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The limits of linguistic community:
Speech styles and variable constraint effects

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Introduction

The linguistic unity of speech communities lies in shared linguistic practices and evaluations. Where variable processes are concerned, this linguistic unity extends to shared constraint effects. Guy (1980) demonstrates that Philadelphians show a common effect of the following pause constraint on /t,d/ deletion, so that it is a conservative environment which disfavors deletion. On the other hand, New Yorkers exhibit an opposite effect of the same constraint, such that it favors deletion. Since the effects are distinct in the two communities, they cannot be attributed to universal factors. But since they are consistent within each community, they reflect shared linguistic practices, which can be characterized as shared grammars. Hence variable constraint effects can be treated as a feature of the grammar, which is consistent with their representation in the variable rule model.

The shared attitudes and evaluations in a community are most clearly evidenced by common directions of style shifting. Thus the fact that New Yorkers in Labov's studies all use more coda (r) in their more careful styles is indicative of a shared evaluation of the sociolinguistic significance of this variable, and indeed, is diagnostic of speech community membership, because speakers from other communities do not vary their /r/ usage in this way. But how does style shifting interact with variable constraints? Although rarely explictly stated, the conventional practice in sociolinguistic research is to assume that linguistic constraint effects are stable across different speech styles: thus in Labov's department store survey, the emphatic repetitions showed higher /r/ use than the original responses, in effect showing a more careful

style, but the linguistic constraint of internal versus final position was the same in both styles. In a variable rule model, this stability follows from the treatment of style as additional factor group, implying that the effect of a given style is simply a quantitative shift in the rate of use across all contexts, while the factor weights in other groups are the same for all styles. This also follows from the observation that different constraint effects imply different grammars: if the different individuals in a community share a common grammar with a common set of constraint effects, the most straightforward hypothesis would be that their various styles also share that grammar.

However, given that different speech communities can show distinct constraint effects, the possibility arises that some speakers may command different dialects (or registers), with dissimilar constraint effects, and alternate among them in appropriate social circumstances. This is, in fact, what is postulated to occur in diglossia: the alternation between H and L varieties involves, in some respects, different grammars. Hence it is worth investigating whether "stylistic" variation ever involves differences in constraint effects. This paper examines this issue with respect to the constraints on English coronal stop, or /t,d/ deletion. Stylistic variation in /t,d/ deletion has been explored by Labov (1972), Baugh (1979) and Guy (1980). These studies have all shown quantitative adjustments such that the rate of /t,d/ deletion increases with more vernacular speech. We will examine the qualitative aspects of style shifting in /t,d/ deletion in the speech of four Singapore English speakers in New York City.

Stylistic variation in /t,d/ deletion has been explored by Labov (1972), Baugh (1979) and Guy (1980). These studies have all shown quantitative adjustments such that the rate of /t,d/ deletion increases with more vernacular speech. In this paper, we will look at the qualitative aspects of stylistic changes. This dimension of style-shifting deserves attention as it has been generally assumed that constraint effects are consistent across the community. In the variable rule framework, style is ordinarily treated as an additional factor group, implying that the effect of a given style is simply a quantitative shift in the rate of use defined by the other contextual factors. This practice assumes that the linguistic constraints on a variable should be independent of speech style, and stable across different styles. However, given that different speech communities can show distinct constraint effects, the possibility arises that some speakers may command different dialects (or registers), with dissimilar constraint effects, and in appropriate circumstances, alternate among them in a way that parallels "stylistic" variation. This paper examines the stylistic and linguistic constraints on /t, d/ deletion from four Singapore English speakers in New York City.

Methodology

The informants for this study were part of a social group of NYU college students. They all grew up and attended school in Singapore. Except for one informant who had just graduated, all of the other three speakers were still students. Age and ethnicity were controlled factors as the subjects were all in their early twenties and ethnically Chinese.

The interviews were conducted by one of the authors who is Singaporean and recorded with a Lavaliere microphone and Sony DAT recorder. In total, over 9 hours of recorded vernacular speech of high sound quality was collected with over 1000 tokens selected for the analysis. The recordings were transcribed impressionistically and coded by the Singaporean author. Following Guy (1991a & b), we have not included contractions of not such as *wasn't* and *won't* and tokens in a neutralizing environment where the following segment is a /t/ or /d/. In addition, we restricted the number of repeating tokens such that there could only be 10 of the same token from any one speaker. This was necessary since words like *and* and *just* for example, showed higher frequencies of occurrence than most other words.

Since the results of our VARBRUL analysis showed that gender and individual speakers as factor groups proved to be statistically insignificant, the factor groups of interest for the purpose of this study are:

1. Morphological status
2. Preceding phonological environment.
3. Following phonological environment.
4. Style

In the formulation of contextual styles, we adopt the same categories used by Labov (1972) with some modifications. Labov considers the interview proper to belong to Style B which involves careful speech. Interspersed within the interview situation are various contexts which elicit what he terms as casual speech or Style A. We have not made a distinction between Style A and B in this paper although four of the five contextsthat Labov considers as Style A were observed in the interviews. For simplicity, we will label this as Style AB. Apart from this difference, style C (reading style) and D (word lists and minimal pairs) follow along the same

lines as Labov(1972). For the purpose of this paper, Style AB is akin to less formal speech while CD is correlated with more formal speech.

With Bell's (1984, 2001) audience design model of stylistic variation in mind, we have also kept addressee/interviewer constant by having all of the interviews conducted by the same interviewer. Hence, for all subjects, the target audience was a fellow Singaporean of the same ethnicity. Despite the gender asymmetry for male and female subjects with respect to the interviewer, no gender differences were detected as far as the /t,d/ variable was concerned. Additionally, we have also attempted to control for topic by introducing similar topics in all of the interviews. These included stories about the informants' childhood, experiences in school and growing up in Singapore.

Analysis

1. Morphological Category

We present an overall summary of the results in Table 1 of the handout. Focusing on the morphological factor group, our results indicate that the morphological constraint is a first order constraint conditioning /t,d/ deletion in Singapore Englishin both formal and informal styles of speech. As can be seen in Figure 2 (in the handout), it is clear that the speakers are consistent with the pan-English ranking in which monomorphemic forms undergo much more deletion than regular past tense forms. However, in the intermediate category, irregular past tense forms like *lost, kept* and *told*, differ between the two styles. In the informal style, these words have a high rate of deletion -- higher in fact than the monomorphemes, while in the

formal style, they move to an appreciably lower rate, approaching the conservative rate found in regular past tense forms.

These two patterns suggest substantively different grammars for the two 'styles'. The informal style is consistent with the pattern reported by Guy & Boyd (1990) for adolescent speakers of American English: Irregular past tense forms are treated as if they were underived, and hence deleted at a rate comparable to monomorphemes. Effectively, this grammar treats the class of verbs such as *lost, kept*, etc. as suppletive alternants, the same kind of morphological treatment we expect for verbs such as *go-went* and *think-thought*. The formal style, however, compares with the pattern Guy & Boyd report for mature adult speakers of American English, one which reflects a morphological analysis in which the final stops in irregular past tense verbs are seen as affixes which are derived in the morphology. Guy & Boyd postulate that these are developmental stages for their American English subjects, reflecting morphological reanalysis by speakers during their lifetimes.

It appears that our Singaporean subjects, however, may well be entertaining both analyses simultaneously, in two different grammars: if the informal speech in our data is reflective of their native vernacular, then the irregular past tense forms are treated as monomorphemes in this style of speech. On the other hand, it seems that in their formal variety, they may have adopted the (American English?) adult norm. This dichotomous behavior is surprising as it defies the general observations found in studies of /t,d/ deletion as well as other studies, where constraint effects are assumed to be consistent across speech styles. Before commenting

further, we turn now to the following segment effects to show that this re-ranking of constraints is also evident in the phonological factors.

2. Following segment effects

Looking at Figure 3, we observe that while in both styles the subjects preserve the universal ranking in which consonants promote deletion more than vowels (no doubt reflecting the universal preference for CV syllable structure), the stylistic difference examined here involves the rank order of following vowel and following pause. In the informal style, our subjects have an intermediate value for pause, where it promotes deletion more than a following vowel. This pattern has been reported for a number of English dialects. In their formal style, however, these speakers treat pause as the most conservative following context.

A question arises as to where the two patterns come from. On the one hand, the high rate of deletion before pause in informal speech is reflective of the NYC vernacular found by Labov et al (1967, 1968) and Guy (1980). But, there is a re-ranking of constraints when a formal style is adopted. Here, the pattern found is consistent with that encountered in Philadelphia and other parts of the United States, where Pause is highly conservative. We turn now to the preceding phonological environment before providing an interpretation of the results.

3. Preceding Segment Effect

The preceding segment factor group also shows important differences between the two styles. In the informal style data, nasals are high, liquids low, stops and fricatives intermediate, with no significant difference in the fricatives between /s/ and the non-sibilant fricatives. In the formal style, nasals maintain their maximally favoring ranking, while liquids move up to

second-most favorable position, and stops and fricatives move down. (Again, there is little difference between sibilant and nonsibilant fricatives.)

What is the explanation for these differences in constraint effects? Any interpretation should begin with a cautionary note: numerous previous studies of /t,d/ deletion exist showing that this factor group is considerably less stable in its effects than the other two factor groups that we have just looked at; it is also a relatively weaker factor group than the other two. Guy & Boberg 1997 explain the rankings of the factors in this group in terms of an OCP effect, depending on the similarity between the preceding segment and the [t,d] target for deletion: /s/, stops, and /n/ share more features with the deletion target than liquids, nonsibilant fricatives, and noncoronal nasals. The Guy and Boberg analysis is partially supported in these data for informal style: nasals, /s/ and stops are not significantly different from one another, and are collectively more favorable to deletion than fricatives and liquids. But the Singapore English formal data do not fit the Guy & Boberg model.

The most striking feature of these results is the different treatment of /l/ in the two styles: why should it disfavor deletion in one style and favor it in another. The answer appears to be that the two styles actually have different articulations of the laterals: in the informal style, they are generally vocalized, becoming glide-like, while in the formal style they are articulated as lateral consonants. /t,d/ deletion is systematically favored in all varieties of English by preceding consonantal segments and disfavored by preceding vocoidal segments, so the "style shift" here is actually an adaptation of the segmental phonology.

Another noteworthy distinction between Singapore English and Pan-American English is the markedly high deletion rates for nasals in both formal and informal Singapore English. Why should nasals as preceding segments be so highly favoring of /t,d/ deletion? We propose that this is in fact reflective of the phonology of Singapore English. Final obstruent devoicing is a productive aspect of Singapore English (Tay 1982, Bao 1998). The result of this is that words such as *pad* and *pat* or *tend* and *tent* are homophonous. It has been widely observed in many languages that NC̥ clusters, involving a nasal followed by a voiceless consonant, are highly marked. The rationale for this, according to Huffman (1993:310) and Ohala & Ohala (1991: 213), may be articulatory ease. Velic closure - is necessary for both voiced and voiceless stops. Although leakage into the velic cavity may occur, Ohala and Ohala (1991) state that "voiceless stops have less tolerance for such leakage because any nasal sound –voiced or voiceless – would undercut either their stop or their voiceless character." Turning back to the Singapore English data, this implies that the variable rule or OT constraint of final obstruent devoicing feeds into that of *NC̥ clusters. To illustrate the effect of this, let us assume that the NC̥ rule is operational in both Pan American English and Singapore English. Since final obstruent devoicing is not observed in Pan American English, only phonemic NC̥ clusters undergo this rule. In contrast, because there is final obstruent devoicing in Singapore English, both voiced and voiceless NC clusters become available for the * NC̥ rule/constraint.

Another feature of these results that merits attention is the marked reduction in deletion in the formal style after sibilants and stops. We hypothesize that these results may reflect a sensitivity to the differences between Singapore English and other varieties of English. Our

speakers may recognize that in their vernacular variety they are not producing /st/ and /kt/ coda sequences, and they over-correct these forms in their careful styles.

Overall, these results again suggest important grammatical differences between the two styles that go beyond what we find in more conventional style shifting in other studies. In particular, a change in segmental phonology, as occurs in the liquids, is strongly indicative, in our view, of the use of different grammars in the two data sets.

Summary of results

So, the striking feature of these data is that in all of the three factor groups, we find significant differences in constraint rankings between informal and formal styles. In the morphological category factor group there is a shift in the treatment of irregular verbs; in the following segment group there is a shift in the treatment of the following pause, and finally, in the preceding segment group, several constraints change their ranking, most noticeably the lateral, which is pronounced differently in the two styles. These results are at odds with the common assumption – which is well supported by empirical studies -- that style shifting involves purely quantitative adjustments of the rate of use of a variable. Why do these data on Singapore English contradict the other findings?

The crucial point appears to be that Singapore English can be interpreted in terms of the use of contrasting grammars in the two styles. In effect, these speakers are bi-dialectal or diglossic, rather than mono-dialectal style shifters. What are the possible origins of the two grammars? Suppose that both informal and formal styles are a result of language contact with American

English speakers. It may be argued that these speakers have been somewhat influenced in their informal speech by the NYC vernacular, after all, they show the same following Pause effect as New Yorkers. It may also be the case that in their formal speech, these speakers are mirroring American English since the morphological category and following segment effects are similar to the Pan-American English patterns. However, there are several reasons why this might NOT be a plausible scenario: Firstly, in the informal style, both the grammatical and preceding segment factor groups demonstrate results that are anomalous. The grammatical category with irregular verbs patterning with monomorphemes shows no plausible adult pan-American sources. The same argument applies as well to the elevated preceding nasal deletion pattern. Secondly, in the formal style, preceding nasals once again repeat their high deletion pattern and laterals contradict previous findings by favoring deletion (more than sibilants, fricatives and stops?). Thirdly, since the speech communities that these college students come into contact with are largely college students from varying sources in the U.S. and not just New York City, it is unlikely that these speakers would adopt the NYC vernacular. Moreover, it is not clear why these speakers should be adopting a different American English vernacular in different stylistic settings.

From here on, work in progress…

Points to consider:

1. There should be 3 possible scenarios: formal and informal contact varieties, hybrid variety different from all sources and Singapore variety.

2. Restate the conclusions to indicate less certainty.

3. The choice of the Singapore variety supported by diglossia reported in other studies and shouldn't they also retain something of their Singapore vernacular?
4. Since they all behave similarly, no significant individual differences, and they have different degrees of interaction with various social groups, unlikely that they all converge on the same influence variety.

Given that they have only been in New York City for a few years, it seems more likely that they retain some of their Singaporean patterns. We assume, that the informal style is more indicative of their vernacular usage in Singapore.

Moreover, since these speakers show a different following Pause effect in the formal speech style that is distinct from the NYC pattern, it seems unlikely that they have adopted the NYC vernacular. It is worth noting that the Informal Grammatical Category, where irregular verbs pattern with monomorphemes, shows no plausible adult pan-American sources.

So, if the informal is reflective of a Singapore English vernacular, what about the formal? It remains plausible that the formal variety is influenced by contact with other sources, since these speakers are exposed to American English. The morphological category and following segment effects could be reflective of Pan-American English patterns. However, the preceding segment effects, are anomalous and cannot be ascribed to any documented Pan-English phenomenon. Nevertheless, since some aspects of the preceding segment effect may be a result of hypercorrection, we admit the possibility that the bi-dialectal nature of these speakers may be indicative of a Singapore English diglossia or a contact-influenced formal variety.

It appears that an argument for the diglossia can be made since the same observation has been documented by Gupta (1991, 1994, 1998) and Richards (1977, 1983) who arrived at their conclusions from studies independent of the /t,d/ variable. Using primarily a discourse approach, they adopt Ferguson's (1959) diglossic model where functional and domain differences dictate High and Low varieties of Singapore English. The H variety is similar to standard varieties of English while the L variety can be strikingly different especially in syntax. The linguistic situation in Singapore is complex for a number of reasons: speakers can be multilingual and may command different proficiencies in their use of English. Yet, for a majority of the speakers of Singapore English today, it is their first and native language. This is the case for the four speakers of this study who are typical of the more educated speakers of Singapore English, capable of a range of English that extends from the colloquial L variety to the formal H variety.

In fact, this re-ranking of the /t,d/ variable across styles has been noted as well in one of Labov's (1972: 26, 27) speakers. His subject DR, a black woman raised in North Carolina, demonstrates two distinct grammars in /t,d/ simplification with respect to the grammatical category constraint. Figure 5, reproduced from Labov shows that in the informal style, the subject in conversation with a close relative, demonstrates no difference between the monomorphemic and past tense forms. In contrast, in her speech with a white interviewer, she displays a more formal style, one in which a clear distinction is made between the two grammatical categories. This result indicates that the DR is also potentially a bi-dialectal speaker.

With this in mind, it seems reasonable to assume that the multiple grammars for our

Singaporean speakers are reflective of diglossia. Indeed, if this is true, a stronger implication

follows: we would like to propose that a re-ranking of constraints serves as a diagnostic for

diglossia. As we have not completely ruled out the possibility that the informal variety may be

a result of contact in the U.S., we are in the process of investigating data recently collected in

Singapore so that the results of this study can be better understood. Nevertheless, our data

indicates that two grammars are at work here; whether the formal variety is a consequence of

contact in the U.S. or present in the speech of native Singaporeans it is clear that they employ a

distinct grammar from that of their vernacular.

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	Informal			Formal		
	Factor	**% deletion**	**Ns**	**Factor**	**% deletion**	**Ns**
Grammatical Category						
Monomorphemes (*mist*)	0.60	84	513	0.72	50	107
Irregular (*lost*)	0.65	80	62	0.35	18	48
Regular Past Tense (*missed*)	0.26		224	0.37	10	119
Following Segment						
Consonant (_ by)	0.61	80	377	0.73	45	104
Vowel (_ at)	0.37	62	289	0.51	29	44
Pause (_ #)	0.48	76	133	0.30	11	126
Preceding Segment						
Nasal (*tent)*	0.56	82	345	0.77	60	76
Sibilant (*test*)	0.52	76	247	0.35	13	84
Fricative (*craft*)	0.43	54	42	0.42	16	36
Stop (*tact*)	0.42	51	87	0.35	8	47
Lateral (*belt*)	0.30	61	78	0.52	25	31
p0	0.770			0.200		
Log likelihood	-393.762			-110.209		
Overall Total Ns			**799**			**274**

1. Grammatical category

	Monomorphemic	Irregular Past	Regular Past	
Informal - Factor weights	0.60	0.65	0.26	M=I, R
- % deletion	84	80	47	
Formal - Factor weights	0.72	0.35	0.37	M, I=R
- % deletion	50	18	10	

1. Following segment effect

	K (consonant)	V (vowel)	Q (pause)	
Informal - factor weights	0.61	0.37	0.48	K>Q>V
- % deletion	80	62	76	
Formal - factor weights	0.73	0.51	0.30	K>V>Q
- % deletion	45	29	11	

3. Preceding segment effect

Sing. Eng (Informal)	Nas	>	/s/	>	Fri	>	Stop	>	Liq
	0.56		0.52		0.43		0.42		0.30
Percentage deletion	82%		76%		54%		51%		61%
Tokens	346		232		56		88		78

Sing. Eng (Formal)	Nas	>	Liq	>	Fri	>	/s/	>	Stop
	0.77		0.52		0.42		0.35		0.35
	60%		25%		16%		13%		8%
Tokens	76		31		36		84		47