Research issues in Mexican American English

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Research durign the past decade has greatly increased our understanding of Southwest Spanish and the shift from Spanish to English that is taking place in Mexican-American communities. Mexican American Vernacular English (MAVE), however; *has remained a relatively neglected area of investigation, despite the fact that English has become the primary or sole language of many Mexican Americans. This article examines work on MAVE that has been accomplished to date and proposes a research program designed to fill the most obvious gaps in our knowledge. Using data and examples from recent and ongoing research in Los Angeles and San Antonio, I argue that sociolinguistic studies of MAVE are necessary to achieve a full understanding of the linguistic repertoire and social dynamics of Mexican American communities. Such studies also have the potential to contribute to our understanding of language shift and to formal linguistic theory. Finally, systematic study of MAVE is needed to counter linguistic stereotypes that negatively impact on the education of Mexican American children.*

La investigación de la última década ha incrementado grandemente nuestra comprensión del español del suroeste y del cambio del español al inglés que ocurre actualmente en las comunidades mexicano-americanas. El inglés vernáculo mexicano americano (TVMA), sin embargo, continúa siendo un área de investigación relativamente descuidada, a pesar de que el inglés se ha convertido en la lengua principal o única de muchos mexicano-americanos. Este artículo examina el trabajo sobre IVMA que se ha realizado hasta ahora y propone un programa de investigación diseñado para subsanar las deficiencias más obvias en nuestro conocimiento. Utilizando datos y ejemplos de la investigación reciente y en curso en Los Ángeles y San Antonio, argumentaré que los estudios sociolingüísticos sobre el IVMA son indispensables para una comprensión cabal del repertorio lingüístico y la dinámica social de las comunidades mexico-americanas. Además, este tipo de estudios pueden contribuir a una mejor comprensión del cambio lingüístico y a la teoría lingüística formal. Finalmente, se necesita un estudio sistemático del IVMA para contrarrestar los estereotipos lingüísticos que afectan negativamente la educación de los niños mexicano-americanos.

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In the United States, Mexican American communities are characterized by great linguistic diversity, not only in the degree and extent of their bilingualism, but also in the diversity of Spanish and English dialects spoken. Thus, in cities like Los Angeles, Houston, or San Antonio, we find educated professionals and business people whose Spanish is indistinguishable from the *norma culta* of Mexico City, Guadalajara, or Monterrey, as well as working class immigrants from throughout Mexico who have brought with them the popular speech of their places of origin. We also find numerous second, third, and fourth generation Mexican Americans who retain varying degrees of Spanish proficiency, and we find many fluent speakers of Spanish whose dialects, partially under the influence of English and partially through natural linguistic evolution, have diverged from the dialects spoken by their immigrant forebearers and who now speak one or another variety of Southwest Spanish.

A similar situation exists with respect to the varieties of English spoken in Mexican American communities. Thus, middle and upper-class Mexican Americans such as Henry Cisneros or Federico Peña, both members of the Clinton administration, speak English varieties which are indistinguishable from the speech of upper-middle class Anglos in the regions where they reside. At the other end of the social scale, we find the mass of recent immigrants, many confined to overcrowded *barrios* as a result of lack of economic opportunity and the lingering effects of racism. Partially as a consequence of the age at which they immigrated and partially as a result of social marginalization, many immigrants never acquire native or near-native proficiency in any variety of English and speak a fossilized interlanguage, or learner variety. In between these two groups, however, we find the greatest number of Mexican Americans. Members of this group were either born in the United States, often to immigrant parents, or arrived before the age of five. Living in communities where both Spanish and English are in wide use, many are bilingual and their everyday speech with fellow community members, especially in south Texas, is characterized by frequent code-switching, as illustrated by examples (1), (2), and (3), extracted from sociolinguistic interviews with residents of an overwhelmingly Hispanic west San Antonio neighborhood:

(1) *Se fueron pa' otros* places. (Don 7)

(2) ...y *luego que una* little girl *le dice algo a mi* sister... (Don 27,28)

(3) And then *cuando completé los* — about five years old, we moved down to, close to J.T. Brackenridge... (Cindy 4)

Despite the frequent occurrence of the these types of code-switching in the speech of many members of this intermediate group, most descendants of immigrants, many of whom acquired English in infancy and most of whom received all or the greater part of their education in English, may be regarded as native-

speakers of English (Santa Ana, 1993). The English varieties spoken natively by many U.S.-born Mexican Americans, however, differ in a number of respects from other dialects of English and thjese differences have given rise to considerable misunderstanding of the nature of Mexican American Vernacular English (MAVE)[1], but, unfortunately, very little research into the nature or origin of the dialect's salient features. Indeed, more than a decade ago, Peñalosa observed that "the most obvious discrepancy in the field of Chicano sociolinguistics is that between the extensive use of English in the Chicano community and the paucity of serious studies concerning varieties of English used by Chícanos" (1980, p.115). A few years later, Ornstein-Galicia noted that the Southwest region is "the least exploited dialectologically and sociolinguistically in the United States [and] Chicano English remains at the bottom of the research list of issues treated in the Southwest" (1984, p. 163). The situation is only marginally improved today. In fact, aside from Santa Ana's (1991,1992) recent work on Los Angeles Chicano English (ChE), to which I shall return, most studies of the English spoken by Mexican Americans have lacked the linguistic sophistication and quantitative rigor that has characterized work on, for example, African American Vernacular English (AAVE) since Labors studies in Harlem more than 25 years ago (Labov, Cohen, Robins, & Lewis, 1968). Rather, researchers have tended to offer lists of features where MAVE diverges from Anglo varieties and often attributed the divergence primarily or even solely to the influence of Spanish (e.g., González, 1988; Metcalf, 1979; Penfield & Ornstein-Galicia, 1985).

The following section outlines some of the main features of MAVE identified in previous research and examines representative earlier research on MAVE that viewed divergent features as evidence of imperfect acquisition of English. The next section describes recent quantitative sociolinguistic studies such as Santa Ana (1991) and the work we are carrying out in San Antonio. I then suggest how systematic sociolinguistic investigation may add to our understanding of language shift and linguistic theory. Finally, I suggest that the type of scientific evidence generated by sociolinguistic research may be used to counteract widely held linguistic

1 Following the practice of sociolinguists working on African American Vernacular English, I use the term Mexican American Vernacular English, hereafter MAVE, to refer to the varieties, of English spoken by Mexican Americans who live in and/or continue to owe their cultural allegiance to the barrios of the southwest. I use the broader term Mexican American English (MAE) to refer to the full range of dialects spoken by Americans of Mexican ancestry. These varieties range from the Spanish-English interlanguages spoken by recent immigrants to the standard dialects spoken by fully assimilated members of the middle and upper classes. I have retained the term Chicano English (ChE) where it is used by other scholars and used the term Tejano English (TE) to refer to the dialect of MAVE spoken in the barrios of south Texas. The decision to avoid the term Chicano English is motivated by the rejection of Chicano identification by nearly all of the San Antonio speakers discussed here.

stereotypes that have long affected the educational prospects of Mexican American children.

Innovation in MAVE: Spanish Interference or Internally Motivated Development?

Researchers generally agree on the features that characterize the vernacular English dialects spoken by Mexican Americans. Thus, in a recent overview of the Mexican American language situation, Valdés (1988) mentioned five salient features of Chicano English.

1. Substitution of /č/ for /ʃ/ *(watches* for *washes*);
2. Substitution of /f/ and /s/ for /*Θ*/ (*teef* for *teeth);*
3. Replacement of voiced /z/ by /s/ (girl/s/ for girl/z/);
4. Unaspirated voiceless stops in initial position (/p/it for p^h/it).
5. Stress on both elements of a compound (âpple trée).

(Valdés, 1988, p.136)

With the exception of the substitution of /f/ and /s/ for /*Θ*/, these features are also included in the much more comprehensive list in Penfield and Ornstein-Galicia's (1985) monograph on Chicano English. Penfield and Ornstein-Galicia listed and commented upon 18 features of Chicano English pronunciation as well as on intonational and syntactic patterns. They argued that many of the features they identified are attributable to the influence of Spanish and the lingering effects of language contact. Their list of features of Chicano English pronunciation follows:

1. Alternation of č and ʃ;
2. Devoicing of z in all environments;
3. Devoicing of v in word-final position *(wayfs* for 'wives', *layfs* for 'lives');
4. Realization of v as [B] or [b], especially in intervocalic positions *(UBing* for 'living');
5. Realization of th as t and dh as d (*der* for 'there');
6. Realization of y for ǐ in word-initial position;
7. Devoicing of l in intervocalic and word-final position (*lae wich* for 'language' and yas for 'just');

8. Realization of a for ^ in stressed syllables *(mandey* for 'Monda/);
9. Tensing for **ɛ** to ey especially preceding nasals *(cheynch* for 'change');
10. Realization of **iy** as **I, ey** as **ɛ** and *uw* as **u (***nId* for 'need', *dhIs* for 'these', mɛl for 'mail', skul for 'school');
11. Different word distribution for *ɛ* and *æ (bɛk* for 'back', *bɛt for* 'bat', *bæd* for 'bed');
12. Realization of hw as w (e.g., *wɛn* for 'when');
13. Velarization of h as x;
14. Reduction of consonant clusters in word-final position (e.g., *wes* for 'west');
15. Deletion of intervocalic flaps and other consonants (e.g., *daar* for 'daughter');
16. Shift of major stress on noun compounds (e.g., *mini-skírt* for 'míni skirt');
17. Shift of major stress on verb compounds (e.g., *shów up* for 'show úp');
18. Shift of stress assignment in individual lexical items (e.g., *áccept* for 'accépt', *operáte* for 'operate').

(Penfield & Ornstein-Galicia, 1985, pp. 39-47)

As Penfield and Ornstein-Galicia acknowledge, some of the features in their list are found in other vernacular English dialects (e.g., realization of hw as w, consonant cluster reduction). Nevertheless, there is a little reason to doubt that all are found in the speech of at least some MAVE speakers in some regions. For students of language variation, however, the more interesting questions concern the nature of those features and the constraints upon their use. As an examination of two of the commonly noted features of MAVE -[z]-devoicing and final consonant cluster reduction- makes clear, a focus on Spanish to the exclusion of other possible explanations greatly oversimplifies the dynamic and systematic nature of Mexican American vernacular speech.

Spanish Interference as the Problem

Early studies of MAVE, grounded in structuralism and the attendant methodology of contrastive analysis, viewed divergence from national or regional speech norms as evidence of inference from Spanish. Sawyer (1973), for example, using data from her 1957 dissertation, attibuted the fact that the informants she called "bilingual" did not produce vowels that characterize regional Anglo speech, but not national

norms (e.g., glide-shortened /ai/ in words such as night), to their absence from Spanish. The attribution is based on the highly questionable assumption that Mexican Americans wanted to conform to regional patterns of pronunciation to gain acceptance into Anglo society. Similarly, Sawyer attributed variation in the bilingual speakers' distribution of /s/ and /z/ to the lack of a phonemic distinction between voiced and voiceless sibilants in Spanish (1973, p.231).

Despite studies that have questioned the assumption that Spanish interference is solely responsible for the distinctive features of MAVE (e.g., Wald, 1984) the notion has persisted even in the work of scholars who have made major contributions to our understanding of the linguistic repertoire of Mexican Americans. Metcalf, for example, refers to MAVE as "a special variety of English with a Spanish sound to it" (1979,p.l). Such characterizations doubtless arise from the fact that Latino communities typically include numerous immigrants who acquired English as adults and who stopped short of full acquisition. However, adult immigrants who have not fully acquired English should not be confused with native-speakers of MAVE. Rather, adult immigrants are most frequently speakers of an interlanguage, that is, a learner variety that is influenced both by the native language and by the target language, presumably MAVE in many cases, but that can be fully accounted for by neither. Treating language learners and native speakers of an innovative dialect as speakers of the same variety obscures our understanding of both the process of second language acquisition -and the factors that sometimes cause speakers to stop short of full acquisition- and our understanding of the competence of native speakers of the innovative dialect[2].

Internal Linguistic Development and Language Contact: Variationist Studies

In contrast to earlier research that viewed MAVE as an example of imperfectly mastered English, the quantitative paradigm that informs much current sociolinguistic research provides the most promising approach to answering a number of outstanding questions about the varieties of English spoken in Mexican American communities. The methodology and analytical procedures of quantitative sociolinguistics enable us to move beyond the many descriptions of MAVE that consist of lists of variable features where MAVE is said to differ from prescriptive norms. Such lists, while valuable in the early stages of research, cannot tell us, for example, whether these variables are rule-governed or whether they reflect imperfect mastery of English. That is, they provide no way of knowing whether we are justified in treating MAVE as a genuine dialect of American English, with some rules

2 Patrick (1991), in a study of Jamaican Creole, makes a similar point about the sometimes overly simplified arguments that equate incomplete second language acquisition and creolization.

that diverge from other dialects, or whether the variables that Valdés, Penfield and Ornstein-Galicia, and other scholars have described alternate randomly with more standard English features and hence cannot be accounted for by rule. To answer this question, we need to conduct the type of quantitative studies that have proven so valuable to our understanding of African American Vernacular English and a wide variety of other dialects. That is, we need to examine relatively large corpora of vernacular speech, collected by researchers familiar with the communities in which they are working, and to adopt satistical procedures that enable us to control for the many intersecting factors that influence a speaker's choice among alternative forms. The widespread availability of high-quality recording equipment and the well-developed elicitation procedures of the sociolinguistic interview (Labov, 1984) enable us to accomplish the first task; Rousseau and Sankoff's (1978) Varbrul computer program, developed for the multivariate analysis of linguistic variation, facilitates the second. In the following sections, I shall discuss three studies, Doviak and Hudson-Edwards (1980), Santa Ana (1991), and Bayley (in press) to illustrate some of the insights into the Mexican American speech community that a rigorous quantitative approach may yield.

[z]-Devoicing: Doviak and Hudson-Edwards (1980)

Doviak and Hudson-Edwards (1980) studied [z]-devoicing in the speech of elementary school children in an Albuquerque barrio. This particular linguistic variable is of considerable interest for three reasons. First, it is highly stigmatized. Second, it has been proposed that an implicational relationship exists among [z]-devoicing and other features of a Latino accent (Thompson, 1975). Third, since Spanish also devoices word-final sibilants, [z]-devoicing provides a convenient way to test the influence of the heritage language on MAVE. Although they did not employ the methods of multivariate analysis commonly used in more recent sociolinguistic studies, Doviak and Hudson-Edwards clearly established that [z]-devoicing by Latino children in Albuquerque is not the type of random behavior that might result from Spanish interference. Rather, it is highly constrained by a complex array of phonological factors, the most important of which is the voicing of the following segment. That is, although [z]-devoicing does indeed occur in all environments, as Penfield and Ornstein-Galicia (1985) suggested, it is far more likely to occur in some environments (e.g., before a following voiceless consonant or a pause as in *slid/s/safely* or *slid/s/##)* than in others (e.g., before a following vowel as in *snor/z/ a lot)*. Moreover, the process is constrained by the same factors in the speech of both English and Spanish dominant children, including Chicano English monolingual. That is, while the Spanish substrate may be the ultimate source of [z]-devoicing among Albuquerque children, it can hardly be regarded as evidence of

interference from Spanish because it is a characteristic feature of the speech of children who speak no Spanish.[3]

Word-final [z]-devoicing is also one of the variables we are examining in our ongoing work on the English of Lafino adolescents and young adults in a west San Antonio housing project. Although it is too early to offer any definite conclusions, preliminary analysis suggests that devoicing of final [z] is constrained by the same kinds of factors that operate in the speech of the Albuquerque children Doviak and Hudson-Edwards studied. That is, we are finding that [z]-devoicing is highly constrained by the voicing of the following segment and that it is one aspect of a stable dialect that extends across generations.

Consonant Cluster Reduction

Like [z]-devoicing, final consonant cluster reduction is frequently listed among the characteristic features of MAVE. Moreover, like [z]-devoicing, cluster reduction might be plausibly attributed to Spanish interference. Spanish syllables, after all, generally follow a CV pattern, there are relatively few words ending in consonants, and those few are often weakened or deleted in popular dialects. Fortunately, however, final consonant dusted reduction, usually confined to final /-t,d/ deletion, is one of the most extensively studied variable processes in English and 25 years of research have established the constraints on the process in fine-grained detail (see Labov, 1989 and Santa Ana, 1991 for reviews). Thus, all native speakers of English are more likely to delete a final /-t,d/ that is part of a word-stem (e.g., mist) than to delete a past-tense ending (e.g., *missed).* Moreover, native speakers of all English dialects in which this variable has been systematically investigated are also more likely to delete /-t,d/ when it is followed by a vowel than when it is followed by a consonant. These pan-dialectal constraints are shown in (4)[4]:

3 This is not to say that features that originate in parents' LI may not be passed on and incorporated into the speech of children for whom the parents' L2 has become the LI. Studies of ethnic dialects in Boston (Laferriere, 1979) and Ann Arbor, Michigan (Knack; 1991) show that this process does indeed occur. However, little is gained by describing the process as due to "interference", a term more properly associated with second language acquisition. Rather, it is more reasonable to suppose that certain features of a wide variety of English dialects have their origin in language contact and that the likelihood of speakers' use of these features in different linguistic environments depends upon a variety of factor that may have little to do with the original source of the innovation.

Note that factors such as the grammatical category to which a word belongs and the features of the following segment are independent of one another. Indeed, the variable rule model is predicated on the assumption that factor groups are statistically independent. Normally the assumption of statistical independence presents no problems for linguistic factors. It can, however, present difficulties for the analysis of social factors, which often interact.

(4) mis/Ø/by the lake > miss/Ø/Bill
mis/Ø/by the lake > mis/Ø/in the morning
miss/Ø/Bill > miss/Ø/Alice

Extensive studies (e.g., Guy, 1980; Labov, Cohen, Robins, & Lewis; 1968; Wolfram, 1969) have shown that the /-t,d/ variable is subject to other constraints in addition to morphological class and the phonetic features of the following segment. Following Labov (1989), the constraints on /-t,d/ deletion may be described in formal terms as follows:

(5) /-t,d/ — > < 0 > / < str. > (C) < — cont. + cons. > < cat. > _ < features >
<∘< voi> <∘< voi>

a h £ d £
I f

a syllable stress (unstressed stressed)

b cluster length (CCC > CC).

c the phonetic features of **the preceding consonant**, yielding the SIGNO segmental order /s/ stops nasals other fricatives liquids;

d **the grammatical status** of the final /-t,d/, with the order: part of -n't morpheme part of stem derivational suffix past tense or past participial suffix.

e the phonetic features of **the following segment**, yielding the order: obstruents liquids glides vowels pauses.

f **agreement in voicing** of the segments preceding and following the /t,d/ (homovoiced heterovoiced). (Labov, 1989, p.92)

Results of studies undertaken in different communities do depart from the above pattern in some minor details. Guy (1980), for example, showed that a following pause has different effects on cluster reduction in the speech of New Yorkers and Philadelphians. Nevertheless, the main outlines of the pattern Labov summarized clearly apply to the great majority of English dialects in which the /-t,d/ variable has been systematically investigated.

To test whether San Antonio Tejanos conform to the general pan-English pattern of conditioning factors on /-t,d/ deletion, I coded more than 4,000 tokens of

final /-t,d/ that occurred in some 20 hours of sociolinguistic interviews with adolescent and several adult Tejano residents of a San Antonio housing project. Owing to San Antonio Housing Authority eligibility requirements, all speakers were of lower socio-economic status and all were U.S. citizens. In addition, many came from families that had lived in south Texas for generations. For the comparison with the pan-English pattern, data were coded for the six factor groups outlined by Labov. The results of multivariate statistical analysis with GoldVarb 2.0 (Rand & Sankoff, 1990), a Macintosh version of the Varbrul 2 program used by sociolinguists to model variation in natural speech, indicate that five of the factor groups tested significantly affect realization of final /-t,d/ (p.05) among San Antonio Tejanos. The significant factor groups are: 1) syllable stress; 2) voicing agreement of the preceding and following segments; 3) grammatical category; 4) the phonetic features of the preceding segment; 5) the phonetic features of the following segment. Only cluster length (C_C, CC_C) proved not to be significant. Table 1 shows the results for this run, along with Santa Ana's (1991) results from a study of the same variable in Los Angeles Chicano English. Note that the factor values (pi) generated by the Varbrul program are not probabilities of rule application. Rather, they are indications of the strength of a particular factor relative to other factors in the same group. A factor with a pi between .50 and 1.00 promotes rule application (e.g., /s/ in factor group 5, with a pi of .67 favors /-t,d/ deletion); a factor with a pi between Ø and .50 inhibits rule application (e.g., preceding fricatives in the same factor group, with a pi of .22, disfavor /-t,d/ deletion).

As Table 1 shows, fifteen of twenty individual factors tested in the San Antonio corpus and sixteen of twenty factors in Santa Ana's Los Angeles corpus match the pan-dialectal pattern. Moreover, of the factors that do diverge from the pan-English pattern in the San Antonio data, most diverge in ways that have been documented in studies of other English dialects. Thus, the Tejano English divergence from the widely documented factor ordering of MSP can be explained as a consequence of the relative youth of the San Antonio speakers (M and S are combined in Table 1). Like the young Philadelphians Guy and Boyd (1990) studied, young Tejanos treat semiweak verbs as monomorphemes. In addition, a following pause has different effects on cluster reduction in New York and Philadelphia English (Guy 1980).

Although most of the results for San Antonio Tejanos are similar to those reported in at least some other English dialects, there are differences from the pan-English pattern and from results reported for Los Angeles Chicano English. The first of these differences concerns the effect of syllable stress. As Labov's (1989) ordering of constraints on /-t,d/ deletion suggests, in most dialects stress is among the strongest constraints on cluster reduction, with unstressed syllables being much more liable to /-t,d/ deletion than stressed syllables. Even though the San Antonio results show a significant effect in the expected direction, syllable stress is the least

Table 1. *Comparison of /-t,d/ Deletion in Mexican American English Dialects with the English Pan-dialectal Pattern.*

1. SYLLABLE STRESS			
Pan-English	unstressed	>	stressed
LA ChE	.53		.49
*SATE	.56		.49

2. LENGTH OF CONSONANT CLUSTER			
Pan-English	CCC	>	CC
LA ChE	.57		.48
SATE	.48		.50

3. AGREEMENT IN VOICING OF PRECEDING AND FOLLOWING SEGMENTS ([voi] _ [voi]			
Pan-English	same	>	different
LA ChE	.55		.45
*SA TE	.55		.43

4. GRAMMATICAL CATEGORY						
Pan-English	-n't	>	M	>	S	> P
LA Che	.58		.55		.43	.28
*SATE	.70		.46		-	.30

Table 1 . (*Continued*).

5. PRECEDING SEGMENT									
Pan-English	/s/	>	sto	>	nas	>	fri	>	liq
LA ChE pattern	/s/	>	nas	>	sto	>	fri	>	liq
LA ChE	.56		.56		.38		.28		.23
SA TE pattern	/s/	>	sto	>	nas	>	fri	>	liq
*SA TE	.67		.47		.46		.22		.16
6. FOLLOWING SEGMENT									
Pan-English	obs		liq	>	gli	>	V	>	Q
LA ChE pattern	obs	>	gli	>	liq	>	V	>	Q
LA ChE	.62		.60		.57		.33		.32
SA TE pattern	obs	>	liq	>	gli	>	O	>	V
*SA TE	.67		.55		.49		.36		.26

Key: LA ChE = Los Angeles Chicano English; SA TE = San Antonio Tejano English; voi = voicing; M = monomorpheme; S = semiweak verb; P = regular past tense & regular past participle; sto = stop; nas = nasal; fri = fricative; liq = liquid; obs = obstruent; gli = glide; V = vowel; Q = pause. Notes: Monomorphemes and semiweak verbs are combined in the San Antonio data. Factor values that diverge from the pan-English pattern are in italics. Los Angeles N = 5049, average /-t,d/ deletion 61%; San Antonio N = 4155, average /-t,d/ deletion 59%; 'Factor group significant at p . 05. Sources: Pan-English, Labov, 1989, p. 90; Los Angeles, Santa Ana, 1991, p. 82; San Antonio, Bayley, in press.

prominent among the significant factor groups, with a range of only .07. (Compare this very small range with, for example, the range of .51 between the most and least favorable factors for deletion in the preceding segment group). Moreover, the effect is even smaller, with a range of only .04, in Santa Ana's Los Angeles ChE results. A full explanation of this divergence from other dialects awaits further investigation. However, for the present suffice it to say that there is considerable evidence that Mexican American vernacular varieties exhibit different patterns of stress and intonation than do other dialects of English (Penfield 1984; Penfield & Ornstein-Galicia 1985). Such differences offer potential explanations of the divergence found here.

The second difference is between the San Antonio and Los Angeles speakers. In contrast to other studies, where preceding /r/, like preceding vowels, results in near categorical retention, Santa Ana (1991, p.87) reports a 13 percent rate of /-t,d/ deletion following /r/. A model which attibutes substantial influence to Spanish would predict just such a result because Spanish /r/ is [+ consonantal-vocalic], in contrast to general American /r/, which is [+ consonantal+vocalic] The 263 examples of /rt/, /rd/ in the San Antonio data, however, contain no instances of /-t,d/ deletion. They were therefore excluded from the variable rule analysis. While the reasons for this difference bewteen the speech of Mexican Americans in Los Angeles and San Antonio require further investigation, the nature of the populations sampled suggests at least one possible explanation. Santa Ana's consultants included a considerable number of immigrants. In contrast, the San Antonio speakers were all U.S. citizens or permanent residents. Indeed, all except one had been born in the United States, as had their parents and, in many cases, their grandparents. Moreover, virtually all of the San Antonio speakers had begun to acquire English before the age of five. It is reasonable to expect, then, that Spanish would have less influence on the English of the San Antonians, despite the persistence of Spanish in many areas of community life.

Finally, although additional work on a range of variables is necessary before any firm conclusions can be reached, the patterning of /-t,d/ deletion in Mexican American speech in the San Antonio and Los Angeles studies is sufficiently close to suggest that Chicano/Tejano English has some of the characteristics of a supra-regional ethnic dialect, with only minor regional differences in areas such as final stop deletion in the environment of a preceding /r/.

To summarize, the few variationist studies of MAVE that have been undertaken so far provide no support for the notion that speakers are somehow lacking in English proficiency, presumably as a result of interference from Spanish. Indeed, in the data we have collected in San Antonio, there is not a single instance of a large number of possible forms that an interference hypothesis would predict. The working class MAVE speakers we have interviewed, for example, frequently use double negatives (or negative concord). They do not, however, use no in double negatives (e.g., I no want nothing), as we would expect if interference were a factor. The evidence that we have suggests that Spanish does indeed have some influence on MAVE, particularly in the areas of syllable stress and intonation. The influence of Spanish, however cannot explain the fine-grained patterns of variation that have been observed. To explain those patterns, we need to examine MAVE as an autonomous dialect, one that is subject to its own internal laws of development as well as to influence from Spanish.

MAVE: Implications for Language Shift and Linguistic Theory

MAVE and Theories of Language Shift

Studies of language shift in Mexican-American communities have tended to focus either on the larger dimensions of the process or on its effects on Spanish (e.g., Hakuta & D'Andrea, 1992; Silva-Corvalan, 1991; Veltman, 1988). Such studies have taught us much about the factors that underlie language loss and, as in Fishman's (1991) recent work, how those factors might be counteracted. Nevertheless, they leave out a major part of the process. Neither Mexican Americans nor anyone else can merely shift from one language to another. Rather, speakers -and groups- shift from a particular variety of language X to a particular variety of language Y. Moreover, the variety of language Y speakers shift to -or that they create during the process- can also serve as a symbol of group solidarity. That is, innovative features of the new variety of language Y, which are perceived by the dominant community as nonstandard and as evidence of failure to master the language, often enjoy what sociolinguistics call "covert prestige". In the case of MAVE, we might well hypothesize that linguistic features that have been regarded as attributable to Spanish interference represent instead deliberate choices on the part of speakers who do not wish to loose their ethnic identity even though they have shifted to the language of the dominant community.

Linguistic Theory: MAVE and Variable Lexical Phonology

The potential implications of systematic studies of MAVE for theories of language shift are clearly evident. The potential of such studies to contribute to formal linguistic theory, however, is less obvious. Formal linguistics has long had as its objective to construct grammars that characterize the linguistic competence of "the ideal speaker-hearer in a perfectly homogenous speech community" (Chomsky, 1965, p.3). In contrast, both traditional dialectology and quantitative sociolinguistics have as their object of study the performance of actual speakers in dialectally and linguistically heterogeneous communities. That is, while formal linguists have focused their attention on discovering the internal grammar that all speakers share, sociolinguists have concentrated on the systematic differences that characterize different groups of speakers. Moreover, while the concept of the variable rule that informed Labov's work in New York and Philadelphia was an outgrowth of generative phonology, generative grammarians never accepted the concept and, in recent years, some sociolinguists have rejected the variable rule as a theoretical construct (e.g., Fasold,1991). In the face of such basic disagreements, quantitative sociolinguists have continued to pursue empirical studies of variation, while formal linguists have continued their attempts to characterize the abstract systems common to all speakers.

Recently, however, Guy (1991a, 1991b) has developed a hypothesis which bridges the gap between empirical studies of linguistic variation and formal theory, and Guy's hypothesis has been strongly confirmed by Santa Ana's (1992) work on Los Angeles ChE and our own work in the Tejano community in San Antonio (Bayley, in press). Briefly, Guy attempted to locate variation in the grammar by combining variable rule analysis with the model of lexical phonology developed by Kiparsky (1982). To simplify a bit, Kiparsky posited multiple levels of phonological derivation, with rules applying recursively at each level. Thus, in the case of word-final /-t,d/, for example, the /-t,d/ of monomorphemes (e.g., *west*) is present from the beginning of the derivation. /-t,d/ is affixed to semiweak verbs *(keep, kept)* at level one, when base forms also undergo an internal vowel change (or ablauting), and to regular past tense forms and participles (e.g., *talked*), at level 2.

In modifying Kiparsky's model, Guy hypothesized that adding a variable rule that applied recursively at each level of the derivation would not only explain the pan-English ordering of grammatical constraints on /-t,d/ deletion, but also allow for precise quantitative predictions of the ratio of /-t,d/ absence (or retention) in different grammatical categories[5]. Thus, with a three level model, regular past tense verbs and past participles would be subject to /-t,d/ deletion once, semiweak verbs, twice, and monomorphemes, three times. That is, there should be an exponential relationship among rates of /-t,d/ retention for words of different grammatical categories. The hypothesis, then, makes the following predictions about retention of final /-t,d/ in words of the three relevant morphological classes:

(6) Monomorphemes $Pr = X^3$

Semiweak verbs $Pr = X$

Past tense verbs and past participles $Pr = X$

Thus, according to Guy's modified version of lexical phonology, a data set with 100 tokens each of monomorphemes (M), semiweak verbs (S), and regular past tense verbs (P), where 25 percent of final /-t,d/ clusters are reduced at each pass of the rule, should yield the results such as those shown in Table 2. That is, given these conditions, the model predicts that regular past tense verbs will retain 75 /-t,d/ endings, semiweak verbs will retain 56, and monomorphemes will retain only 42 final stops.

5 In popular Spanish dialects of Andalucía, the Caribbean, eastern Bolivia, and other regions, /-s/ aspiration and deletion, which is also subject to morphological and phonological constraints, would provide an additional means to test the exponential hypothesis.

Table 2. *Quantitative Consequences of an Exponential Model of l-t,d/ Deletion (Hypothetical Data),*

Grammatical Category	Tokens	Probability of /-t,d/ Retention	N /-t,d/ Retained
M	100	$Pr^3 = .4219$	42
S	100	$Pr^2 = .5625$	56
P	100	Pr = .7500	75

The results of Guy's (1991a) initial test of the hypothesis on a small data set representing several different dialects were very encouraging. The large-scale tests of what Guy calls the "exponential hypothesis", however, come from Santa Ana's (1992) work on Los Angeles Chicano English and our work in San Antonio (Bayley, in press). Santa Ana analyzed nearly 5,000 tokens of word-final /-t,d/ extracted from interviews with forty speakers. The results match the prediction of the exponential model with 98.8% accuracy. That is, LA Chicanos conform to the predictions of the hypothesis almost perfectly. As Table 3 shows, San Antonio Tejanos follow the predictions of the exponential model almost as closely, with the greatest divergence from the predictions of the exponential hypothesis coming in the semiweak verb category.

Table 3. *Tejano English /-t,d/ Retention by Grammatical Category.*

Grammatical Category	N	Predicted Retention	Observed Retention	N Predicted	N Observed	Token Error	Error Rate
M	2012	$Pr^3 = .4309$	.4175	866.97	840	27.0	.0134
S	204	$Pr^2 = .5705$	. 6471	116.38	132	15.6	.0765
P	568	Pr = .7553	.7553	429	429	–	–

Exclusions: and tokens in the environment of a following homorganic stop. No weighting of the Pr. N = 2784.

The fact that semiweak verbs exhibit considerable deviation from the predictions of Guy's model, with an error rate of 7.65 percent, is not necessarily surprising, of course. Semiweak verbs represent a small closed morphological class and naturally occur much less frequently than either monomorphemes or regular past tense verbs. They are therefore much more subject to statistical fluctuations arising from sampling error. In the San Antonio corpus, the number of semiweak verbs is relatively small (N = 204) compared to the number of monomorphemes (N = 2012) or regular past tense forms and participles (N = 568). A question arises, however, concerning the proper treatment of semiweak verbs among the speakers reported on here, most of whom were in their teens at the time data were collected. As noted previously, Guy and Boyd (1990) found that speakers under the age of 30 tend to analyze semiweak verbs as monomorphemes, a finding that has subsequently been confirmed by Santa Ana (1991) and Roberts (to appear). To test whether a similar age effect holds for the San Antonio speakers, I combined the M and S classes. Table 4 compares the prediction of the exponential hypothesis with the Tejano results for the remodeled data. Note that I have assumed that the M + S class is still subject to three passes of the rule.

Table 4. *Tejano English /-t,d/ Retention by Grammatical Category: Semiweak Verbs and Monomorphemes Combined.*

Grammatical Category	N	Predicted Retention	Observed Retention	N Predicted	N Observed	Token Error	Error Rate
M, S	2216	$Pr^3 = .4309$	.4386	954.87	972	17.1	.0077
P	568	Pr = .7553	.7553	429	249	-	-

Exclusions: **and** tokens in the environment of a following homorganic stop. No weighting of the Pr. N = 2784.

As the results in Table 4 show, the data conform even better to the predictions of an exponential model of morphological constraints when tnonomorphemes and semiweak verbs are combined. The accuracy rate for the combined category improves over the rate for monomorphemes alone from 98.66 to 99.33 percent. That is, given information about the rate of surface /-t,d/ retention in regular past tense forms, using data collected in informal interviews in the community, we can predict the rate of /-t,d/ retention in the combined category of monomorphemes and semiweak verbs with an error rate of less that 1 percent. This kind of precise quantita-

tive prediction about the actual distribution of forms in informal speech has not heretofore been possible in linguistics.

To summarize, I have examined only one relatively small area where studies of MAVE have confirmed a hypothesis that bridges the gap between formal theory and the empirical study of linguistic variation. Mexican American speech communities, however, offer many other possibilities. To name just the most obvious example, code-switching presents a rich array of problems for scholars who seek to understand linguistic competence, as the recent work of Myers-Scotton (1993a, 1993b) suggests. Indeed, Romaine (1989), in a recent survey of bilingualism, argues that the speech of bilingual communities, including the varieties of both languages as well as their interaction with one another, presents the most fundamental problem for linguistic theory.

MAVE and Educational Concerns

The issues I have dealt with so far, although many have clear social and educational implications, are primarily of concern to the scholar. MAVE, however, is not only a source for linguistic study; it is also implicated in the educational concerns of Mexican-American communities, and negative perceptions of MAVE -as well as misdirected efforts at accent reduction or correction- have adversely affected the educational prospects of Mexican American children. For example, in the 1970's, researchers such as Galvdn, Pierce, and Underwood (1976) and Williams, Miller, Naremore, and Whitehead (1976) showed that Texas teachers, regardless of their own ethnicity, tended to have lower expectations of children who spoke with a Latino accent than of children who spoke with an Anglo accent. Ramirez and Milk (1986) reported similar negative attitudes among San Antonio teachers in the mid-1980's. Moreover, despite the very large amount of research that has shown that dialectal divergence and the innovative forms that accompany such divergence represent rule-governed behavior rather than errors, the influence of what Kroch and Small (1978) refer to as "grammatical ideology" is still alive and well in school, even in predominantly Hispanic communities like San Antonio. Thus, in classes at The University of Texas at San Antonio, we still find practicing teachers who state that the Hispanic children they teach have no real language, that they are competent neither in English nor Spanish, and that they speak "deformed" versions of one or the other language. If we are to counter such dehumanizing attitudes effectively, there is clearly a need for scientific evidence of the type that variationist studies are uniquely suited to provide.

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