that
- According to Foley (1987), the constable hung out in the cantinas (bars), drinking and gambling with Mexican American men
- He would arrest one for some supposed infraction, make it sound like the poor fellow was in serious trouble, and then tell him something like "but I'm going to give you a break"
- In this way, he could count on Mexican American votes for the next constable election
- Anglos finally got rid of this constable in an effort to "clean up the town…"
- apparently because he was drinking and gambling in the cantinas, not because they cared what he was doing to the "Mexicans"

the town hall

Segregation

- Segregation occurred in many realms:
  - "...over there, there's no discrimination like there used to be in North Town. We can't go over to the other side of the track. Or the swimming pool over there or nothing. Or th—we didn't go to school together. We had to go to school over here. And the—the white people go in there on the other side." —an elderly Mexican American woman

- Elementary schools weren't completely desegregated until 1971
  - "They also got the better teachers. You know, the teachers that were old and rickety were the ones that they sent to us and they got the newer and the stronger teachers, you know, and stuff." —a retired Mexican American

The Mexican American cemetery—even the cemeteries were segregated (in this case partly because of religion) →

Imposition of English

- In the elementary schools, students were required to speak English
- Only two or three teachers in the "Mexican" school knew any Spanish at all

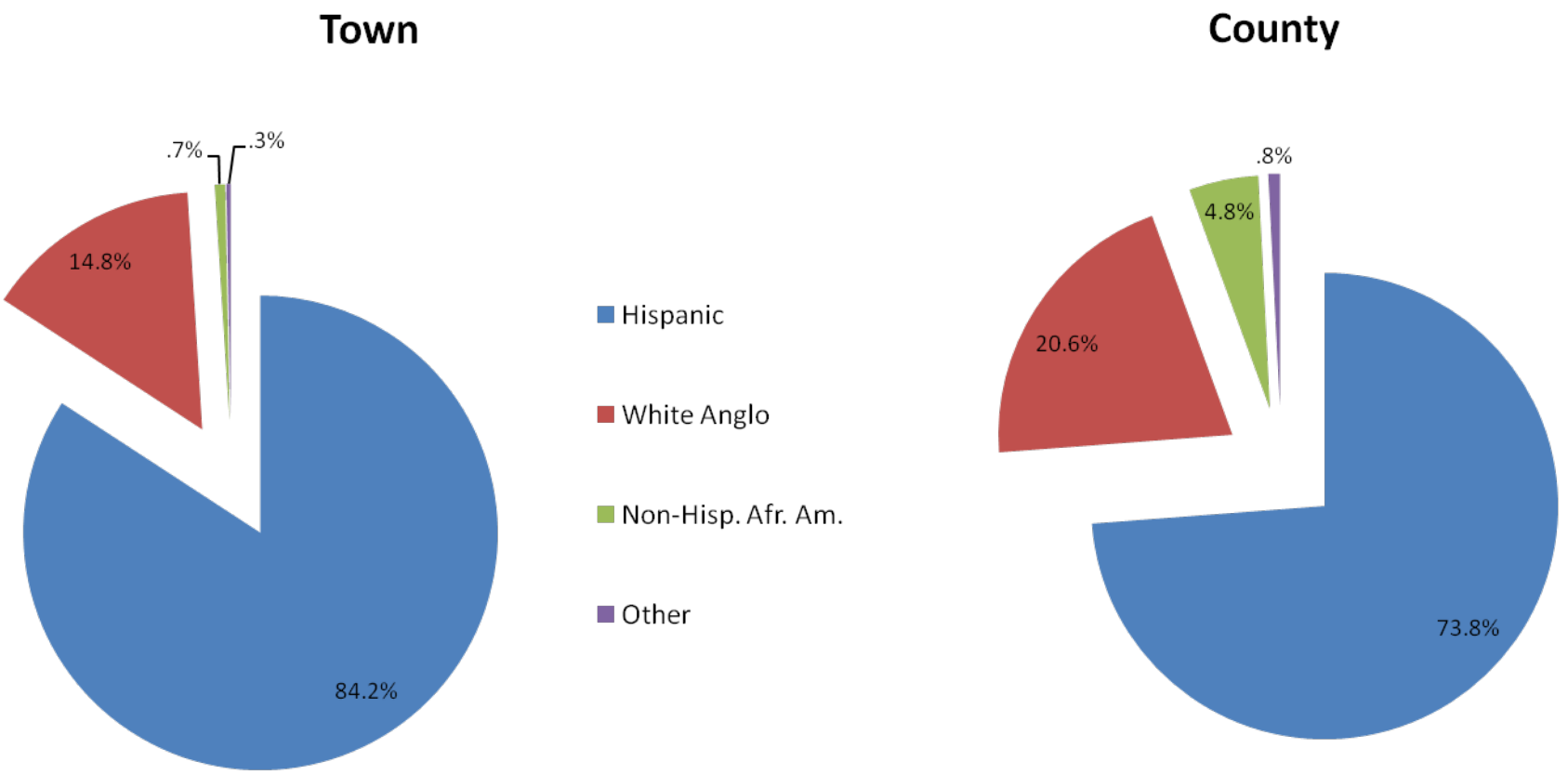
  When asked whether students were punished for speaking Spanish: "Yes. At those years when I was young, yes. I remember. I'd come home and start writin', 'I may not speak Spanish. I must not speak Spanish.' Up to about a hundred times." —an elderly Mexican American woman

- Mexican Americans who grew up under those conditions spoke English to their children:

  "back [then]-- you know, the parents were like, 'Well, no, you're not gonna have it hard like me.' Uh— 'You're not gonna go to class and not know what they're talkin' about.'" —a middle-aged Mexican American man

View down the main street in town →

Population Characteristics, 2000



The Survey

- 42 speakers, all of whom grew up in North Town and/or surrounding North County (some additional interviews with non-natives are excluded)
- 31 are Mexican American—oldest born 1918, youngest 1997—covering four generations
- 11 Anglos, mostly old, for comparison and to establish what the contact dialect was
- Mexican Americans were interviewed in both English and Spanish when possible
- Interviews were conversational, which allows the greatest variety of linguistic variables to be collected

Linguistic Variables

- So far, about thirty linguistic variables, which is a very large number for a sociolinguistic study
- The point is to be able to conduct a quantitative comparison of variables in order to determine what the main divisions within the community are
- Vocalic and consonantal variables are already measured (acoustically or acoustically & auditorily); some morphosyntactic and one prosodic variable are still undergoing analysis
- Statistical analysis—by linear mixed-effects modeling or logistic regression, as appropriate—is used

Main Patterns

- Two recurrent patterns have emerged among linguistic variables in the English spoken by North Town natives
- One is a Mexican American/Anglo split
- The other is a generational split within the Mexican American group: old vs. young
- The latter corresponds with the shift from Spanish dominance to English-dominance

English Features Quickly Acquired

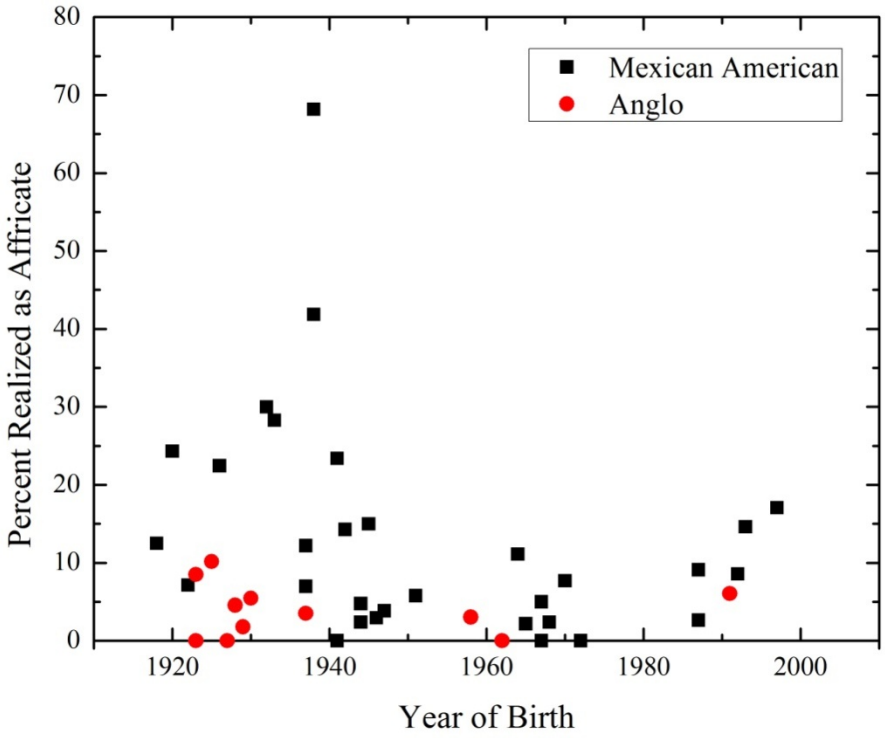
- There are, however, a few English-specific features that even the first generation shows
- Two that we've studied are:
  - Voice-Onset Time (VOT): Even the oldest Mexican Americans have aspiration of /p,t,k/ indistinguishable from Anglos, and the Anglos show voicing of /b,d,g/
  - Bunched-tongue /r/: Even though Spanish has tapped and trilled /r/, Mexican Americans show [ɹ] indistinguishable from Anglos' [ɹ]

Interference Features that are Discarded

- There are quite a few interference features that appear in the data
- This isn't surprising, since the first generation didn't learn English until they began their schooling
- Some of these features are abandoned after one generation

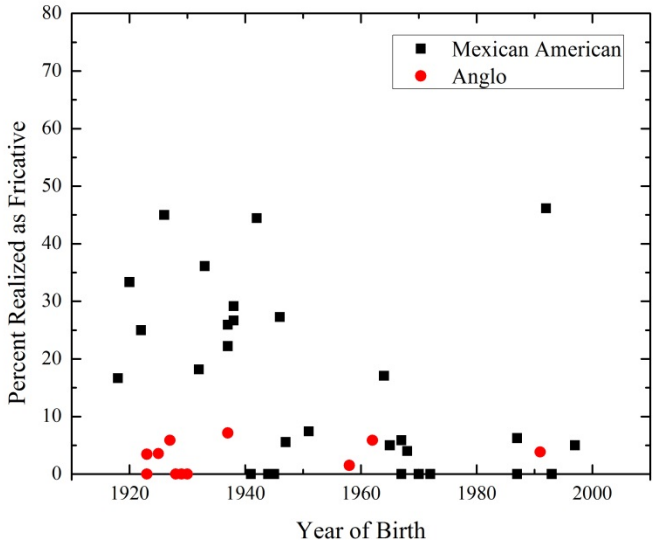
Post-Alveolars (1)

/ʃ/ realized as [tʃ]

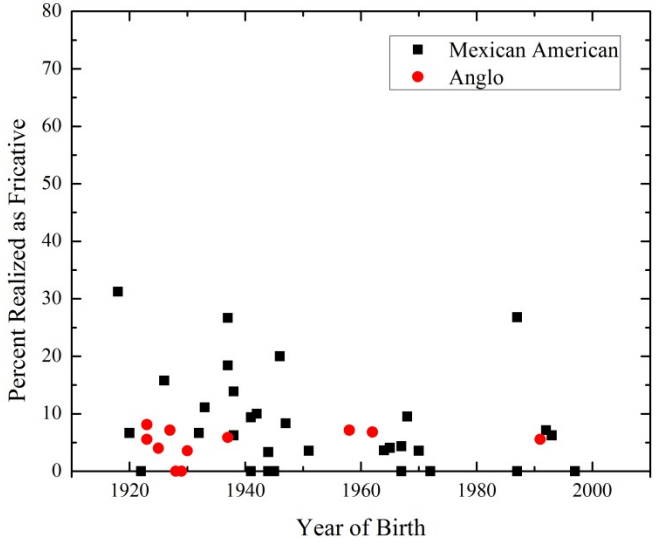


- Mexican Americans often show confusion of /tʃ/, as in *church*, and /ʃ/, as in *shush*
- This is related to the fact that Spanish has a /tʃ/ sound but no /ʃ/ (at least in standard varieties)
- /ʃ/ is realized as [tʃ] mostly in word-initial position (position is significant)
- Ethnicity and generation (the latter tested with Mexican Americans alone) are both highly significant

Post-Alveolars (2)



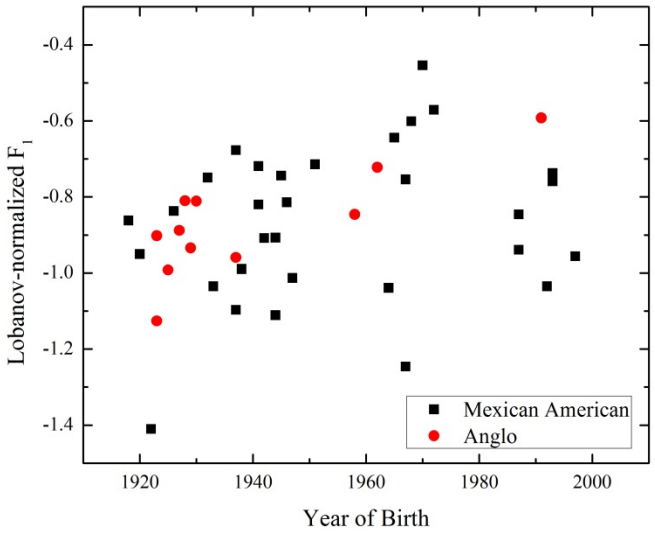
/tʃ/ as [ʃ]



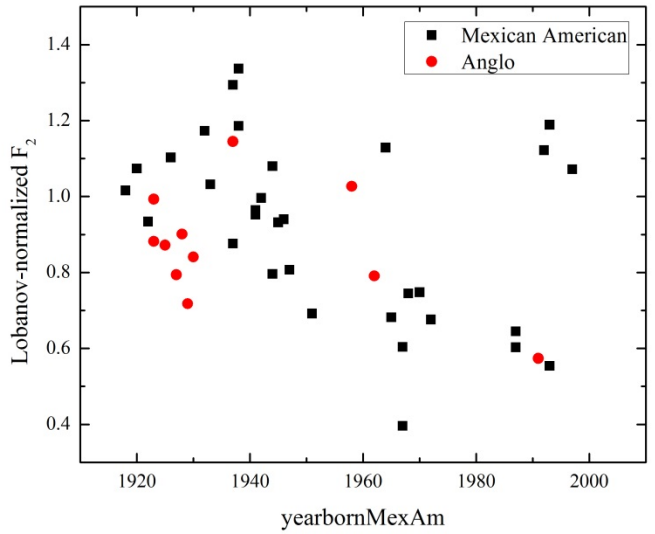
/dʒ/ as [ʒ]

- Realization of /tʃ/ as [ʃ] (top left) and realization of /dʒ/ (as in *judge*) as [ʒ] (bottom left) were also examined
- Ethnicity and generation were both highly significant for both variables, just as for /ʃ/
- Confusion of /tʃ/ with /ʃ/ and /dʒ/ with /ʒ/ largely characterize just first-generation English speakers
- Most common in non-word-initial position (significant)

The BIT Vowel



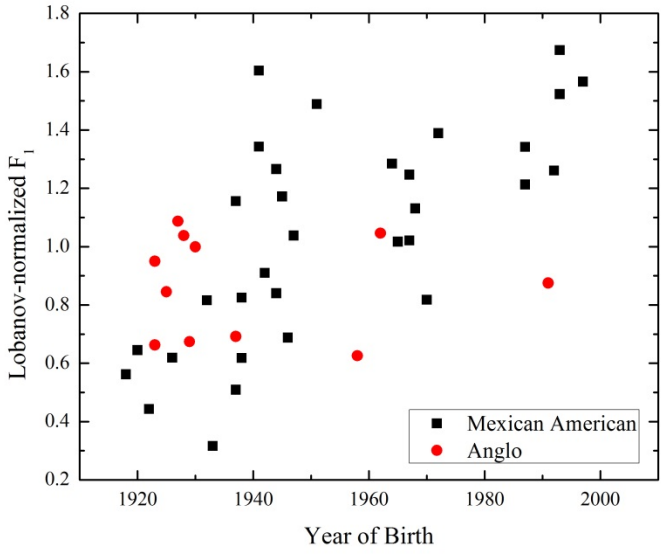
F_1



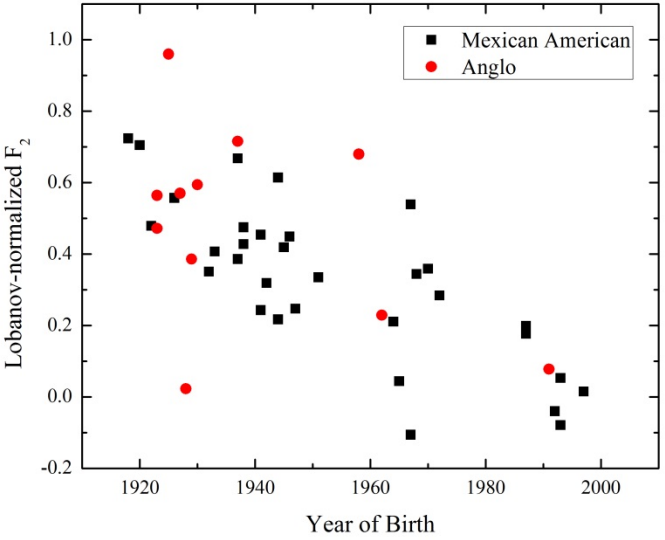
F_2

- Realization of the BIT vowel is stereotypical of Mexican American English
- However, ethnicity was not significant; may have to do with the regional Anglo dialect
- Year of birth was mildly significant for both the first and second formants—younger speakers move away from the stereotype
- The BEET vowel shows a similar movement toward greater differentiation from BIT

The BAT Vowel



F_1



F_2

- Older Mexican Americans have the BAT vowel close to the BET vowel
- For F_1, ethnicity and ethnicity/year of birth interaction are significant
- For F_2, year of birth is significant, ethnicity isn't
- Young Mexican Americans reject the interference form of their grandparents

Unmarked Past Tense

- First-generation speakers often lack marking of some past-tense forms
  1. When I was growing up, my dad, he **make** the coffins.
  2. During that time, they **grind** the masa.
  3. We **can't** go over to the other side of the track. [when she was a child]
- This feature disappears by the third generation
- Erin Callahan-Price has studied this feature; she found that lack of marking was linked to unbounded aspect, realized in Spanish as the imperfect conjugation

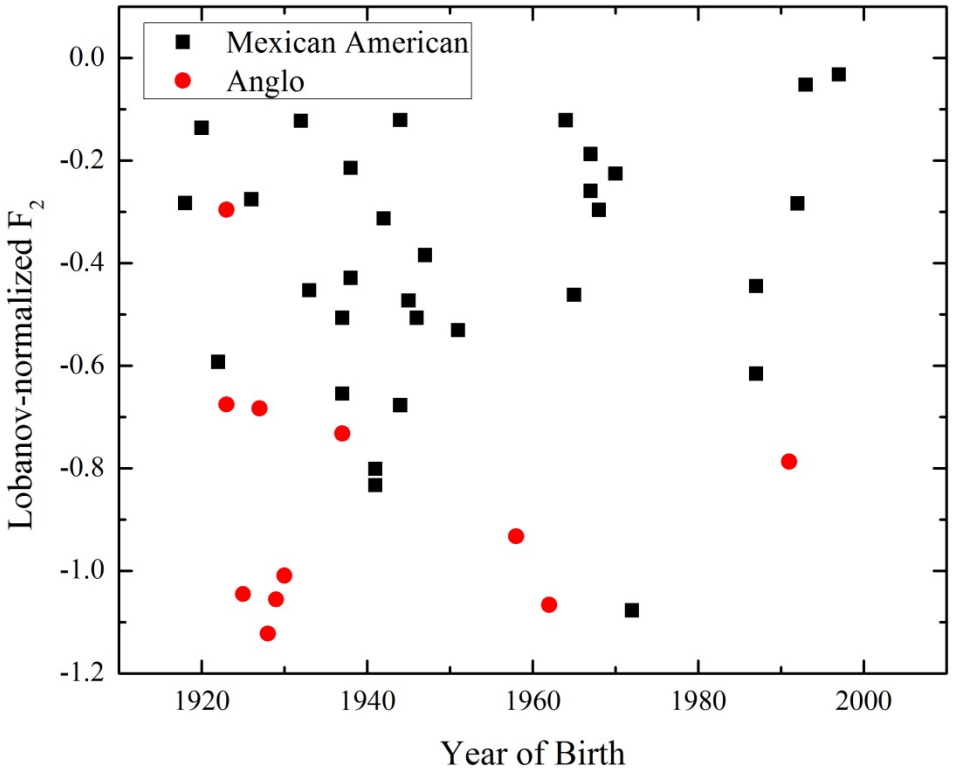
Interference Features that are Maintained

- Not all Spanish interference features decline after the first generation
- Some of them seem to be becoming entrenched as the Mexican American dialect crystallizes
- For some, it's a matter of a feature appearing part of the time, not invariably

Realization of /l/

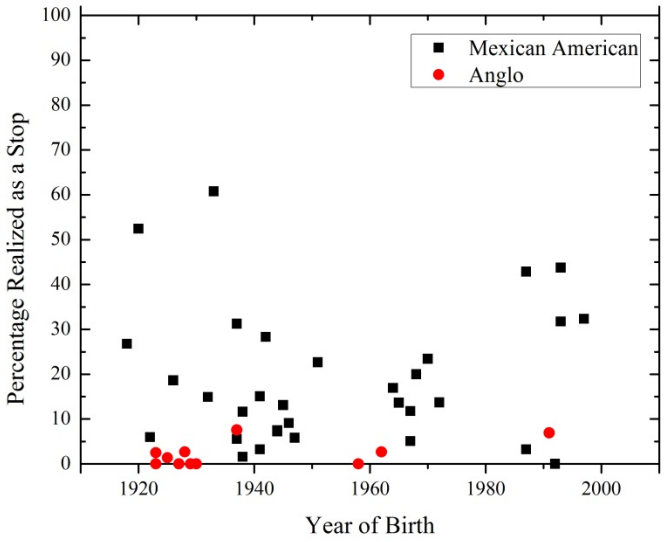
- /l/ is velarized in American English, but not in most other languages, including Spanish
- In the graph to the right, lower numbers indicate more velarization
- Ethnicity is significant, as is its interaction with the duration of the /l/
- Year of birth is not significant

  (This variable was investigated by Janneke Van Hofwegen.)

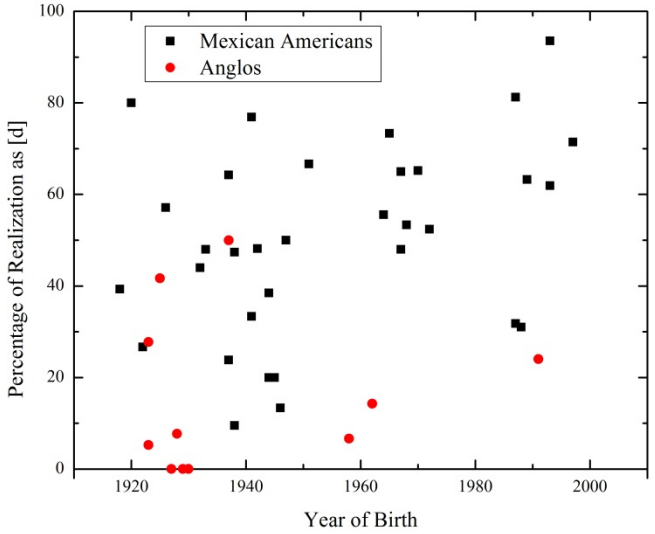


Stopping of word-initial /ð/

- E.g., *keep that* pronounced [k^{h}ip dæt], *that* as [dæt] at the beginning of an utterance, *see that* as [si dæt]
- Cases such as *had that* pronounced [hæd dæt] that are ambiguous between stopping and assimilation are not included in the stopping tally
- Ethnicity was highly significant
- Generation was significant insofar as the second generation had less stopping than the others and the fourth had more



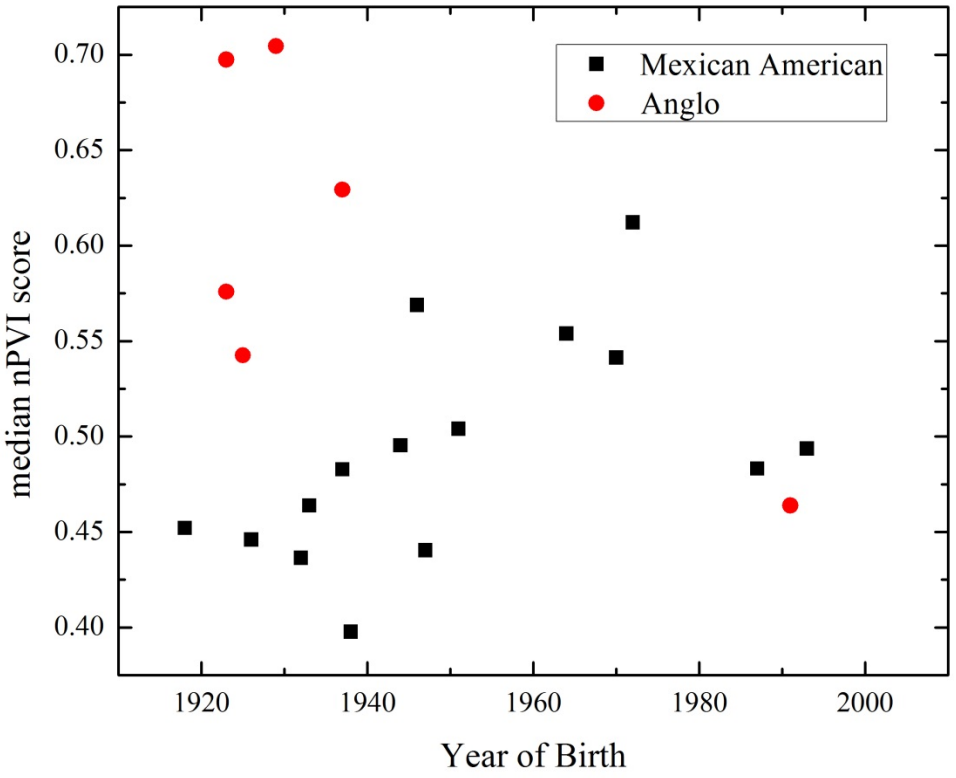
when the preceding word ended in a consonant



after a pause

Prosodic Rhythm

- Prosodic rhythm has to do with the stress-timed/ syllable-timed continuum
- It's controversial
- English is supposed to be stress-timed, Spanish syllable-timed
- We used the nPVI-V method (Low, Grabe, & Nolan (2000)
- Analysis is ongoing—preliminary results to right (lower numbers=more syllable-timed)→

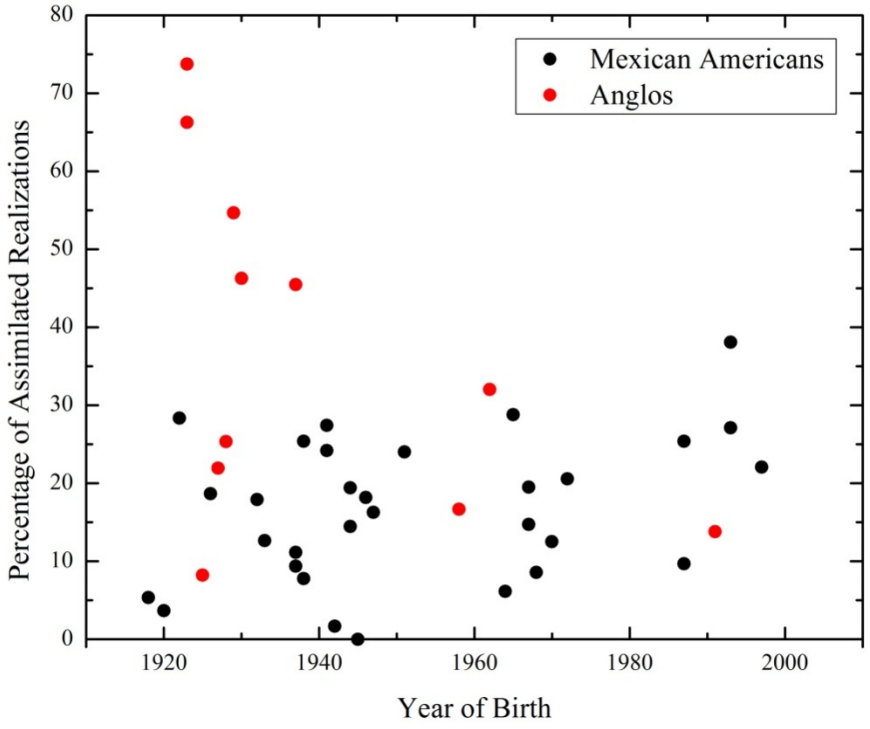


Anglo Features

- Anglos show a regionally marked dialect
- This aspect makes North Town especially interesting
- As we'll see, Mexican Americans almost completely reject these regionally marked features
- For some of the vowels, it's probably a combination of rejection of Anglo speech and interference from Spanish

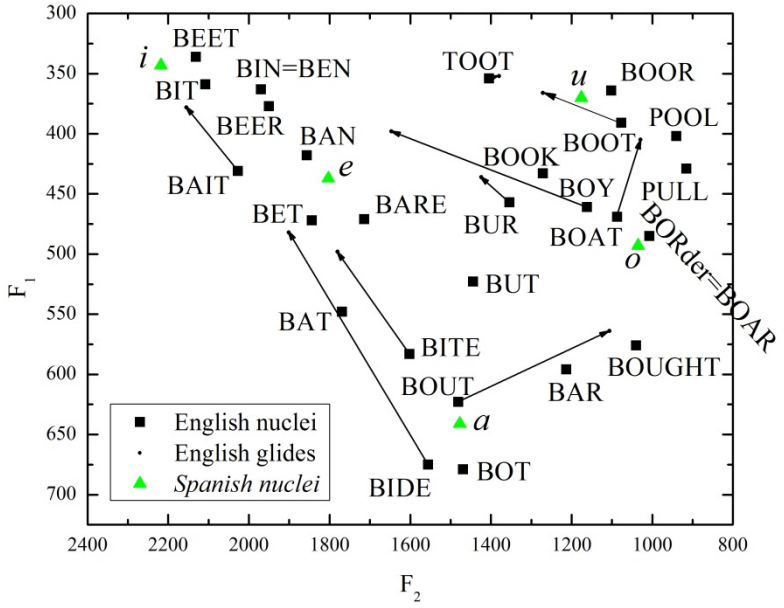
Assimilation of /ð/ to a preceding consonant

- E.g., *has that* pronounced [hæz:æt]
- Cases such as *had that* pronounced [hæd dæt] that are ambiguous between stopping and assimilation are not included in the assimilation tally
- Unlike for stopping, high rates of assimilation are associated with Anglos
- Ethnicity is highly significant
- Small effect of generation, with 2nd generation showing less assimilation than others

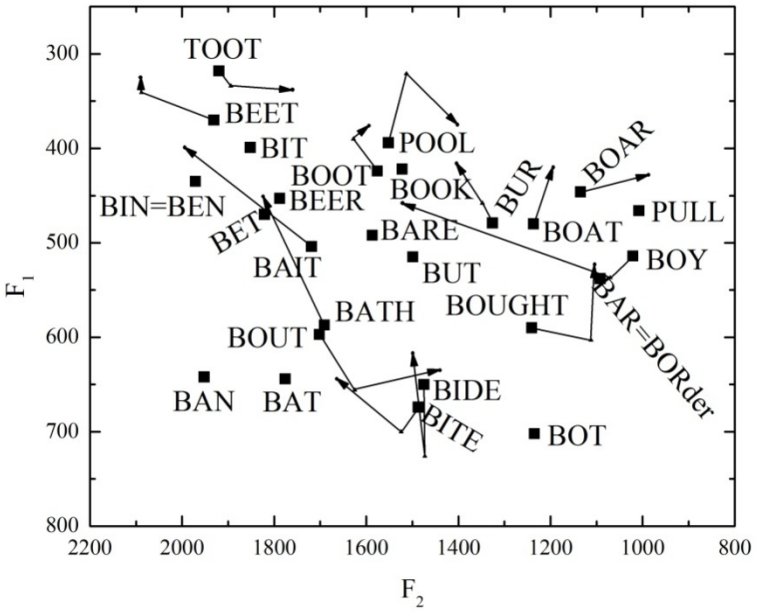


Vowels: Older Speakers

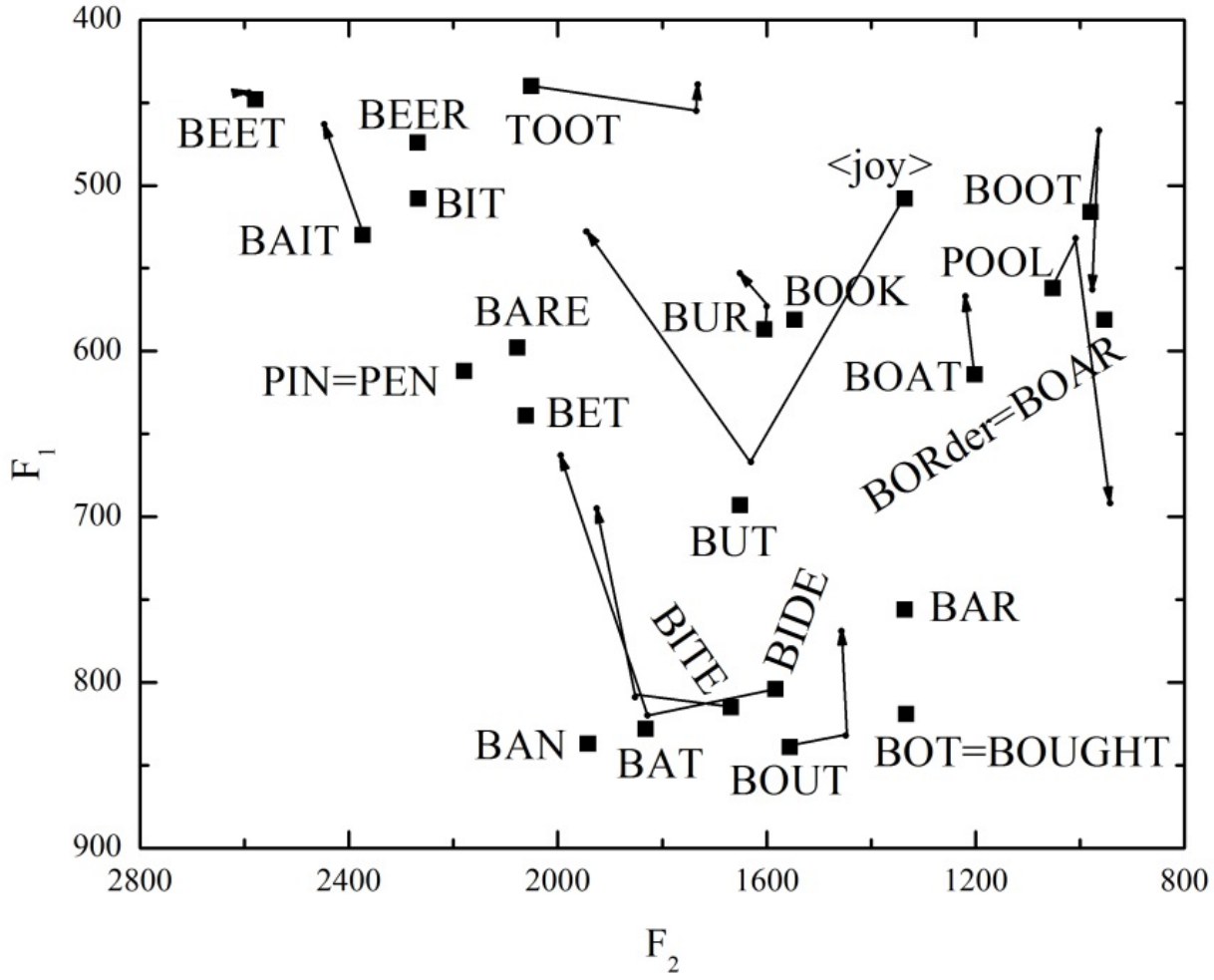
The vowel configuration of an elderly Mexican American



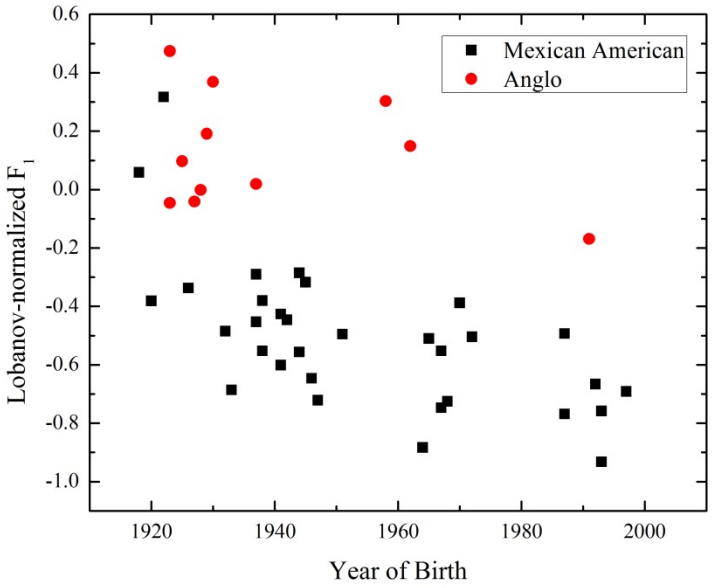
The vowel configuration of an elderly Anglo



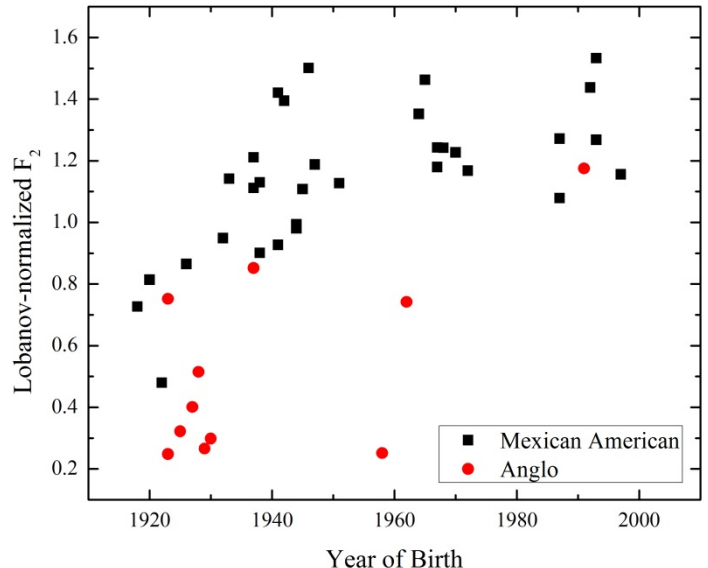
Vowels: Younger Speakers



The BAIT Vowel



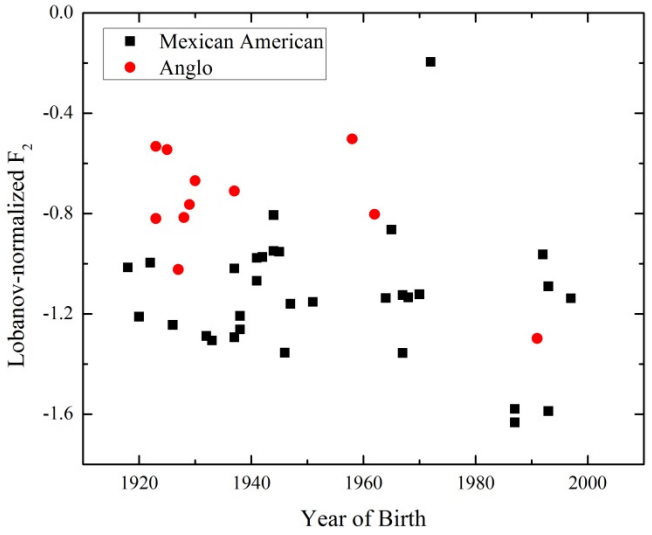
nuclear F_1



nuclear F_2

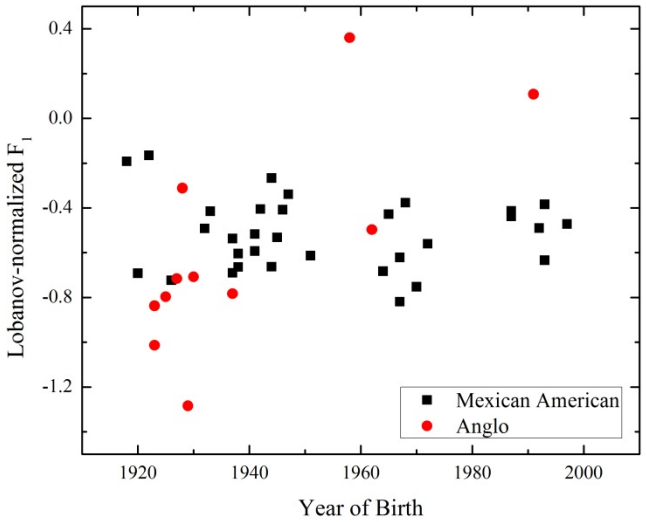
- Anglos have a lowered variant for the BAIT vowel
- Ethnicity is strongly significant for both formants for the nucleus, but only F_2 for the glide
- Year of birth is significant for the nucleus (both formants), but not the glide
- Mexican Americans reject the regional Anglo form
- Also partly due to Spanish influence?

The BOAT Vowel



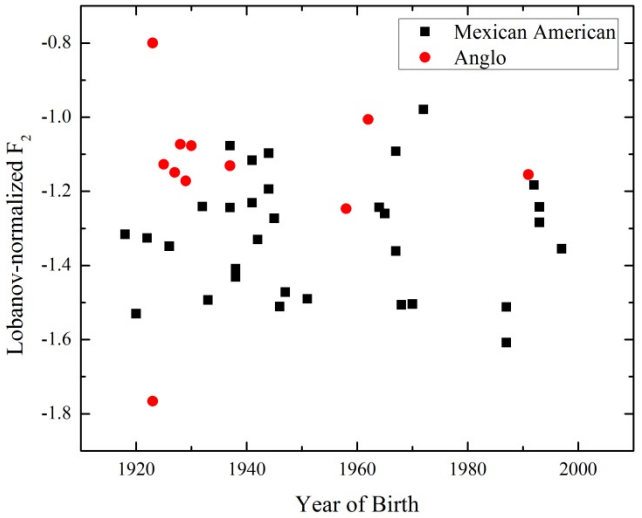
Nuclear F_2

- Anglos tend to show more fronting
- For the nucleus, ethnicity is significant for F_2; year of birth is not significant for either formant
- For the glide, ethnicity and year of birth are both significant for F_1, but only ethnicity for F_2

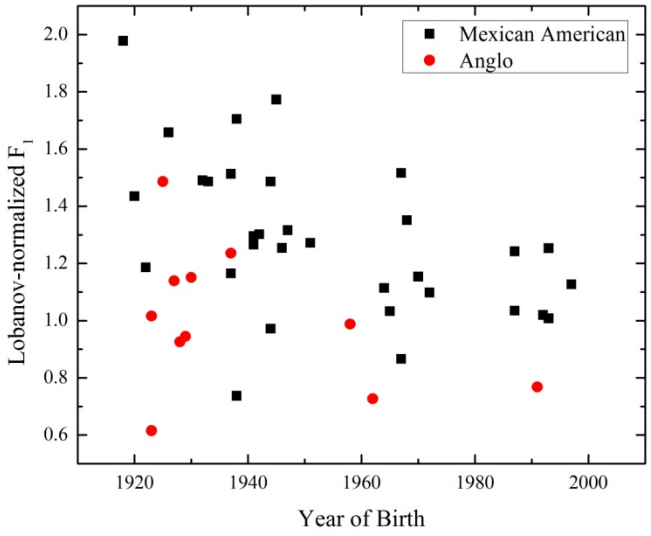


Glide F_1

Glide F_2

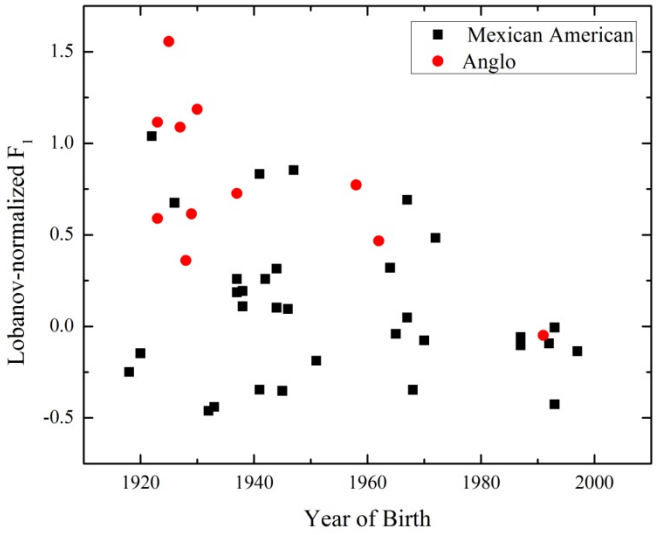


The BITE/BIDE Vowel



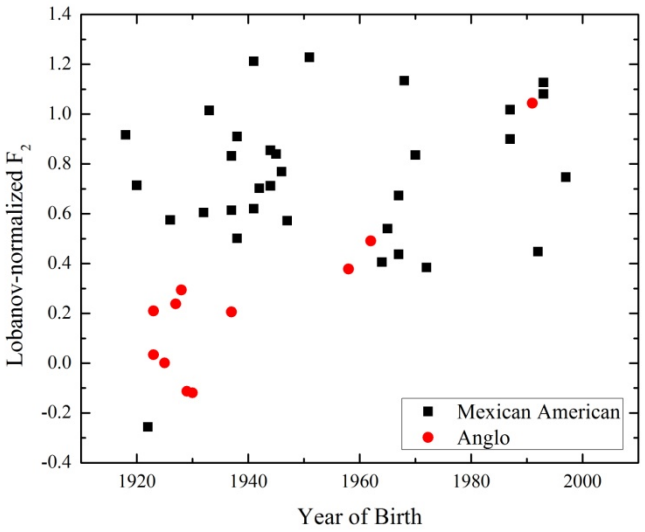
BIDE Nuclear F_1

- Anglos show monophthongization
- For the nucleus, ethnicity and year of birth are both significant for F_1, but neither for F_2
- For the glide, ethnicity his highly significant and year of birth mildly significant for both formants
- Mexican Americans reject the regional Anglo variant



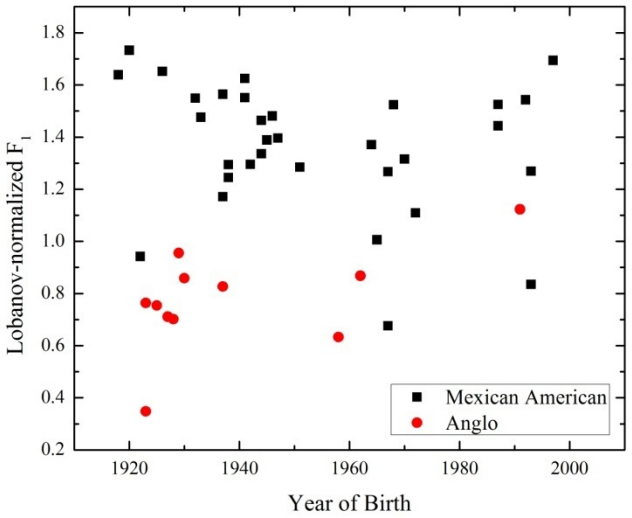
BITE Glide F_1

BITE Glide F_2

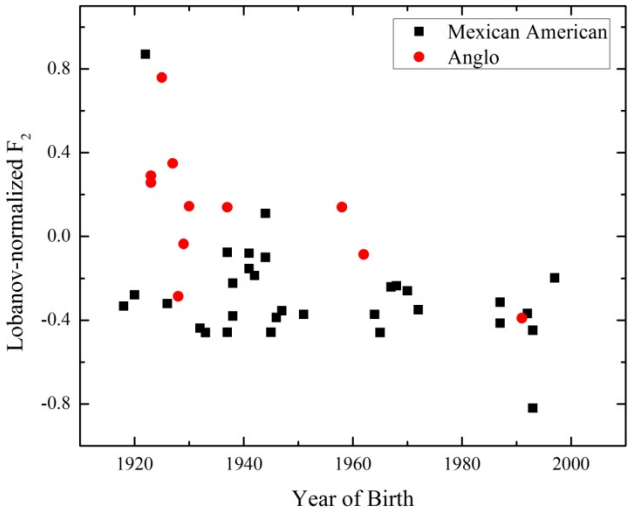


The BOUT Vowel

Nuclear F_1

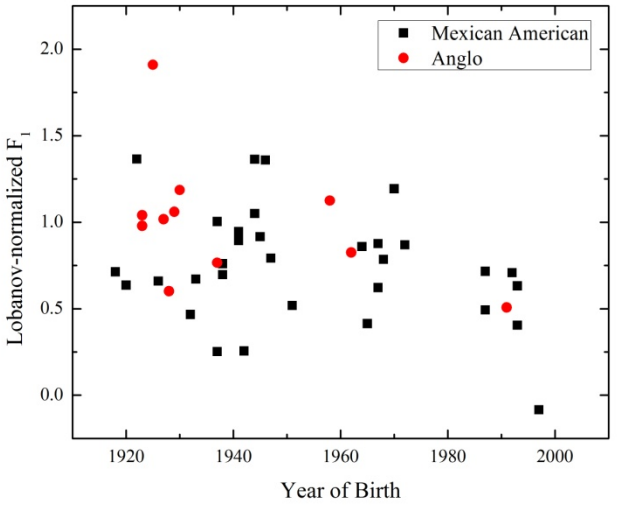


Nuclear F_2

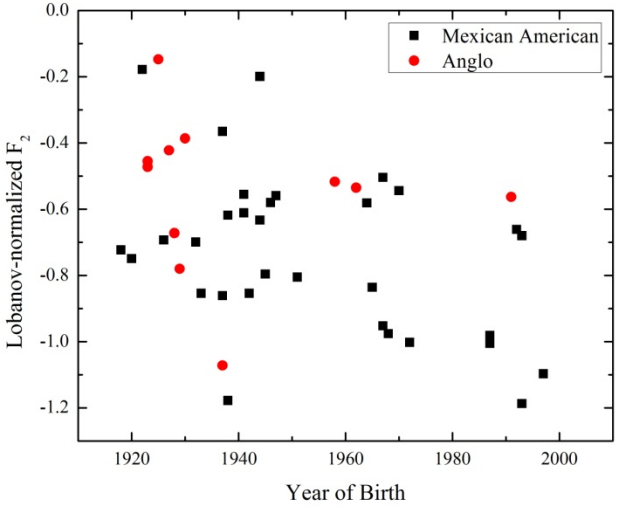


- Anglos show higher, fronter nuclei and lower, less backed glides
- Both F_1 and F_2 of both nucleus and glide are significant for ethnicity
- F_2 of nucleus and F_1 of glide are significant for year of birth

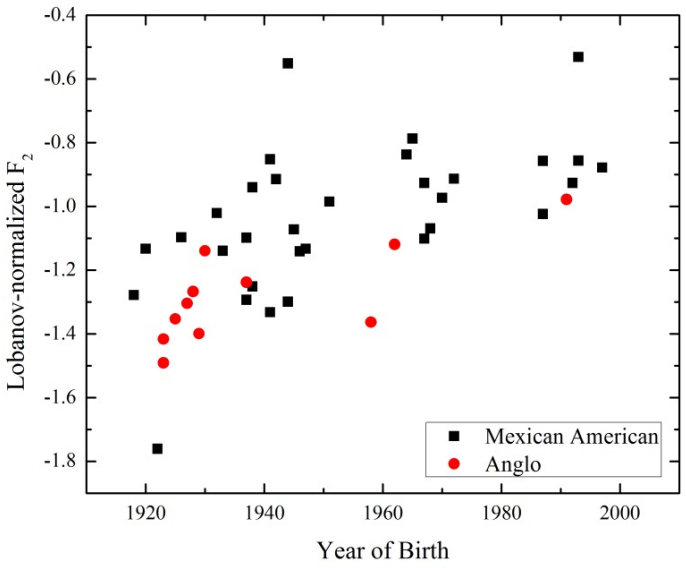
Glide F_1



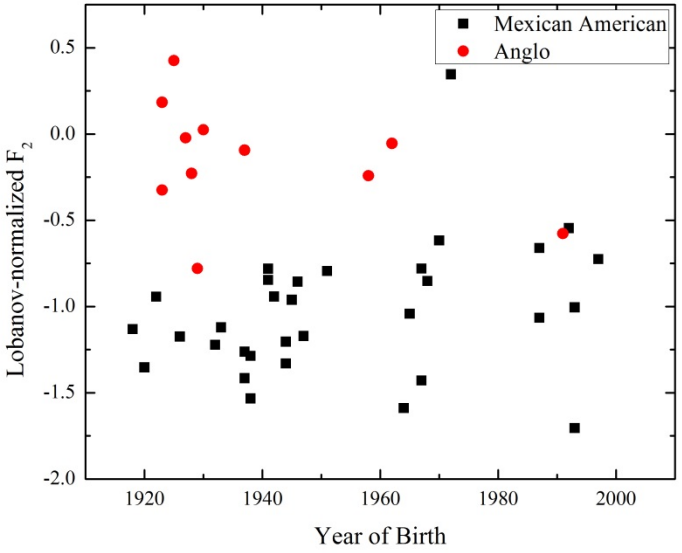
Glide F_2



Other Vowels



BAR nuclear F_2



BOOT nuclear F_2

- The BOOT, BAR, POOL, and possibly a few other vowels are expected to show significant effects of ethnicity
- Tabulations and calculations are pending
- Some elderly Anglos have a BAR=BORder merger (with BOAR distinct) and an upgliding [æɛ] diphthong for the BATH class; these configurations do not occur among Mexican Americans or the younger Anglos

Two Exceptions

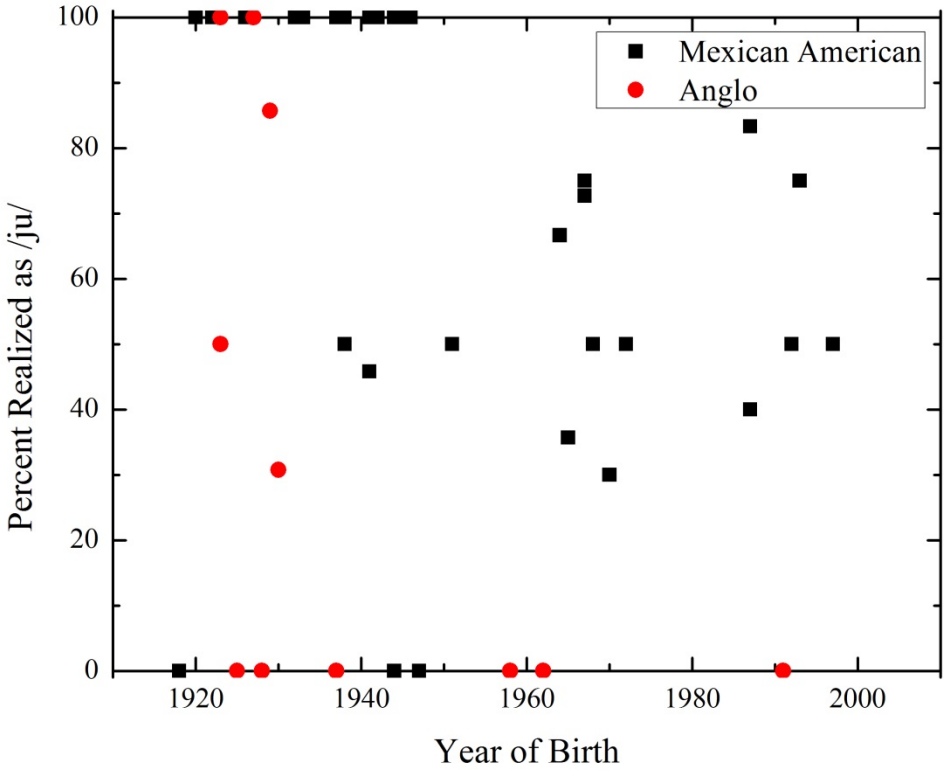
- *can't*
  - This is the only lexical variant examined
  - The traditional Southern Anglo variant rhymes with *paint*
  - [k^{h}eint] is common among Mexican Americans of all ages in North Town
- BIN-BEN merger
  - Another traditional Southern Anglo feature
  - Out of 31 Mexican American subjects, 21 have the merger and one more has a partial merger
  - Common among Mexican Americans of all ages
  - 10 of 11 Anglo subjects have the merger

New Changes Entering from Outside

- Dialects are never static
- North Town MAE isn't, either
- A number of changes that are nation-wide trends in the United States have seeped in since the first generation

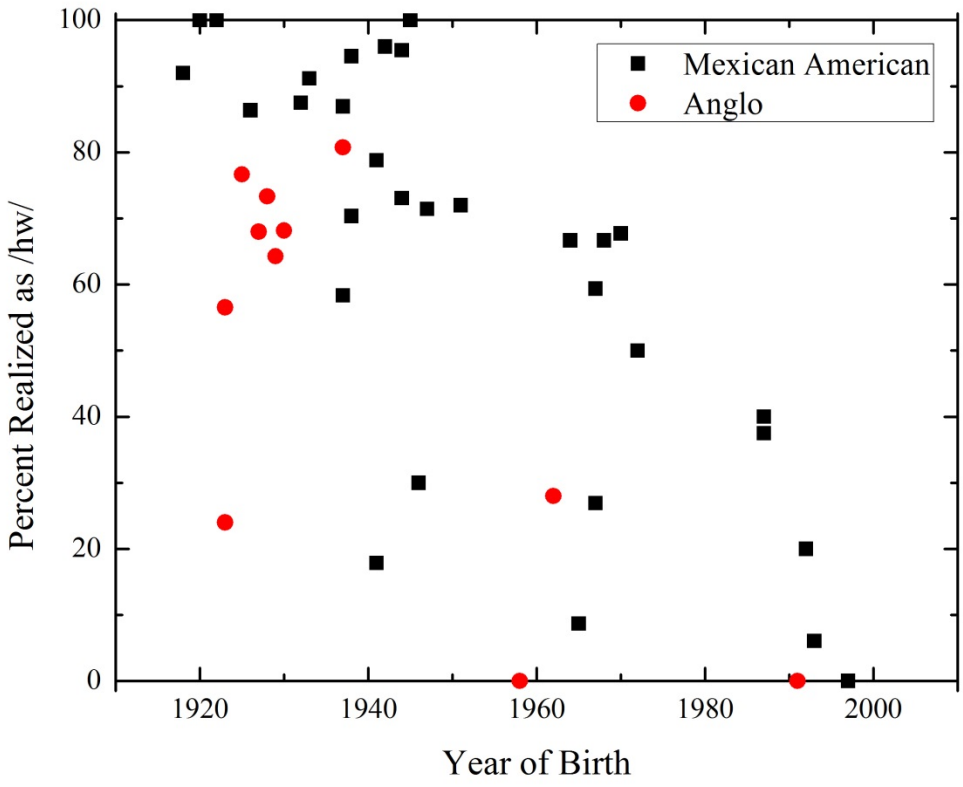
/ju/ after coronal stops

- /ju/ or /u/ in words such as *new*, *Tuesday*, *duty*
- /ju/ is traditional in the South but is fading
- Everything seems to be significant for this variable
- Mexican Americans preserve /ju/ better than Anglos
- Decline in /ju/ among later generations
- Probably some lexicalization: *new* and *knew* most likely to have /ju/

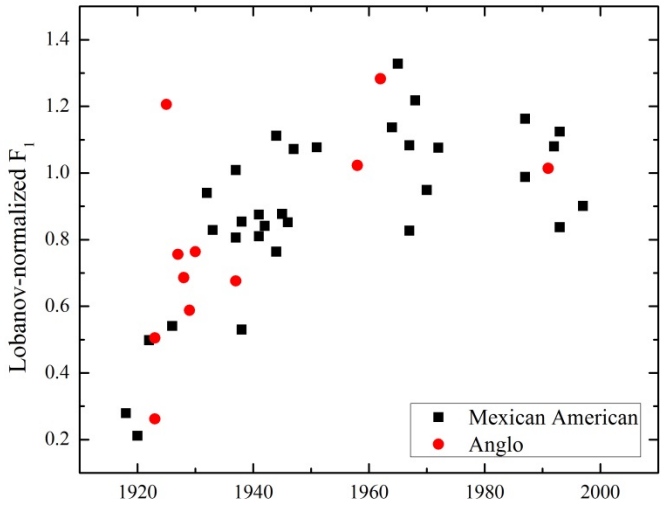


/hw/

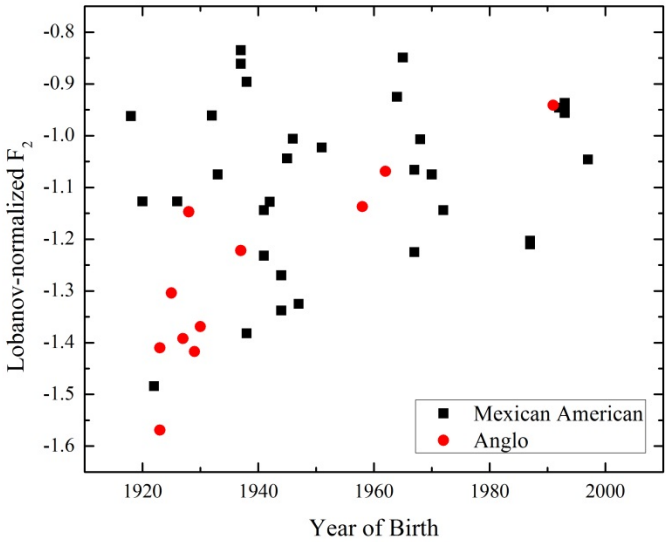
- Shift of /hw/, as in *when* and *white*, to /w/ has been called “the oldest sound change in the world” (J.K. Chambers)
- Here, there’s a strong correlation with ethnictity…
- But an even stronger correlation with generation



The BOUGHT Vowel



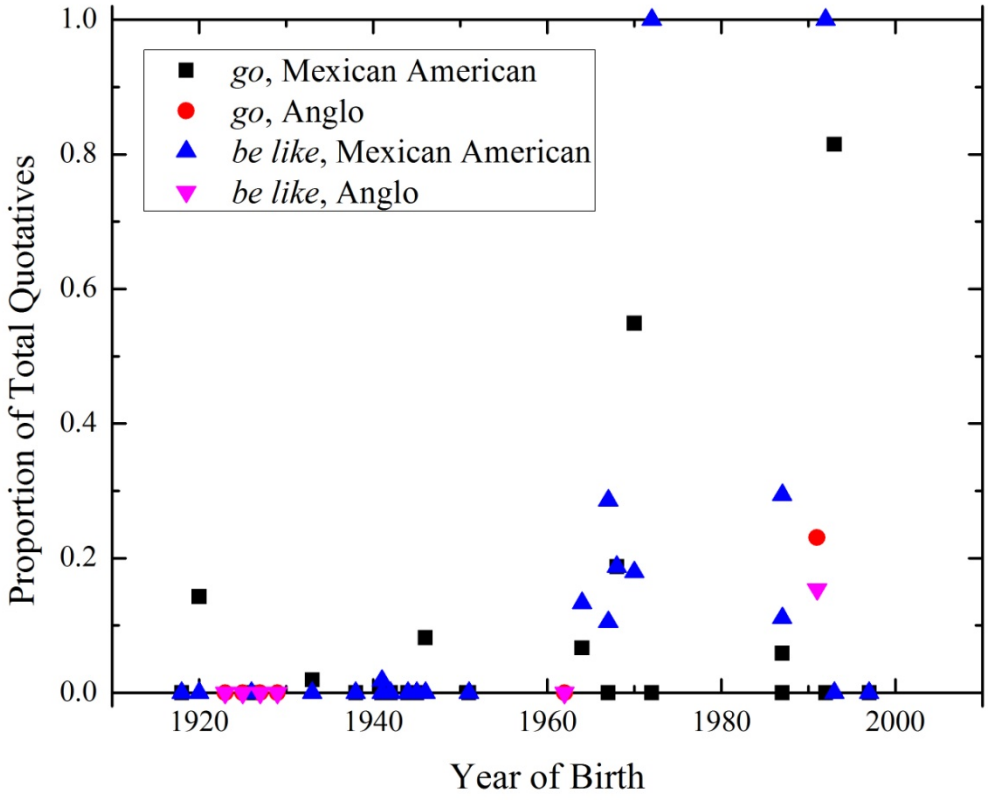
F_1



F_2

- Affected by merger with the BOT vowel, which all 3rd- and 4th-generation speakers show
- Lowering by later-born speakers
- Ethnicity not significant
- Year of birth significant for both formants

Quotatives

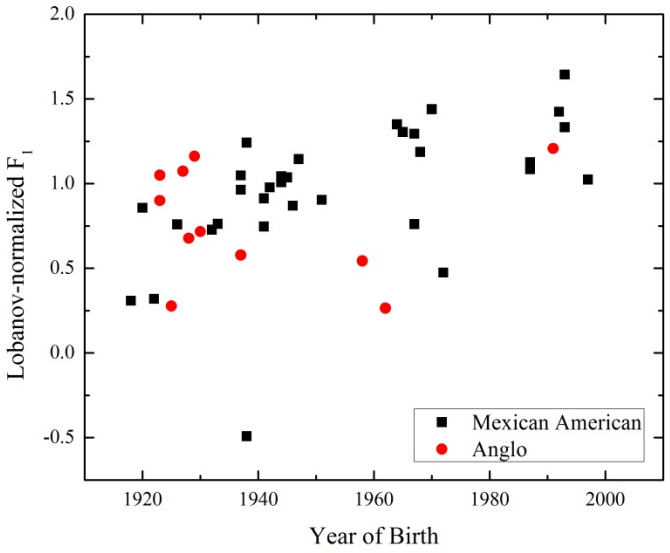


- Two new forms have rapidly spread across the U.S.:
- *go* ("He **goes**, 'All right, get out'")
- and *be like* ("So I'**m like**, 'O.K., let's go'")
- Analysis not complete, so no stats yet

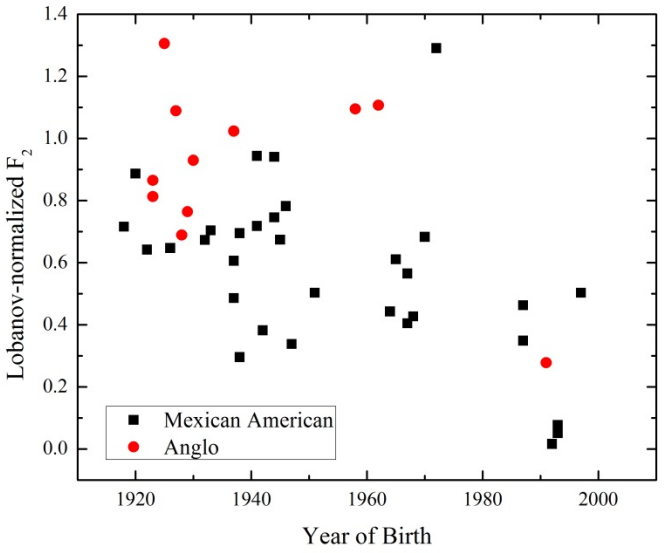
← Change across generations is pretty obvious, though

A Variable Defying Widespread Changes: the BAN vowel

F_1



F_2



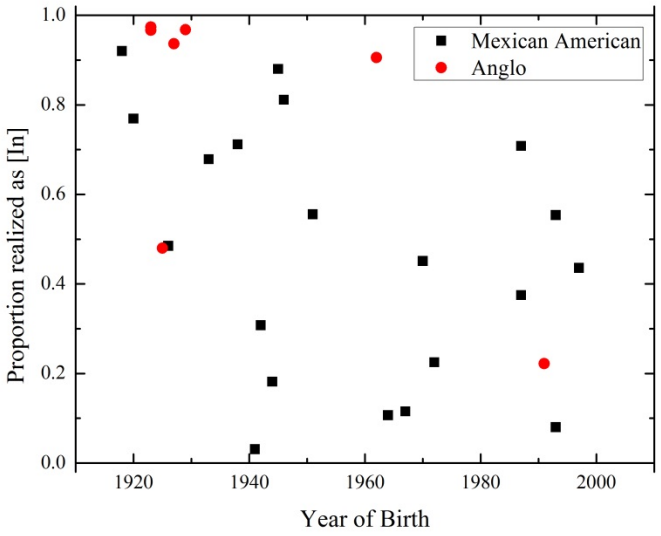
- Raising of /æ/ before nasals (the BAN vowel) is now almost universal in U.S. English and it's even making inroads into Canada
- Mexican American English has resisted it, however
- Few North Town subjects show much differentiation of BAT and BAN
- Among the few who do: two middle-aged Anglos and one middle-aged Mexican American with extensive, long-term contacts with Anglos

Anomalous Variables

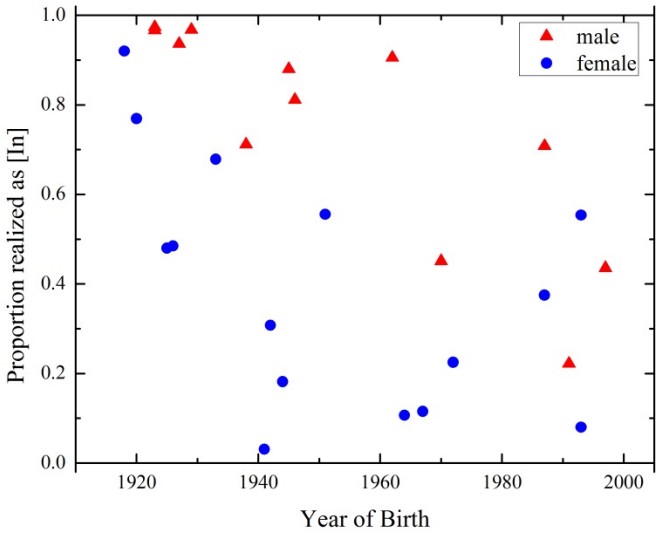
- There are remaining variables that:
  - show other kinds of correlations—(ing)
  - or have an uncertain origin—*r*-lessness

(ing)

Correlation with ethnicity



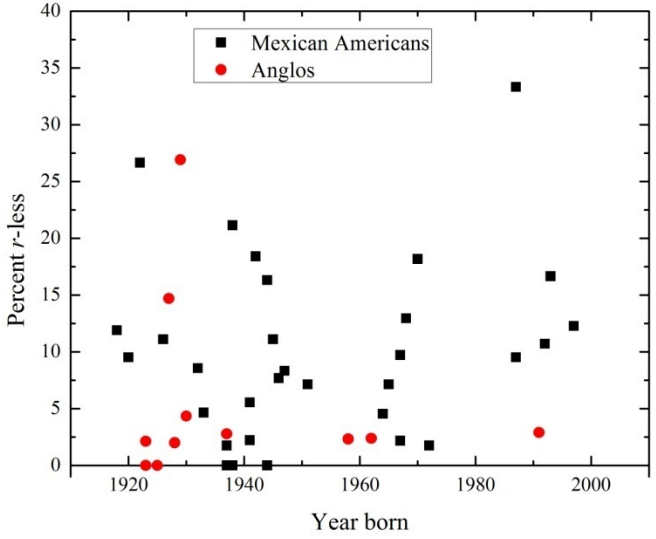
Correlation with sex



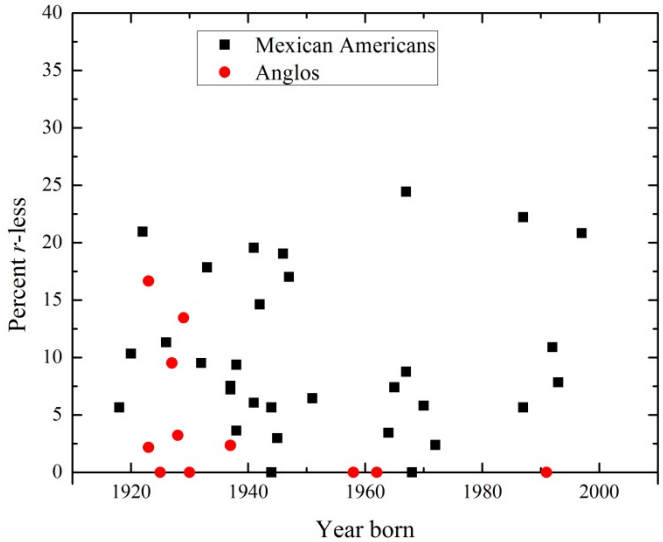
- Well-known variation between coronal and dorsal nasals
- Analysis isn't complete yet, so no stats to report
- Preliminary results suggest that ethnicity may not be significant
- However, sex shows the strongest correlation so far
- Grammatical constraints seem to be present, but are relatively weak

Rates of *r*-lessness

in unstressed syllables, excluding *over* and post-/ð/ tokens



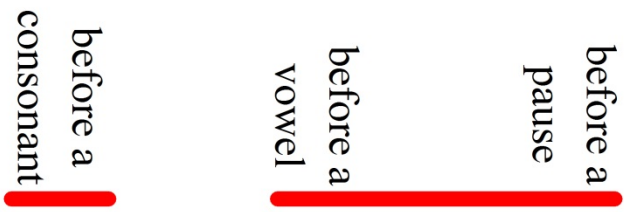
in syllable codas, collapsing position after a front vowel and position after a back vowel

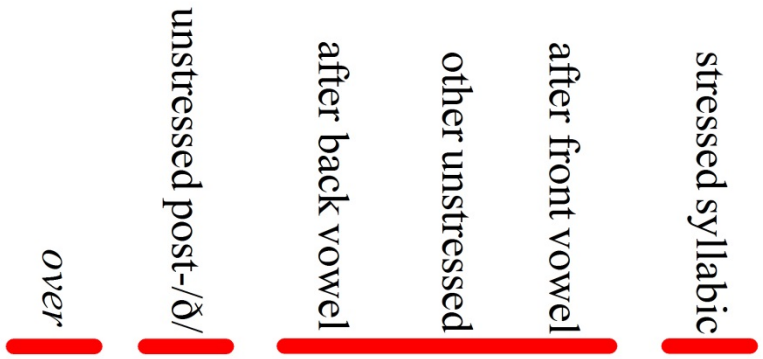


- This was to examine *r*-lessness, which is highly dependent on where the /r/ falls in a word
- Overall, ethnicity and generation were highly significant
- Mexican Americans were more *r*-less than Anglos, and middle generations were the most *r*-ful
- Weak but significant correlation with education: more education→more *r*-ful

Unusual Patterning of Rhoticity

- Post-hoc tests show that the most *r*-less contexts are *over* and post-/ð/ (as in *other*)
- Other unstressed /r/'s pattern with coda /r/'s





- Not only that, but pre-pausal /r/ patterns with pre-vocalic /r/
- Only pre-consonantal /r/ is more *r*-less than pre-vocalic /r/

There are good phonetic reasons behind the post-/ð/ and pre-pausal patterns; *over* seems to be a lexicalization.

Summary of Correlations

Variable	Correlated with ethnicity?	Correlated with gen./ yr.b.?
r-lessness	YES	YES (BUT NOT LINEAR)
/l/ realization	YES	NO
stopping of /ð/	YES	YES (BUT NOT LINEAR)
assimilation of /ð/	YES	YES (BUT NOT LINEAR)
/ʃ/ as affricate	YES	YES
/tʃ/ as fricative	YES	YES
/dʒ/ as fricative	YES	YES
preservation of /ju/	YES	YES
preservation of /hw/	YES	YES
BIT	NO	YES
BAIT	YES	YES (NUCLEUS ONLY)
BAT	YES (F_1)	YES (F_2)
BOUGHT	NO	YES
BOAT	YES	ONLY FOR GLIDE F_1
BITE/BIDE	YES	YES

Ethnic Correlations

- Some are clearly interference from Spanish: /l/ realization, /ð/ stopping, post-alveolar confusion, some vowel forms (BIT, BAT, and in part BAIT, BOAT, BOUT)
- /ju/ and /hw/ may be related to Spanish influence in a more complex way
- Some represent rejection of regional Anglo variants: /ð/ assimilation, BITE/BIDE; in part BAIT, BOAT, BOUT
- *r*-lessness is a mystery: too many potential sources

Birth Cohort Correlations

- Some represent younger Mexican Americans moving away from certain Spanish interference features: post-alveolars, BIT, BAT, unmarked past tense
- Some represent movement toward nation-wide trends: /ju/, /hw/, BOUGHT, quotatives
- Others may have to do with emerging social class differences: *r*-lessness, /ð/-stopping
- The new dialect: some interference features persist, others are discarded (but why?); nationally widespread trends seep in

Cognitive Factors

- We want to know how identity is involved in the observed patterns
- Why are some Spanish interference features preserved and others discarded?
- With North Town's history, you can't blame Mexican Americans for not identifying with Anglos, but…
- Are regional Anglo features really rejected because Mexican Americans don't want to sound like rural Anglos?
- Are there any stereotypes or subtler identification markers?
- We're now conducting a perception experiment to investigate what speakers know about these variables

General Conclusions

- Substrate influence certainly plays a role in ethnolect formation
- There's a lot more going on than that, though
- Contrastive analysis doesn't explain everything
- As any sociolinguist can tell you, social factors are powerful
- However, it's necessary to examine a swarm of variables to get a realistic picture of how the ethnolect forms
- Only then does it become apparent that numerous factors have been involved, and what the relative importance of each one is
- We need to take this kind of broad approach more often

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National Science Foundation
WHERE DISCOVERIES BEGIN

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