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The Linguistic Consequences of Catastrophic Events: An Example from the American Southwest

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1. Introduction

In a discussion of gradualism versus catastrophism in language change, Labov (1994) notes that "it is well known that catastrophic events have played a major role in the history of all languages, primarily in the form of population dislocations: migrations, invasions, conquests, and massive immigrations....[S]uch catastrophic changes are more common than previously believed, and...the history of many urban speech communities would lead us to expect massive population changes several times in a century rather than once in a millennium" (Labov, 1994:24). However, in spite of the obvious linguistic importance of catastrophic events and in spite of their relative frequency, they are still virtually unexplored in sociolinguistics and dialectology. Sociolinguists typically take a microcosmic approach to a speech community at one point in time; although such an approach is extremely useful for tracking the spread of linguistic changes through the community, it is less useful for exploring the effects of catastrophic events. While dialectologists have traditionally taken a more macrocosmic approach, the spatial distributions they outline are purely synchronic. In fact, most of the data that bear on the linguistic consequences of catastrophic events comes from historical linguists and creolists, who often correlate linguistic variation in written texts with large-scale demographic developments.[1]

This paper attempts to add to our understanding of the linguistic consequences of catastrophic events by exploring the effects of World War II in Texas and Oklahoma. Students of the American South have long recognized that World War II is an important dividing line in the history of that region. Mobilization for the war led to a rapid acceleration of urban growth, a dramatic expansion of the industrial base, the construction of a large number of military posts (and an influx of federal dollars), and the alteration of patterns of migration which had carried massive numbers of Southerners northward and westward for half a century. Along with the mechanization of agriculture and the elaboration of the transportation and communication systems after World War II, these processes led to a large-scale redistribution of the Southern population. For instance, in 1940 more

[1]Labov cites a number of creolists who correlate large-scale demographic developments with linguistic phenomena; for two non-creolist examples see Bailey and Maynor, 1987, and Herold, 1990.

than half of the population of both Texas and Oklahoma lived in rural areas (communities with less than 2500 residents). By 1950 more than half lived in urban areas, and as Figures 1 and 2 show, the rapid growth of the urban population has continued for 50 years even as the rural population has declined. In 1990, more than three-quarters of the population in Texas and two-thirds of the population in Oklahoma lived in urban areas. Moreover, most of this urban growth has been in large metropolitan areas. For example, in 1930 five Texas and two Oklahoma cities had populations greater than 100,000, but neither state had a city with more than 300,000 people. By 1990 three of the Texas cities had populations of more than 1,000,000, and Oklahoma City had more than 900,000. What was before the war an insular, rural, agrarian society comprised largely of natives, then, has since the war moved rapidly toward an urban, industrialized society increasingly linked to other regions of the United States by migration into the region and by nationwide communications networks.

Dramatic social changes, driven largely by civil rights demands of African Americans (who had contributed to the war effort in significant ways), accompanied the demographic developments. The integration of public eating establishments, schools, and transportation is the most visible manifestation of these social changes, but the last fifty years has also seen an expansion of educational and employment opportunities for whites as well as blacks. The availability of these opportunities has meant increased exposure to the outside world for many Southerners, but the ultimate consequence of all of these social and demographic developments has been the transition from a traditional to a modern society.[2]

Since this transition from a traditional to a modern society has taken place within the last half century, we have an ideal opportunity to study its linguistic consequences using many of the techniques of contemporary sociolinguistics. Our data from Texas and Oklahoma provide an excellent source for applying these techniques.

2. Methods

The Texas and Oklahoma data comes from three random-sample telephone surveys that are part of a larger study of urbanization and language change in the American South. These surveys include a Phonological Survey of Texas (PST), a Grammatical Investigation of Texas Speech (GRITS), and a Survey of Oklahoma Dialects (SOD).[3] PST and GRITS

[2]For a discussion of these changes, see Grasmick, 1973; McKinney and Borque, 1971; Reissman, 1965.

[3]These surveys were supported by a series of grants from the National Science Foundation (BNS-8812552, BNS-909232, and BNS-9109695). We wish to thank NSF, Texas A&M University, and Oklahoma State

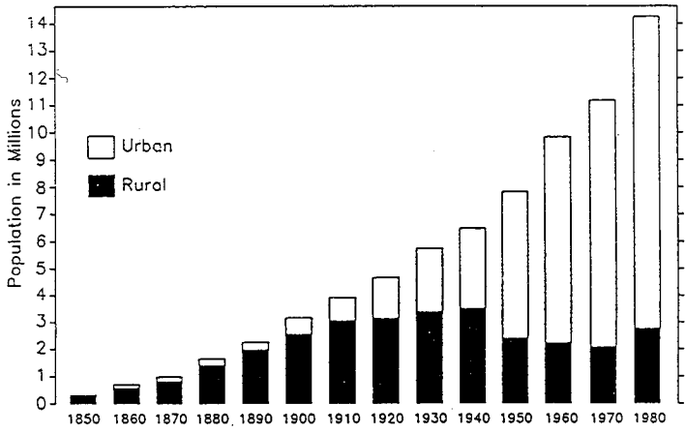

Figure 1. Growth of the Rural and Urban Population in Texas

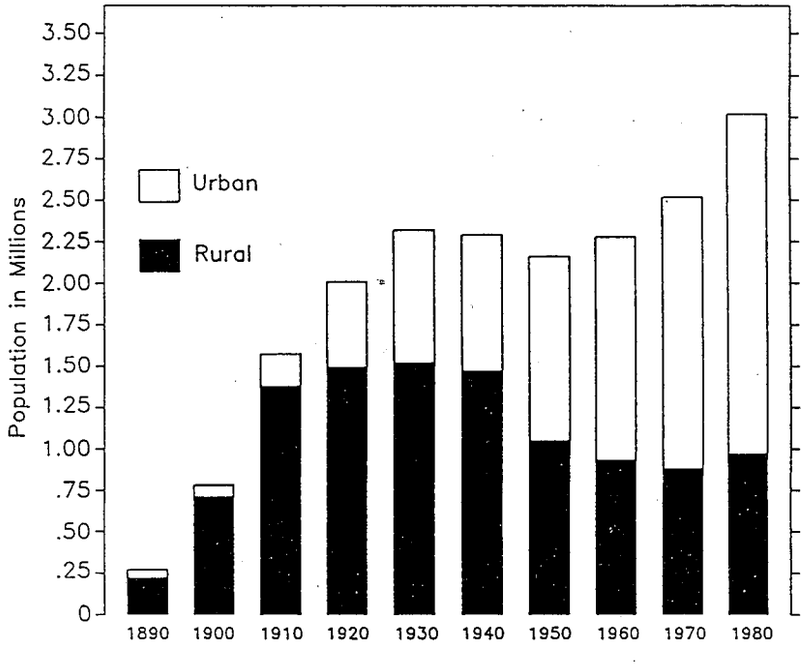

Figure 2. Growth of the Rural and Urban Population in Oklahoma

were "piggy-backed" on the Texas Poll, state-wide public opinion survey of 1000 randomly-selected adult Texans conducted quarterly by the Public Policy Resources Lab at Texas A&M University. In order to piggy-back on the Texas Poll, we included a series of questions designed to elicit phonological data as part of the January, 1989, poll and a series designed to elicit morpho-syntactic data on the October, 1989, poll, and we tape-recorded the January poll in its entirety so that we could transcribe the data phonetically. We organized and conducted SOD ourselves in 1991; it includes 632 randomly selected respondents, was tape-recorded in its entirety, and includes all of the linguistic forms surveyed in PST and GRITS plus a number of other items. Taken together, the surveys provide extensive evidence on language variation in Texas and Oklahoma and on its social and spatial correlates. By analyzing the data using the apparent time construct, we can make inferences about linguistic changes in progress, and since the sample includes several hundred people born both before and after World War II, we can make inferences about the linguistic consequences of this catastrophic event. A prior test of apparent time differences in PST and GRITS with real time differences provides strong confirmation of the validity of the apparent time construct (see Bailey, Wikle, Tillery, and Sand, 1991) and make it especially appropriate for the data used here.

3. Results

Eleven features elicited in Texas (in PST and GRITS) and eight in Oklahoma (in SOD) show both statistically significant age differences (using a Scheffe Test for differences at the .05 level) and apparent time distributions that suggest linguistic change in progress. Table 1 lists those features (and gives phonetic values for the phonological ones), while Figures 3-4 plot apparent time distributions of the Texas features and Figures 5-6 plot apparent time distributions of the Oklahoma ones.

University for their support. For more information on the surveys, see Bailey and Bernstein, 1989; Bailey, Wikle, Tillery, and Sand, 1991.

TABLE 1
Linguistic Changes in Progress in PST/GRITS and SOD

Status of Feature	Description of Feature	Texas PST/GRITS	Oklahoma (SOD)
Expanding:	*fixin to* as a quasi-modal	+	+
	lax vowel [ɪ] in *field*	+	+
	lax vowel [ɛ] in *bale/sale*	+	+
	lax vowel [ʊ] in *pool*	+	+
	unrounded vowels [ɑ] in *lost*, *walk*, and *hawk*	+	+
	[tu] for [tju] in *Tuesday*	+	-
	[ju] for [hju] in *Houston*	+	not investigated
Recessive:	*snap bean* for *green bean*	+	+
	r-lessness in *forty* [ə-0)	+	+
	intrusive /r/ in *washington/ wash*	+	+
	unrounded vowel [ɑ] in *forty*	+	not investigated

Three of the features are well-known characteristics of Southern speech: *fixin to*, a quasi-modal that signals a more immediate future than *gonna*; the lexical item *snap bean* used for *green bean*; and the use of an unconstricted /r/ ([ə]) in words like *forty*. Six of the features represent changes that lead to conditioned and unconditioned mergers. These include the use of the lax vowels [I], [ɛ], and [ʊ] before /l/ in words like *field sale/bale*, and *pool* respectively; the use of the unrounded vowel [ɑ] in *lost*, *walk* and *hawk*; the loss of [j] after alveolars in words like *Tuesday*; and the loss of /h/ before /j/ in words like *Houston*. The final two features, the use of an intrusive /r/ in words like *wash* and the use of a low back unrounded vowel in *forty* [ɑ], are relatively uncommon and seem to be rapidly disappearing. Three facts about these features are particularly interesting.

First, with one exception the same features that are changing in Texas are also changing in Oklahoma, and they are changing in the same way.

Further, the one exception is not really an exception: the loss of /j/ after alveolars in words like *Tuesday* was already well-advanced among the oldest respondents in Oklahoma.[4] As Table 1 indicates, in both states (1) tense vowels are increasingly being laxed before /l/ (so that in pairs like *feel/fill*, *bale/bell*, and *pool/pull* both words sound like the second member of the pair); (2) the use of unrounded vowels in words like *hawk, walk*, and *lost* is expanding rapidly (so that in pairs like *hawk/hock* both words sound like the second member); (3) the use of the Southernism *fixin to* is expanding; (4) the traditional "r-less" pronunciation in words like *forty* is disappearing; (5) intrusive /r/ in words like *wash* and *Washington* is rapidly disappearing; (6) some traditional Southern lexical items like *snap bean* are being used less frequently.

Second, the largest changes in apparent time distributions are almost always between the two middle age groups. The largest change occurs between the two middle group for all but one of the Texas features (*fixin to*) and one of the Oklahoma features (*snap bean*). Even when the differences between these two groups do not seem to be the largest, as in the case of *pool* in Oklahoma, the statistically significant break is frequently between them: the oldest two age groups are often not significantly different from each other, but they are usually significantly different from the two youngest age groups, which are in turn often not significantly different from each other. The results of the Scheffe Test, which are summarized in the Appendix, confirm this pattern. In fact, for six of the features in Texas and one in Oklahoma, the *only* statistically significant differences are between the two middle generations. While there is more overlap between the two middle groups in Oklahoma, the general pattern still holds.

It is interesting to note that respondents in the second oldest age group were born between 1930 and 1944; those in the second youngest were born between 1945 and 1960. From the perspective of apparent time, the two oldest groups represent English as it was spoken in Texas and Oklahoma before the demographic changes brought about by World War II; the two youngest groups represent English as it was spoken after those changes. While it would be inaccurate to say that World War II "caused" the changes that have been taking place in Texas and Oklahoma, the apparent time distributions clearly suggest that the war and its consequent demographic and social developments were catalysts for those changes. A number of linguistic features that were relatively uncommon before World War II expanded rapidly after it (see Figures 3 and 5), and several traditional features

[4]In Oklahoma we did not elicit two features that we elicited in Texas: the loss of /h/ in initial /hj/ clusters (this makes *hue* sound like *you*) and the use of the unrounded vowel of *far* in *forty* (this makes *lord* sound like *lard*). Both of these are features that occur infrequently; nevertheless, their distributions in Texas parallel those of the other features we elicited in that state.

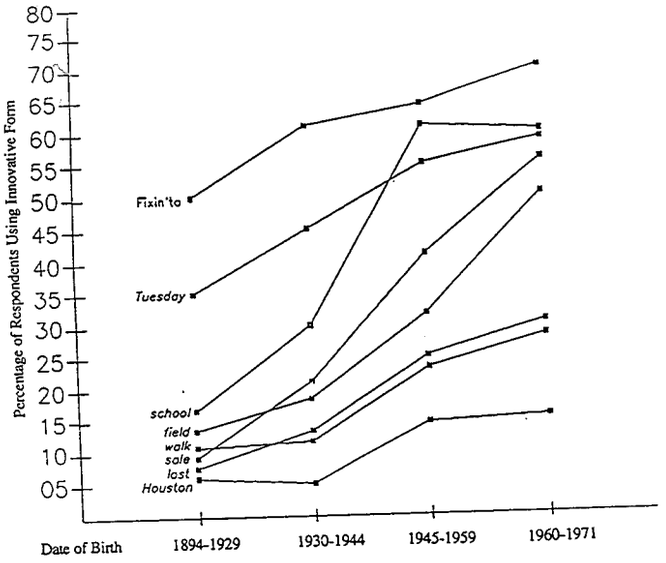

Figure 3. Apparent Time Distributions of Linguistic Innovations in Texas

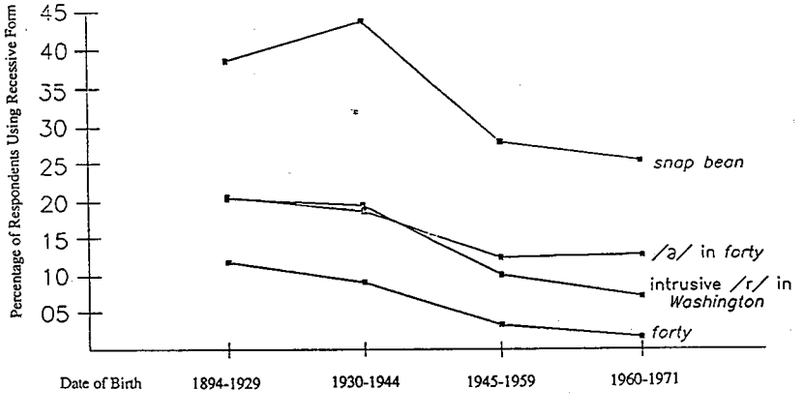

Figure 4. Apparent Time Distribution of Recessive Forms in Texas

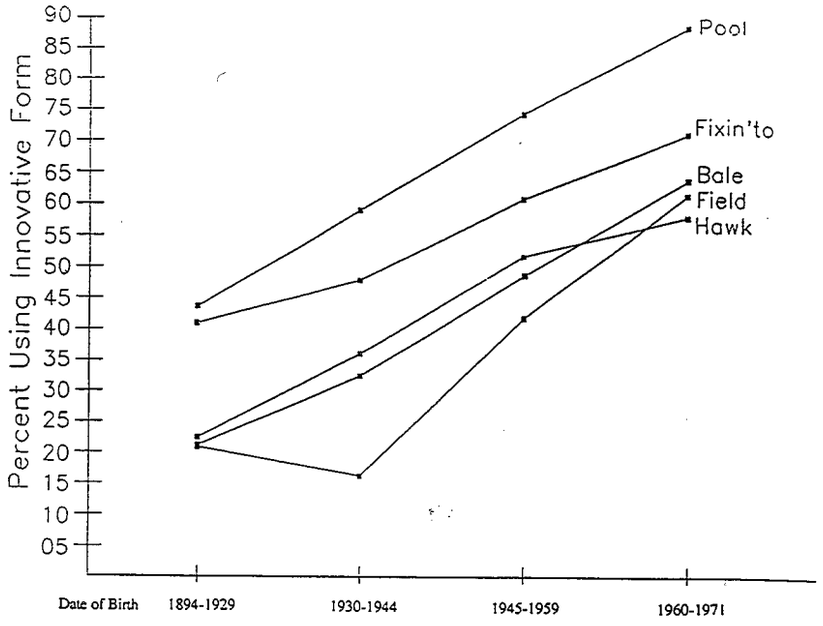

Figure 5. Apparent Time Distribution of Linguistic Innovations in Oklahoma

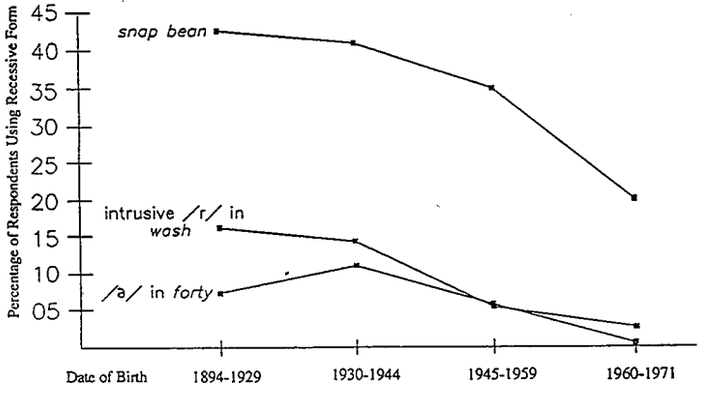

Figure 6. Apparent Time Distribution of Recessive Forms in Oklahoma

that were formerly stable began to disappear after the war (see Figures 4 and 6). Still other changes that had begun before the war (the spread of fixin to and the loss of /j/ after alveolars, for example) accelerated rapidly after it.

Perhaps the best way to see how these changes clustered around World War II is to look at the decade-by-decade progress of four of them in Oklahoma -- the use of *snap bean*, the use of the lax vowels in *field* and *pool* and the use of the unrounded vowel in *hawk*. If World War II was in fact a catalyst for linguistic change, we might expect to see major shifts in the use of features either during the 1940s or in the decade immediately thereafter. As Figures 7-10 suggest, that is precisely what we find. The decline in the use of *snap bean* and the increase in the use of lax vowels in *field* began in earnest during the 1950s (Figures 7 and 8); the increase in the use of lax vowels in *pool* and unrounded vowels in *hawk* began in earnest during the previous decade (Figures 9 and 10). Configurations such as these strongly suggest that the linguistic changes documented in PST, GRITS, and SOD are in fact consequences of the demographic developments brought about by World War II.

Third, the linguistic developments that have been taking place over the last half century represent a substantial change in the English spoken in Texas and Oklahoma. As we point out above, some features traditionally associated with Southern and South Midland speech (those in the recessive category in Table 1) are clearly disappearing. Further, some features that occur in other American dialects (e.g., the use of unrounded vowels in *hawk* and the loss of /j/ in *Tuesday*) are emerging in Texas and Oklahoma. Moreover, recent arrivals to the states are in the forefront of almost all of these developments: nativity is a barrier to the spread of all of the innovations except *fixin to* (see Bailey, Wikle, Tillery, and Sand, 1993; Tillery, 1992). At first glance, then, it would appear that the traditional vernacular of Texas and Oklahoma is disappearing and that the speech of these two states is converging with that of other dialects in the United States. However, while these changes represent a major shift away from traditional speech norms of the area, they do not necessarily represent convergence with other American dialects. Two factors, in particular, suggest that even as the speech of Texas and Oklahoma moves away from traditional norms, it is developing independently of other dialects.

First, many of the changes involve mergers or near mergers. The laxing of tense vowels before /l/, the use of unrounded vowels in words like *hawk*, and even the loss of /j/ after alveolars and /h/ before /j/ lead to mergers (the latter two processes, for example, cause *due/do* and *hue/you* to be homophonous).[5] Herzog's Principle (see Labov, 1994: 313, for a

[5]The work of Reed (1991) documents the spread of a similar process in Texas that leads to a merger: the loss of /h/ in initial /hw/ clusters. As with the processes discussed here, World War II seems to be the catalyst for the loss of /h/.

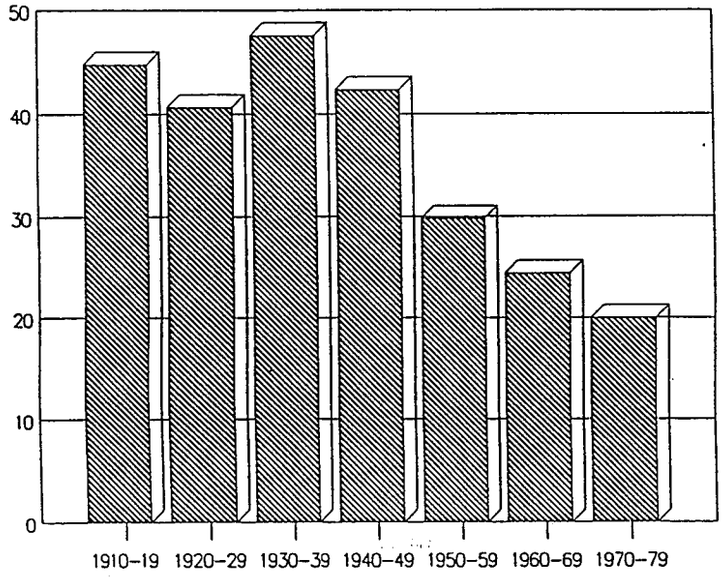

Figure 7. Distribution of the Use of *snap bean* in SOD by Decade of Birth of Respondents

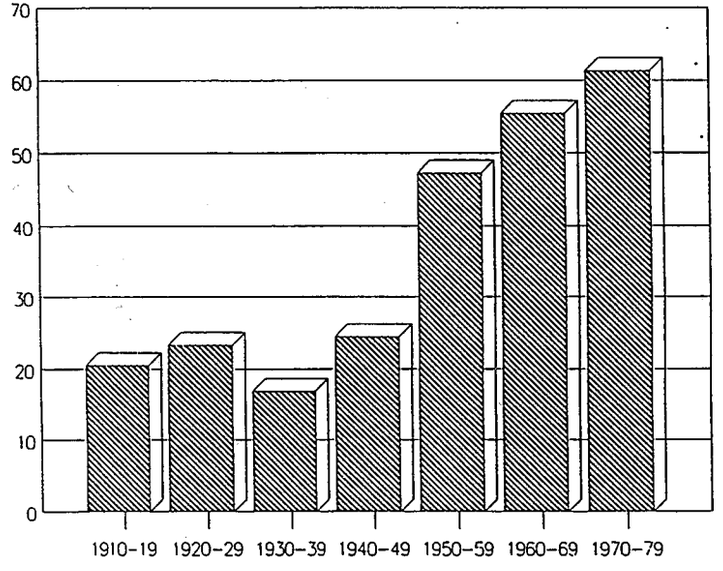

Figure 8. Distribution of Innovative Form of *field* in SOD by Decade of Birth of Respondents

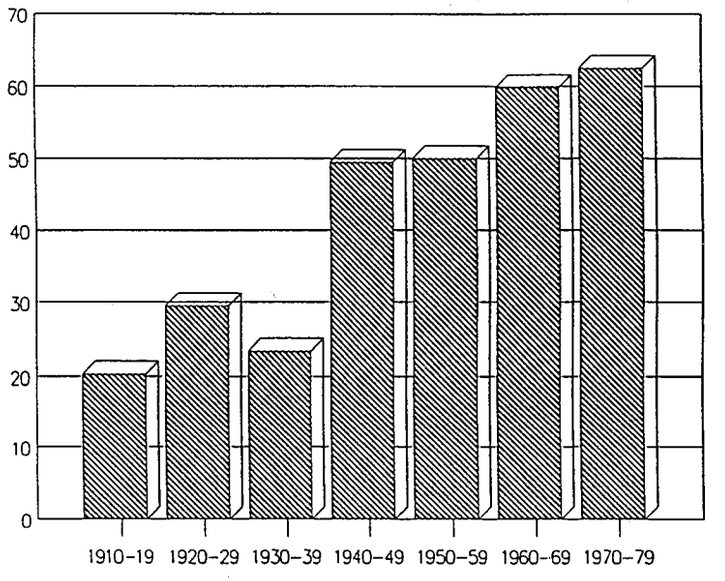

Figure 9. Distribution of the Innovative Form of *hawk* in SOD by Decade of Birth of Respondents

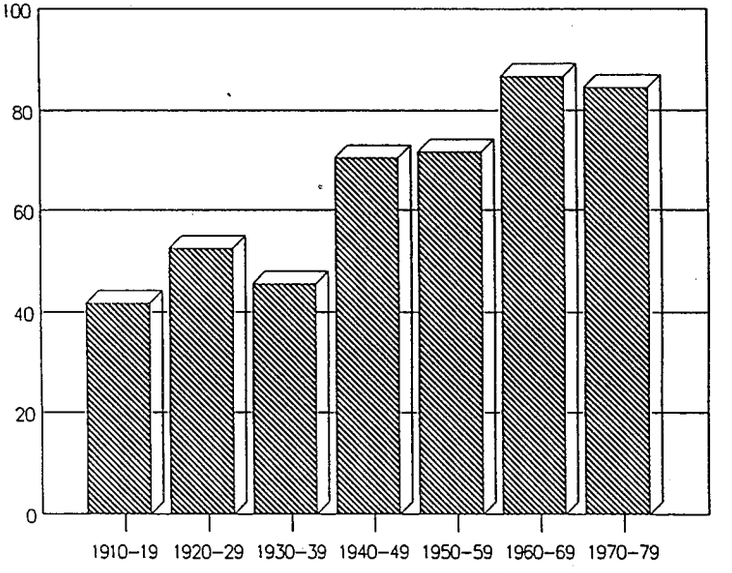

Figure 10. Distribution of the Innovative Form of *pool* in SØD by Decade of Birth of Respondents

discussion) indicates that mergers expand at the expense of distinctions, so we might expect that these mergers would expand quite apart from any outside influence. Second, at the same time that some traditional features of Texas and Oklahoma speech are disappearing, others are expanding or holding their own. Of course *fixin to* is expanding in both Texas and Oklahoma, and data from GRITS and SOD indicates that such traditional features such as *yall*, *might could*, and monophthongal /ai/ before voiceless obstruents are holding their own.

Actually, these Southernisms may be doing more than holding their own. Random sample telephone surveys like PST, GRITS, and SOD include respondents who are not native to but who are residents in a state as well as those who were born and raised there. Differences between the linguistic behavior of natives and non-natives are important in determining the linguistic consequences of World War II. *Yall*, for example, is not included in the list of features expanding in apparent time because it is already used extensively by the oldest age groups. However, while it is no longer expanding among the population as a whole, it is expanding among newcomers, who readily adopt this traditional form. *Fixin to* is expanding among newcomers as well as among long-term residents of Texas and Oklahoma, and both *yall* and *fixin to* are expanding not just in Oklahoma but throughout the South.

Nativity is a particularly important variable in Texas (see Tillery, 1992). An analysis of just the native Texans in PST and GRITS shows how two traditional features that seem to be merely holding their own, *might could* and monophthongal /ai/ in *night*, are actually expanding among natives, though not among other groups (see Figure 11). Interestingly, the time frame for the expansion of monophthongal /ai/, at least, parallels that of other changes in Texas: World War II again seems to be the catalyst. The motives for these changes may be somewhat different, however. The Texas Poll that included PST also included a question that asked respondents how they viewed Texas as a place to live. As Figure 12 indicates, the respondents' rating of Texas as a place to live correlates with the use of monophthongal /ai/ quite strongly (the correlation is statistically significant at the .001 level): respondents who rate the state excellent or good are far more likely to have this pronunciation than are those who rate the state poor. What this suggests, of course, is that identity with Texas as a place to live is a primary motive for the expansion of monophthongal /ai/.

The expansion of *might could* and monophthongal /ai/, alongside the expansion of those changes which lead to mergers or near mergers and the diminishing use of traditional Southern lexical features such as *snap bean*, points to the complexity of the linguistic consequences of World War II in Texas and Oklahoma. Apparently as a result of the population dislocations brought about by the war, many traditional Texas and Oklahoma features are disappearing, bringing the speech of these areas closer to that of other American dialects in some ways. Apparently in reaction to those

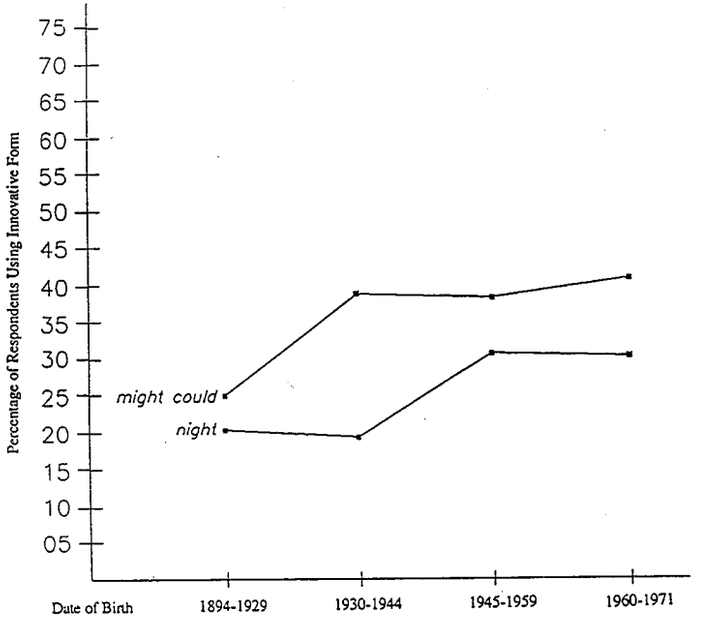

Figure 11. Apparent Time Distribution of Monophthongal /ai/ and *might could* among Native Texans.

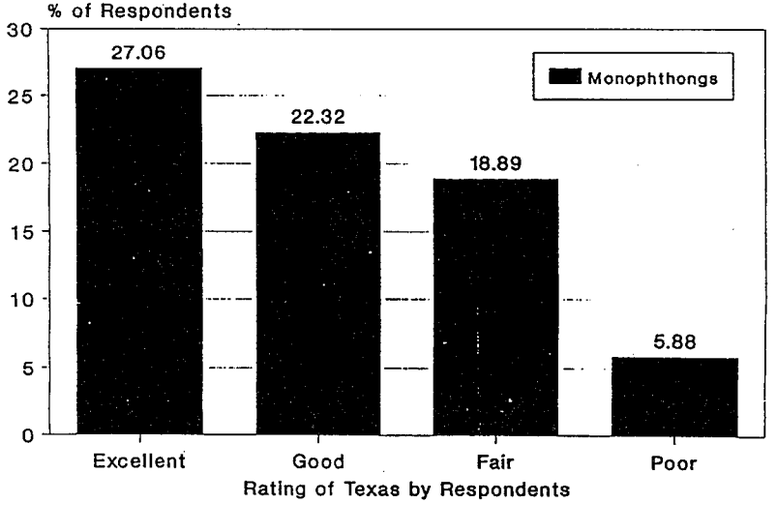

Figure 12. Correlation of Monophthongal /ai/ in *night* with Respondents' Rating of Texas as a Place to Live
Source: Tillery, 1992

developments, other traditional features are expanding as markers of local identity, enhancing the distinctiveness of the speech of the region. Thus even as the speech of Texas and Oklahoma has evolved into a radically different variety over the last 50 years, it has maintained its distinctiveness from other varieties in a number of ways.

The population dislocations brought about by World War II have also had complex linguistic consequences in one other way: they have led to a restructuring of the linguistic landscape of Texas and Oklahoma. Because the Linguistic Atlas of the Gulf States (LAGS) includes data from east and central Texas collected some 15 years before PST and GRITS, we have real time evidence from Texas which allows us to see exactly how the linguistic landscape of that state is changing.[6] Our examination of features such as r-lessness and *snap bean* in LAGS suggests that the speech of the Lower South (i.e., Kurath's Southern Dialect) was dominant almost everywhere east of the Balcones Escarpment (which runs roughly from Dallas-Fort Worth in the north to Laredo in the South) in Texas. The data from PST suggests that since World War II the linguistic domain of the Lower South has been diminishing to include increasingly smaller areas of East Texas (see Figure 13 below). At the same time that the domain of the Lower South has been shrinking, the diffusion of new features such as the use of unrounded vowels in words like *hawk* has created a new spatial structure, with areas of linguistic innovation opposed to areas of linguistic conservatism. Figure 13, which shows the linguistic domain of the Lower South at two points in time with areas of linguistic innovation superimposed, attempts to capture the complex changes in the linguistic landscape of Texas that are taking place -- largely as a consequence of the demographic changes brought about by World War II.

4. Conclusion

The data from PST, GRITS, and SOD make it clear that the population dislocations caused by World War II have had significant linguistic consequences in Texas and Oklahoma, but the consequences are quite complex. As traditional features of the speech of the area have begun to disappear and newer ones to expand, the dialect has been reshaped to a substantial degree. Further, the expansion of some traditional features and the recession of others, along with the diffusion of innovations, are reshaping the linguistic landscape of these states. However, the preservation of some traditional features and the expansion of others as

[6]Actually, because LAGS is purposely biased toward older informants in order to provide a historical baseline for SAE, the data in LAGS probably reflects a time period much earlier than the mid-1970s. In fact, it probably gives us a reasonably accurate picture of the pre-World War II linguistic landscape in Texas, even though the data was collected only 15 years before PST.

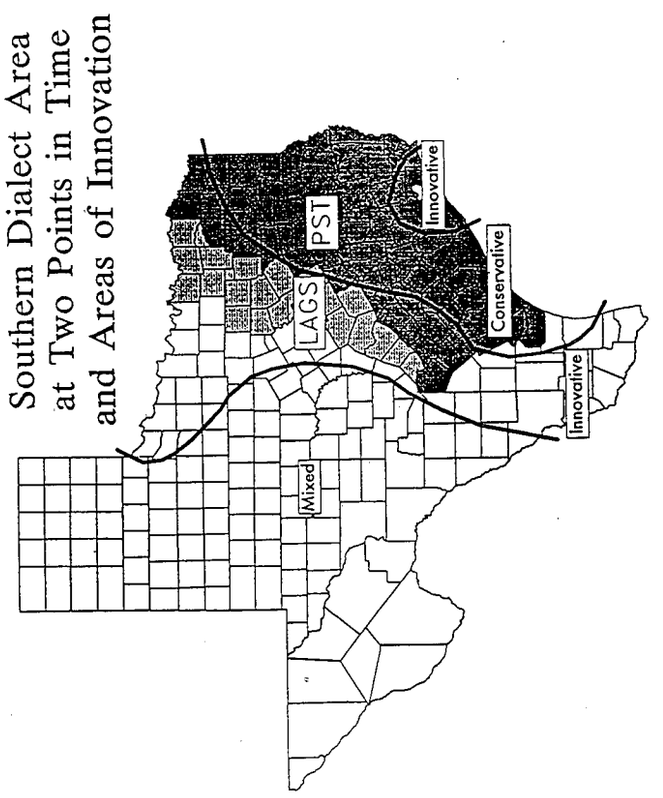

Figure 13. Linguistic Domain of the Lower South at Two Points in Time with Areas of Linguistic Innovation and Conservatism Superimposed

markers of regional identity suggest that even while the speech of Texas and Oklahoma is changing, it is not necessarily converging with other varieties of American English. More generally, the data suggests that while catastrophic events have significant linguistic consequences, those consequences are often complex and contradictory, sometimes leading to linguistic convergence and sometimes preserving differences. Such consequences explain in part why vernaculars themselves are so complex.

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Appendix

Summary of Results for Scheffe's Test of Significance

(Contrasting upper case letters indicate significant age differences at p<.05. Identical letters mean that the age categories actually comprise one group with regard to the use of that feature. For example, for snap bean in Texas there are only two age groups -- those 44 and younger and those 45 and older. For postvocalic /r/ in Texas, age is only marginally significant [p<.088]).

Age Group:	18-29	30-44	45-61	62-95
A. Innovations in Texas				
unrounding of /ɔ/ in *lost*	AAA	AAA	BBB	BBB
unrounding of /ɔ/ in *walk*	AAA	AAA	BBB	BBB
laxing of /I/ before /l/	AAA	BBB	CCC	CCC
laxing of /ɛ/ before /l/	AAA	BBB	CCC	DDD
laxing of /ʊ/ before /l/	AAA	AAA	BBB	CCC
loss of /h/ in /hj/ clusters	AAA	AAA	BBB	BBB
loss of /j/ in /tj/ clusters	AAA	AAA	AAA	BBB
fixin to	AAA	AAA	AAA	BBB
B. Recessive Features in Texas				
intrusive /ɾ/	AAA	AAA	BBB	BBB
/ɑ/ in *forty*	AAA	AAA	BBB	BBB
loss of postvocalic /r/	AAA	AAA	AAA	AAA
snap bean	AAA	AAA	BBB	BBB
C. Innovations in Oklahoma				
unrounding of /ø/	AAA	A/B	B/C	CCC
laxing of /I/ before /l/	AAA	BBB	CCC	CCC
laxing of /ɛ/ before /l/	AAA	BBB	CCC	DDD
laxing of /ʊ/ before /l/	AAA	AAA	BBB	BBB
fixin to	AAA	A/B	B/C	CCC
D. Recessive Features in Oklahoma				
intrusive /ɾ/	AAA	A/B	A/B	BBB
loss of postvocalic /r/	AAA	A/B	A/B	BBB
snap bean	AAA	A/B	BBB	BBB