

Chapter 4 Stable variables (ing) and (dh)

- Kaitlyn:* *Yeah, right, [my accent]’s probably got worse. Stacy’s probably got better cause she talks different now.*
- Stacy:* *I talk different?*
- Abby:* *Yeah, Stacy’s much- Stacy’s definitely changed.*

4.0 Introduction

This chapter explores the external constraints on the use of variants of stable sociolinguistic variables (ing) and (dh) in the speech of 22 Sacred Heart students over real time. While (ing) and (dh) are two of the best-studied English sociolinguistic variables (see section 4.1 below), neither have been examined in a study of linguistic change across the individual lifespan. I show that students from higher socioeconomic backgrounds reduced their use of non-standard variants in the second interview, despite the students’ increased familiarity with me, the interviewer. Students from lower socioeconomic backgrounds tended to remain the same across the two interviews.

4.1 Stable sociolinguistic variables

For English, a small number of linguistic features have been shown to demonstrate stable variation across anglophone communities and across time. They include:

- simplification of word-final consonant clusters in eg. *kept, most, fold*, known as (-t, -d) deletion (eg. Guy, 1980; Labov, 1997; Tagliamonte & Temple, 2005)

- non-standard or “multiple” negation, as in *He don’t know nothing* (Eckert, 2000; Labov, 1972a; Wolfram, 1969)
- alternation of velar and alveolar nasal in (ing), in eg. *running, ceiling, morning* (see section 4.2 below);
- (th) and (dh), the alternation of stops and fricatives for word-initial and/or word-medial interdental fricatives in eg. *these, those, think, brother* (see section 4.3 below).

This list of stable sociolinguistic variables is not exhaustive, and there are certainly others, such as *them-those* alternation (Macek, 1995, 1997; Tagliamonte, 2006), or “h-dropping” (Bell & Holmes, 1992; Kerswill, Torgersen, & Fox, 2005; Kerswill & Williams, 2000; Trudgill, 1978) which have not been as widely studied but which are found in many non-standard dialects of English within or across national boundaries. Crucially, stable variables pattern alike with respect to their social evaluation¹, with one variant consistently and often overtly considered to be standard, while the other is considered to be non-standard. Thus there is usually a positive correlation between non-standard variants, lower social class, and casual style. I discuss the relationship of stable variables to social factors in greater detail in sections 4.2, 4.3 and 4.4 of this chapter.

Stable sociolinguistic variables are usually subject to age-grading, with a peak in non-standard use among adolescents (Labov, 2001:110-112). These stable variables provide a symbolic resource for generation after generation of young people to align themselves with non-conforming reference groups. Like their parents, young people’s frequency of non-standard use is constrained by external factors such as social class, but

it is generally higher than that of any other age group in the community. A peak in mid adolescence drops off in late adolescence and young adulthood, as the speaker leaves secondary education and engages in full socioeconomic membership of the community.

In this chapter I examine two stable variables: (ing) and (dh). The focus of investigation is their use in real time by a panel of 22 Sacred Heart informants. The aim is firstly to establish that girls who attend Sacred Heart are not sociolinguistically anomalous, ie. that they behave similarly to other English speakers with respect to these two variables. A second and more important aim is to observe whether the girls' use of non-standard variants of (ing) and (dh) decreases between 2005 and 2006. Given the expected peak in mid-adolescence (Labov, 2001), we can hypothesize that these girls, who are in late adolescence (aged 17-19), will show a decline in frequency of non-standard variants over the one-year period. Although apparent time studies of stable variables have been interpreted as age-grading, there is no real time confirmation of this interpretation in the literature. The current study will show whether the decline from the mid-adolescent peak really exists in the lives of individual speakers.

I begin with a linguistic and historical description of each variable in sections 4.2 and 4.3. Section 4.4 describes the social factors that have been found to constrain (ing) and (dh), with an account of the relevant sociolinguistic literature. Coding methodology for the present study is given in section 4.5, and the results of longitudinal analysis of (ing) and (dh) use are presented in section 4.6. Section 4.7 provides a conclusion.

4.2 (ing)

The main variants of unstressed² (ing) in eg. *running, going to, ceiling* etc. are apical [ɪn] and velar [ɪŋ]. Other variants exist, and differ in their distribution from speech community to speech community. For example, tense [ɪn] has been noted in the English of Ottawa (Woods, 1978), Britain (Houston, 1985) and in the English of US Hispanic communities (eg. Fought, 2003; Mendoza-Denton, 1997). Other variants include [ɪŋg] eg. in some northern British varieties (Clark, 2004) and [ɪŋk] (eg. in Australia, (eg. Shopen, 1978). The variable (ing) has been studied in many locations in the US (Anshen, 1969; Campbell-Kibler, 2006; Cofer, 1972; Fischer, 1958; Labov, 2006; Mock, 1979; Wolfram & Christian, 1976 inter alia), across varieties in Great Britain (Douglas-Cowie, 1978; Houston, 1985; Kingsmore, 1995; Reid, 1978; Trudgill, 1978), and in Canada (Tagliamonte, 2004 ; Woods, 1978), in Australia (Wald & Shopen, 1981), New Zealand (Bell & Holmes, 1992) and South Africa (Gordon & Sudbury, 2002). In what follows, I report on research findings for the two principal variants, [ɪŋ] and [ɪn].

The alternation of velar and alveolar variants of the suffix (ing) has a stable pattern found in most dialects of English. It reflects a historical morphological alternation between the verbal noun suffix *-ing* and the present participle suffix *-inde* (Houston, 1985). A reflex of the originally independent grammatical categories is found in the greater probability of velar [ɪŋ] being used with nominal words than with verbal words,

or as Houston describes it: "categorical variation in the past being preserved as noncategorical variation in the present." (ibid. p.287)

4.3 (dh)

There are two principal variants of (dh): a voiced interdental fricative [ð] and a voiced alveolar or dental stop [d]. Affricates were reported in New York (Labov, 2006:55) and in Philadelphia (Labov, 2001:78), as well as a more marginal zero variant in Philadelphia only. In some speech communities, notably in African-American English and some British varieties, a voiced labiovelar [v] is found³. The (dh) variable to be investigated in this chapter is restricted to variation in word-initial position only. The alternation of voiceless interdental fricative [θ] and alveolar or dental stop [t], labeled (th) in Labov's New York City study (Labov, 2006), was not found in speech of the Sacred Heart informants, and consequently is not included in the analysis to follow.

Alternation in (dh) is believed to have existed since the earliest history of English. Dubois and Horvath (1998:247) cite Dobson's (1957:948) evidence in some English dialects of *feather-feader* and *mother-moter* alternation, as well as hypercorrect *cannot* for *cannot* in the 16th and 17th centuries. Labov (2006:235-238) gives a summary of the dialectological evidence for (dh) and its voiceless counterpart (th), much of which in his estimation underestimated the frequency of stops. He writes, "It is very hard to accept the notion that a high level of stops and affricates in New York City speech is a new development." (ibid:236).

4.4 Social constraints on (ing) and (dh)

4.4.1 General social evaluation of (ing) and (dh)

The original grammatically conditioned variation between [ɪŋ] and [ɪn] has acquired social value, with the standard, formal velar variant opposed to the non-standard, informal apical variant. Labov (2001:90) suggests that the best conclusion to be drawn from the sometimes conflicting observations of historical commentators is that this social opposition has existed at least since the 19th century, and more likely for one or two centuries before that.

Stop variants of (dh) are socially stigmatized in all of the speech communities in which they have been studied to date, with subjective evaluation tests and self-report tests supporting this view. For example, the job suitability test conducted in Harlem (Labov et al. 1968) found that the fewer standard (dh) variants produced by a speaker, the lower he or she was rated on a scale of suitability for a newsreading job.

4.4.2 Social and stylistic correlates of (ing) and (dh)

In the earliest quantitative study of sociolinguistic variation of (ing), Fischer (1958) found stylistic and social variation in children aged 3 to 10 years. Girls used more [ɪŋ] than boys, and "model" (or school oriented) boys used more [ɪŋ] than "typical" boys. The stylistic variation of one ten-year-old boy was also studied. He used mostly [ɪŋ] in a formal situation and mostly [ɪn] in a less formal interview.

In his study of the Lower East Side, Labov (2006) carried out a more detailed investigation of stylistic differences. He made a three-way comparison of "casual" and "careful" speech in interviews with speech in reading tasks. Use of the standard variants of (ing) and (dh) increased along a cline of formality, from reading, to careful to casual style. Contrary to Fischer's findings, men were not found to use more [ɪn] than women, except in the lower class (Labov, 2006:257). For (dh), Labov did not explicitly report on gender differences, but an adaptation of his Figure 9.11 (ibid p.235) is given as Table 4.1 here. The calculation of the (dh) index is based on the sum of three coding values: 0 for the fricative, 1 for affricates, and 2 for stops, which are then averaged and multiplied by 100. The lower the index score, the more standard the speaker's pronunciation of (dh). Cutting Labov's original 5-point index scale in half at index value 40, we see that 61% of the female speakers have index values of 40 or lower, while the same percentage of men have index values of 41 or higher. Women are therefore more likely to use standard variants of (dh) than men.

(dh) index	Men	Women
0-40	N = 19/49 [39%]	N = 43/71 [61%]
41+	N = 30/49 [61%]	N = 28/71 [39 %]
	Total speaker N = 120	

Table 4.1 (dh) by gender on the Lower East Side (adapted from Labov 1966:235)

Fischer's characterization of the "model" and "typical" boy may be considered to partially reflect social class differences: an independent variable also investigated by

Labov in New York. The variable (ing) was found to reveal fine social class stratification, with an increase in standard variants for every step up on the social class scale (ibid:259); (dh), on the other hand, displayed a gap between working class and middle class informants (ibid:156).

In the LCV survey of Philadelphia (Labov, 2001), logistic regression analysis of the use of (ing) and (dh) by 120 socially stratified informants was performed. Formal styles promoted use of the [ɪŋ] and [ð] variants, while casual styles favored [ɪn] and [d]. Socioeconomic status had the greatest effect on (ing) and (dh) production, especially in careful speech. Older speakers were more likely to use standard [ɪŋ] and [ð] than younger speakers (see the section 4.4.3 on “Age” below). Women used more of the standard variant of each variable than men.

The association of stable variables with multiple correlates of social meaning is discussed in Campbell-Kibler (2005b; 2006). Campbell-Kibler carried out matched-guise experiments with college students in California and North Carolina, and via a web-based survey. Based on data collected from open-ended and multiple choice questions (which tested eg. listeners’ perception of speaker age, region of origin, education, intelligence, casualness, attitude, goal, often in combined categories such as “Valley Girl” and “Stoner”), Campbell-Kibler demonstrated that listeners' social evaluation of (ing) varies depending on the age, region and perceived social class of the speaker. However, she found that standard [ɪŋ] is robustly evaluated as "educated", regardless of other interacting factors.

Another experiment involving controlled tokens of (ing) was carried out by Labov et al. (2006). This study revisited the familiar “job suitability” test used in Labov’s studies of New York City, Harlem and Philadelphia (Labov, 2001:207; 2006:269), in which listeners are asked to evaluate a speaker’s relative suitability for a job or range of jobs, based on a portion of audio. The taped recordings contained differing proportions of [ɪŋ] and [ɪn]. Listeners’ sensitivity to the frequency of non-standard [ɪn] was highest at low proportions; above 10% [ɪn], all the speaker recordings were downgraded. In other words, very few tokens of [ɪn] are required to trigger negative social judgement.

To summarize, the stable variables (ing) and (dh) have consistently been found to have socially stigmatized variants that are used at a higher frequency by men and lower social classes. The frequency of non-standard variants increases for all social classes and ethnicities, and for both sexes, in casual styles. Importantly for this study, variants of (ing) and (dh) are perceived by listeners as indicators of speaker’s education and social class. In the next section, we consider the age-appropriateness of the variants in terms of production and perception.

4.4.3 Age

The relationship of speaker age to (ing) and (dh) use has been not been much investigated in comparison with other social constraints on these variables. Trudgill (1974), for example, examines the co-variation of (ing) with class, style and gender, but gives no information on the age distribution, despite the fact that a sixth of his informants are aged 10 to 20 years old.

In her work on children's acquisition of stable variables Roberts (1994) found that the relevant linguistic constraints, such as the morphologically conditioned alternation of (ing), are learned before the social and stylistic constraints. Roberts' 3-4 year olds had not yet learned the external constraints on (ing), for example, and she notes that:

Such findings do not seem surprising if one assumes that social constraints are learned by interacting with a variety of people, in a variety of situations, speaking on a variety of topics. The opportunities for these types of interactions would naturally increase as one grew older.

(Roberts, 1994:139)

This conclusion is supported by the Milton Keynes study of 4-, 8- and 12-year-olds conducted by Kerswill and Williams (2000). For socially stereotyped variables such as *h*-dropping, the older children were more skilled at style-shifting than the younger children, leading Kerswill and Williams to conclude that "children slowly gain sociolinguistic maturity in a manner that involves a gradual increase in the number of styles that are perceived and treated in an adult way." (Kerswill & Williams, 2000:105 cited in; Smith, Durham, & Fortune, 2007:66). In a study of 8-19 year old's (N=58) perception and production of two socially stigmatized variables in New York, (r) and (th), Labov (1964:484) found that there was a gradual increase with age in conformity to adult norms.

Smith, Durham and Fortune (2007) propose that any contradictory findings with respect to children's acquisition of overtly socially evaluated variation cannot fully be accounted for by the type of variable (morphosyntactic versus lexical, for example), the complexity of its conditioning, or the age of the child. Instead, the social significance of

the variable is most important, namely that “a guiding principle in the acquisition of (socio)linguistic competence may lie in whether the variable is a marker or an indicator (Labov, 1994:78) in the community in which the child is growing up.” (Smith et al., 2007:91). They examined how children aged 2;10 to 3;6 in northeast Scotland acquired two sociolinguistic variables. For one of these, the use of *-s* in third person plural contexts (eg. *My trousers is falling down*), children acquired complex grammatical constraints, but no stylistic variation. For the other, in which the local monophthongal [u:] (eg. *hoose* [hu:s]) alternates with the more prestigious standard diphthongal pronunciation, children did acquire stylistic variation. Smith et al. point out that caregiver input had a significant effect only for the vowel variable, and that this variable is more locally salient (a marker) than the *-s* variable (an indicator). Caregivers consequently did not modify their linguistic behavior for *-s* as much as they did for the *hoose* variable when speaking to their children.

However children learn what is sociolinguistically appropriate in formal and informal contexts, it seems clear that caregiver influence wanes during the later childhood and pre-teen years (Kerswill & Williams, 2000). Young people begin to manipulate their knowledge of sociolinguistic norms by acting in sociolinguistically *inappropriate* ways – at least in the judgement of the wider community. By the teenage years, they are using non-standard variants at a greater rate than any other members of their speech community. With respect to (ing) and (dh), apparent time studies have found that younger speakers tend to use more non-standard variants than older speakers (eg. Labov, 2001, 2006; Woods, 1978). Shuy et al (1968) and Houston (1985) both report that the highest frequency of [ɪn] is present in the speech of their adolescent age group: ages

10-17 in Houston's British data, and ages 13-17 in Shuy et al.'s Detroit data. "[N]o serious difference" (Labov, 2006:257) was found for (ing) between adults older than 20 and those younger than 20 in the Lower East Side study, but for (dh), younger speakers tended to have higher rates of non-standard variants.

Given the long-term stable status of (ing) and (dh), this distribution seems to reflect age-grading rather than community change. As Roberts argues, social constraints are best learned through the gradual broadening of one's interactional experiences, and until teenagers fully engage with wider society through work or college, they are (just like pre-schoolers) more limited than older members of the community in their knowledge and control of stable variables. Their high rate of use of non-standard variants acts as an adolescent symbol of non-conformity, from which they withdraw upon entry into college or the labor force.

Both Sankoff (2004) and Chambers (1995) apply this interpretation to data from Macaulay's (1977) apparent time study of Glasgow. Macaulay found that rate of use of non-standard glottal stop for medial and final [t] was greater than 65% for all 10-year-olds. Among 15 year olds, however, the upper class and upper middle class speakers had enormously reduced their use of glottal stops. These speakers are represented as groups 1 and 2a in Figure 4.1 below.

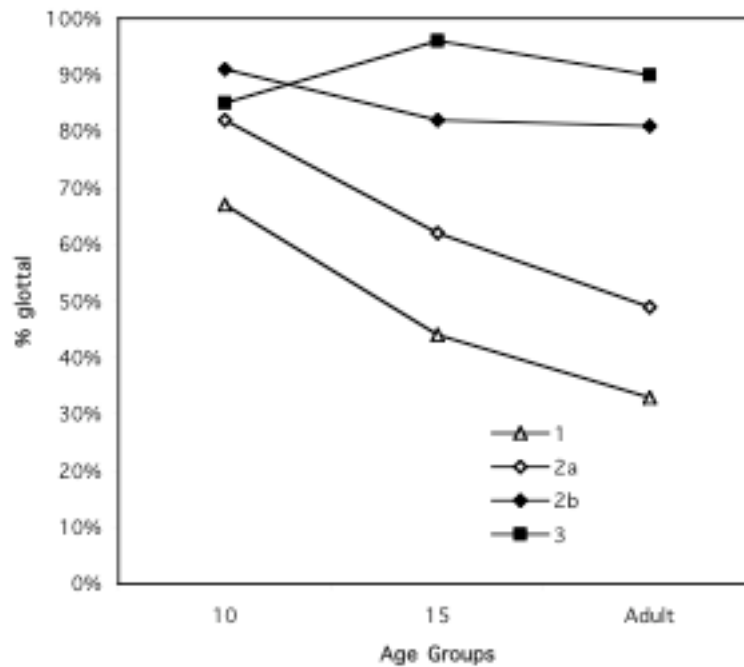


Figure 4.1 Percentage of glottal variants of /t/ used by female speakers in Glasgow

Adapted from Macaulay 1977 (Sankoff, 2006). 1 = professional; 2a = white collar; 2b = skilled manual; 3= semi- and unskilled manual.

Sankoff (2005:103) suggests that the apparent time findings are a reflection of real time age-grading:

Apparently the middle and upper class adolescents withdraw from glottal stop as they get ready to enter the labor force, where the standard pronunciation is more appropriate to their social position.

Some of the most detailed data on age-graded (ing) and (dh) use is to be found in the LCV. Speakers in this study ranged in age from 8 to over 60, allowing for a breakdown of ages by decades, with extra subdivisions for those under 20. The under 20 group was split into ages 8-12, 13-16 and 17-19. These are the categories that Labov (2001:101)

justifies as corresponding to modern American life stages, which we examined in Chapter One. The LCV found an adolescent peak for (dh), (ing) and negative concord around age 16, with a sharp drop-off in the 17-18 age category (ibid p.110-112). Figure 4.2 and Figure 4.3 reproduce the findings for (dh) and (ing) respectively.

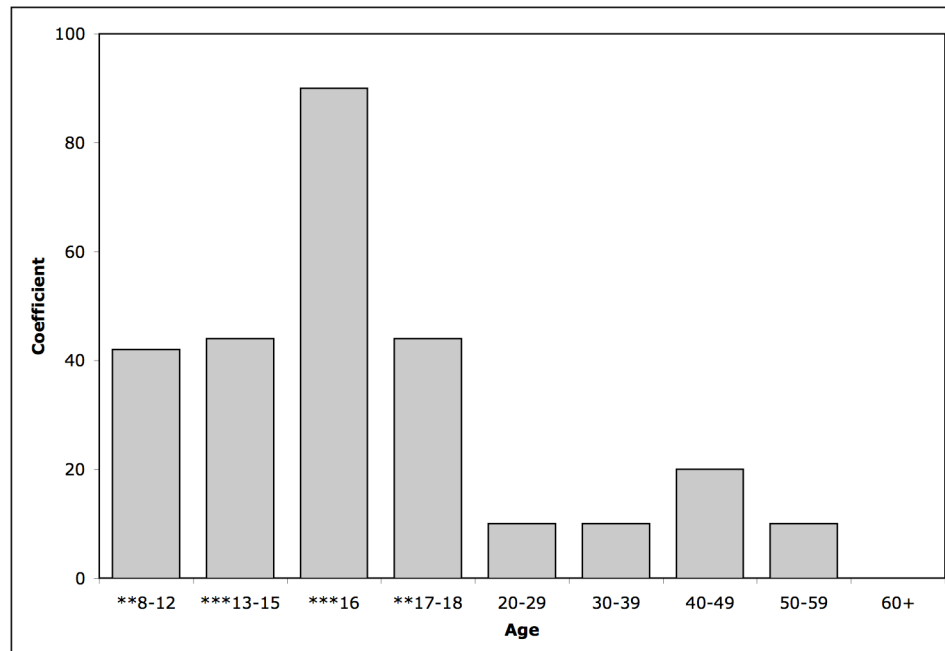


Figure 4.2 Regression coefficients for (dh) in careful speech

Adapted from Labov (1994:110, Fig. 3.13) (p $** < .01$, $*** < .001$)

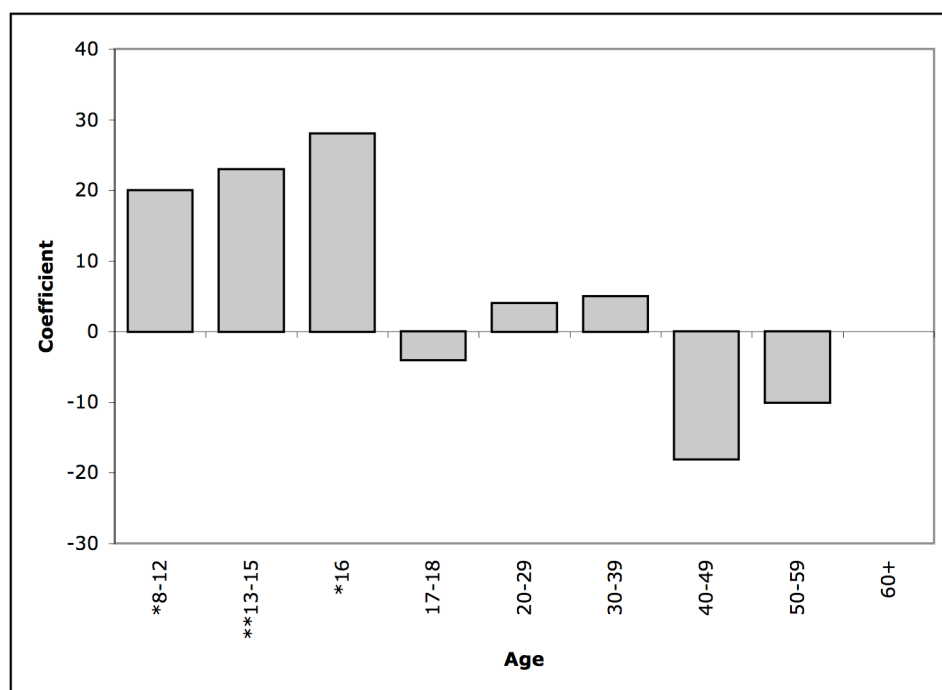


Figure 4.3 Regression coefficients for (ing) in careful speech
Adapted from Labov (1994:112, Fig. 3.15) (p *<.05, **<.01)

It is surprising, given the recent interest in real-time studies in the field of quantitative sociolinguistics, that no panel studies have yet explored the adolescent peak in stable variables such as (ing) and (dh). Were Macaulay's Glaswegian 15-year-olds and Labov's Philadelphian 17-18-year-olds really responding to the pressures of encroaching adulthood and the world of work and college? Their findings have not yet been verified longitudinally.

In what follows, I attempt to provide some real time data on young people's use of (ing) and (dh). The relationship between age and stable variables is of primary importance in this chapter. The prediction, following Labov (2001:101) and the Sankoff/Chambers interpretation of Macaulay (1977) is that speakers in the present study

aged 17-19 are now descending from the mid-adolescent peak, and that their use of non-standard variants will decline between 2005 and 2006.

4.5 Coding methodology

4.5.1 The panel for (ing) and (dh) analysis

Coding for (ing) and (dh) was conducted on sociolinguistic interview data from 22 of the 35 Senior and Junior panelists who were recorded in both 2005 and 2006 (see Table 4.2). 12 speakers were excluded because their token count for (ing) or (dh) was too low for individual real time comparison⁴.

	2004-5 and 2005-6	Removed	<i>Total</i>
Seniors	18	4	14
Juniors	17	9	8
<i>Total</i>	35	12	22

Table 4.2 Panel of 22 speakers for (ing) and (dh) analysis by cohort

Because informants were included in the stable variable analysis on the basis of their overall frequency of (ing) and (dh) tokens, the resulting sample of 22 is not balanced by any social factor. The number of Seniors and Juniors is uneven, and there is a skew in the distribution of socioeconomic status (Table 4.3), wherein the majority of Seniors are from the middle and upper strata, and the majority of Juniors are from the lower stratum.

	SES 1	SES 2	SES 3	N
Seniors	1	8	5	14
Juniors	6	1	1	8
N	7	9	6	

Table 4.3 Socioeconomic distribution of speakers in Cohorts 1 and 2

Since the two cohorts are so different, we cannot consider calendar age as an independent variable. That is, we cannot compare apples to apples: or 18 year-olds (Seniors in 2005) to 18-year-olds (Juniors in 2006). The cohorts are therefore considered separately in the analyses to follow, and combined for explorations of *relative* change over time. Furthermore, in the rest of the chapter, I refer to Seniors as “Cohort 1” and Juniors as “Cohort 2”, so as to avoid any ambiguity about their age and/or class status in either the first or second time periods.

The distribution by ethnicity is more even, with 12 of the panelists self-identifying as Irish, and 10 as Italian. However, there is an interaction with socioeconomic status that makes the category of ethnicity not viable for the current analysis, as shown in Table 4.4:

	Irish	Italian	
SES 1	6	1	7
SES 2	4	5	9
SES 3	2	4	6
	12	10	22

Table 4.4 Distribution of panel by SES and ethnicity

With only 1 Italian speaker in the lowest socioeconomic group, and only 2 Irish speakers in the highest socioeconomic group, ethnicity cannot be considered in the longitudinal study of (dh) and (ing). It will, however, be examined in the apparent time study of vocalic variables (Chapters 5 and 6), when an ethnically and socioeconomically balanced sample of 18 speakers will be analyzed.

4.5.2 Coding protocol

Coding was conducted by myself and two undergraduate assistants. Coders followed a coding protocol outlined in the next section. Ambiguous tokens were examined in spectrographic form in Praat, and if after examination they could not be reliably identified, they were rejected.

4.5.3 Coding for (ing)

For each of the 22 speakers, up to 30 tokens of verbal (ing) were extracted from each of the 2005 and 2006 interviews. Only verbal tokens of (ing) were extracted, in order to avoid the interaction of grammatical category on (ing) production. Verbal (ing) was selected because, as discussed above, it exhibits the weakest constraint on the production of non-standard [ɪn] and could therefore be expected to show a wider range of variation in the data than nominal (ing).

Verbal tokens were defined as:

- progressive eg. *I was running; He's giving; We had been laughing*

- participial eg. *I went shopping; He goes fishing; He keeps saying*

Exclusions (following Labov, 2001:79):

- adjectival eg. *mind-blowing, raging, disgusting*
- nominal eg. *ceiling, morning, swimming pool, the washing*
- *something, anything, everything, nothing*
- *gonna, tryna*
- *during, excluding*

The 2005 interviews lasted approximately 30 minutes on average, and 30 tokens generally exhausted the available data. For comparability, 30 tokens were also extracted from the second, longer interviews (approximately 90 mins on average). Tokens were extracted from two points in the interview if possible, to improve the chances of coding both casual and careful speech.

2005 interviews under 30 minutes were coded 10 minutes into the recording, until the token quota was filled. For longer interviews, 15 tokens of (ing) were extracted at 10 minutes from the start of the recording, and a further 15 tokens at 30 minutes from the start of the recording. If by the end of any recording the quota had not been filled, the coder then extracted from the start of the recording.

2006 interviews over 60 minutes were coded similarly. 15 tokens were collected at 10 minutes from the start of the interview, and 15 tokens were collected at 60 minutes

from the start of the interview. If the interview lasted less than an hour, the protocol for the longer 2005 interviews was applied.

A total of 1176 tokens of (ing) were retained after coding and selection of the panel.

4.5.4 Coding for (dh)

A similar protocol was followed for the extraction and coding of (dh) tokens. For each speaker, 60 tokens of (dh) were extracted from each of the 2005 interviews. 60 tokens were also extracted from the second, longer interviews (approximately 90 mins on average). Tokens were extracted from two points in the interview if possible, to improve the chances of coding both casual and careful speech.

All tokens of variants that appeared in an environment where the voiced interdental fricative phoneme was expected, were coded, with the following exceptions:

- in neutralizing environments (after alveolar stops and interdental fricatives)
- clear instances of reduced *them*, as in *seen 'em*
- preceding *down*, given the prevalence of stereotyped South Philadelphia phrases like *down the shore* (the Jersey Shore) which are almost categorically produced with zero initial consonant, as in "dahnashore"

Tokens were coded using a ternary coding scheme as either fricative, stop or intermediate. The intermediate code was used for zero variants and ambiguous tokens

(eg. weakly articulated word-initial fricatives could not always be distinguished from stops, and the generally dental articulation of word-initial stops made them hard to distinguish from the interdental fricative). Fricatives were coded as 0, intermediates as 1, stops as 2. The coding values were averaged and then multiplied by 100 (Labov, 2001:78).

As for (ing), 2005 interviews under 30 minutes were coded 10 minutes into the recording, until the token quota was filled. For longer interviews, 30 tokens of (dh) were extracted at 10 minutes from the start of the recording, and a further 30 tokens at 30 minutes from the start of the recording. If by the end of the recording the quota had not been filled, the coder then extracted from the start of the recording.

2006 interviews over 60 minutes were coded similarly. 30 tokens were collected at 10 minutes from the start of the interview, and 30 tokens were collected at 60 minutes from the start of the interview. If the interview lasted less than an hour, the protocol for the longer 2005 interviews was applied.

A total of 2526 tokens of (dh) were retained after coding and selection of the panel.

4.6 Results

4.6.1 (ing)

Overall rates of non-standard apical [ɪn] in verbal forms range between 62% and 95% over the one year time period from 2005 to 2006 (see Figure 4.4, below). Cohort 2 (who were Juniors in 2005), exhibits a higher overall rate of the non-standard variant than does

Cohort 1. This is expected, given the younger mean age and the high proportion of SES 1 speakers. However, both cohorts significantly decrease their use of the non-standard variant between 2005 and 2006 (Cohort 1, $t = 1.96$, $p \leq 0.01$; Cohort 2, $t = 1.97$, $p \leq 0.1$).

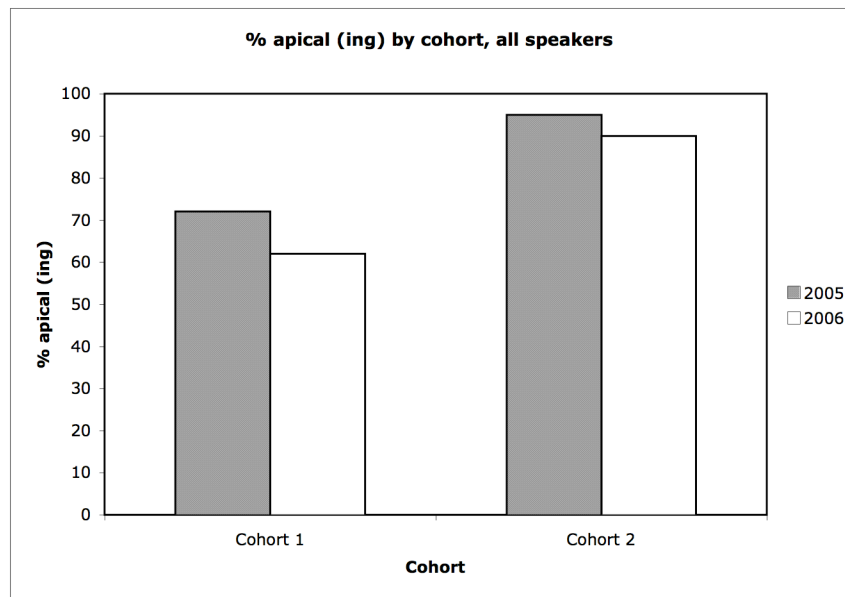


Figure 4.4 Mean percent frequency of apical (ing) by Cohort and Year of Recording

Overall, the rate of non-standard [ɪŋ] use in 2005 is 81%, declining by 10% to 71% in 2006. This confirms the hypothesis, outlined in section 4.4.3 above, that in general the panel are descending from a mid-adolescent peak in non-standard variant use, as they approach graduation from high school and engagement with the wider linguistic and socioeconomic marketplace.

However, there is a marked difference in rate of decreasing [ɪŋ] use between the three socioeconomic groups. Figure 4.5 displays the rate of production of the apical variant for each social group over time.

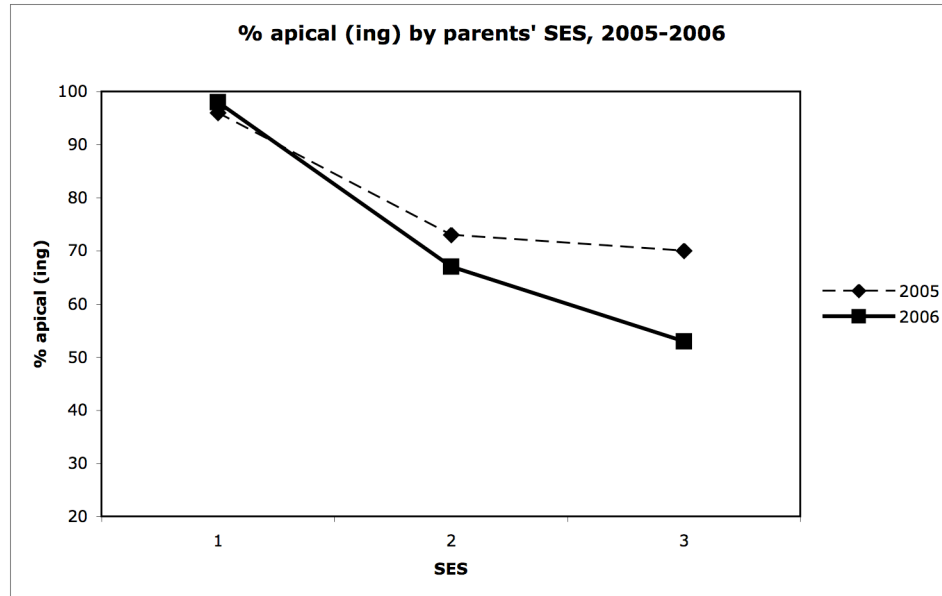


Figure 4.5 Percent rate of apical (ing) by parents' SES, 2005-2006, all speakers

Firstly, it is clear that in both 2005 and 2006 the greatest social division is between SES 1 (blue collar workers) and the other two social groups. This same gap between working and middle class was found in Labov's 1966 study of the Lower East Side and Trudgill's 1974 study of Norwich. Secondly, speakers in SES 1 do not significantly change their rate of [ɪŋ] use, $\chi^2(1, N=395) = 1.39, p = \text{n.s.}$ Indeed, their use of [ɪŋ] increases by 2%. Speakers in SES 2 slightly decrease their rate of [ɪŋ] (by 6%), but the decrease is not significant, $\chi^2(1, N=412) = 1.98, p = \text{n.s.}$ Speakers in the highest social group, SES 3, show the greatest decrease, at 17%, in use of the non-standard variant over time. This difference is significant at $p < 0.001$ ($\chi^2(1, N=369) = 11.18$). This considerable withdrawal from [ɪŋ] by the highest SES group (equivalent to Conn 2005's upper middle class) mirrors the withdrawal from glottal stop of the upper class 15-year-olds in Glasgow

(Macaulay, 1977). In both studies, the importance of standard speech to the highest socioeconomic group in the linguistic marketplace is reflected in their rapid rejection of non-standard forms in mid to late adolescence.

Let us list the individual scores, given in Table 4.5. Shown in Figure 4.6 are 18 of the 22 panel speakers. For clarity, the four remaining speakers are shown in Figure 4.7, and discussed below.

	% [in]		% change 06-05	SES
	2005	2006		
Alison	100	93	-7	1
Kerry	97	93	-4	1
Lynne	100	97	-3	1
Erin	97	97	0	1
Natalie	97	100	3	1
Kathleen	93	100	7	1
Melanie	93	100	7	1
Joanna	77	27	-50	2
Julia	75	40	-35	2
Emma	83	70	-13	2
Mia	88	75	-13	2
Veronica	70	60	-10	2
Abby	93	90	-3	2
Kaitlyn	100	97	-3	2
Amanda	47	52	5	2
Hayley	48	87	39	2
Chelsea	90	50	-40	3
Melissa	67	30	-37	3
Angela	43	10	-33	3
Deirdra	80	57	-23	3
Lucia	78	77	-1	3
Claire	76	83	7	3

Table 4.5 Percent [in] by speaker, year of recording and SES

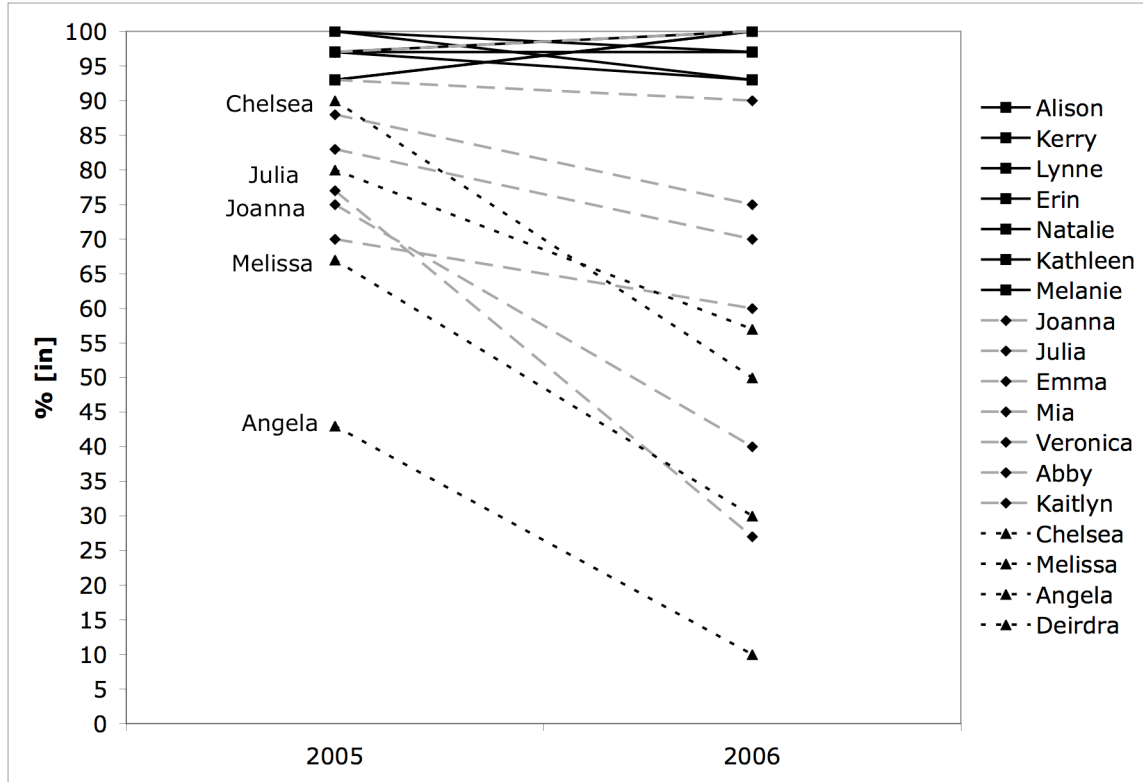


Figure 4.6 Percent [ɪn] by speaker and year of recording for 18 of 22 panelists.

Full line = SES 1; dashed line = SES 2; dotted line = SES 3.

4.6.1.1 *Categorical and near-categorical users of non-standard [ɪn]*

Looking first at Figure 4.6, three points of interest emerge. The first is that those speakers whose use of non-standard [ɪn] was close to 100% in 2005 remain within a range of 93-100% in 2006. This finding resembles that of Sankoff and Blondeau (2007), who report that for a panel of Montreal French speakers, those who were **categorical** users of either apical [r] or uvular [R] in 1971 tended to remain categorical in 1984. Speakers who participated in the community change to [R] by increasing their use of this variant over the 13 years, were those who had been variable users of [R] in 1971. The influence of

categoricity is clearer in the Sankoff and Blondeau study since it affects categorical speakers in all socioeconomic categories, rather than principally working class speakers, as it does here. In addition, their study tracks a linguistic change in progress over real time, rather than a stable variable.

Besides social class and linguistic categoricity, we must also bear in mind that six of the nine speakers whose [ɪn] score varies within the 93-100% range are younger Cohort 2 speakers who were in high school in 2005 and in 2006. The remaining three near-categorical speakers, Abby, Natalie and Kaitlyn, are the only Cohort 1 members in this panel who went on to community college (rather than a four year college) after high school. Could social circumstances have contributed to the lack of standardization exhibited by these speakers? Before we try to answer this question, we will look at the variable speakers, all of whom are in SES 2 and 3.

4.6.1.2 *Variable users of non-standard [ɪn]*

The second point of interest, then, is that almost all of the 13 **variable** speakers (that is, speakers who were not categorical or near-categorical speakers in 2005) in SES 2 and 3 decrease their use of the non-standard variant over time. Five of these speakers—Chelsea, Julia, Joanna, Melissa and Angela—show dramatic decreases, as shown by the labelled lines on Figure 4.6. A minority of four, shown in Figure 4.7, either remain stable or *increase* their use of non-standard [ɪn]. One speaker, Hayley, shows a quite dramatic increase.

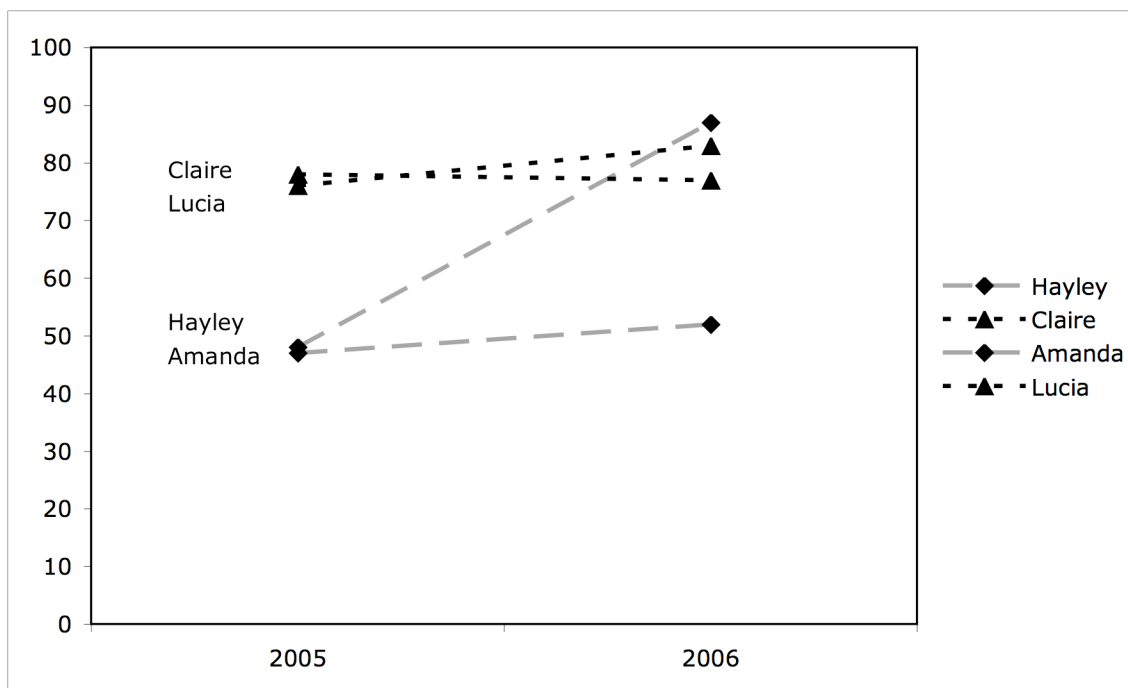


Figure 4.7 Percent [In] by speaker and year of recording for 4 panelists. Dashed line = SES 2; dotted line = SES 3. 22 speaker panel.

Can we account for the girls' linguistic behavior by looking at their post-high school transitions? Joanna, Melissa, Julia and Angela are high-achieving, academically-inclined girls who are attending good colleges⁵, and that this may explain their marked avoidance of [In] in 2006. However, Hayley, Amanda and Lucia were also members of the group Abby once referred to disparagingly as “the smart girls”, and, unlike their friends, they do not avoid non-standard [In] when they get to college in 2006. Indeed, Hayley uses considerably more non-standard [In] in her second interview than in her first.

Teasing out social explanations, therefore, for the differing linguistic behavior of members of this panel, is difficult with evidence from only one linguistic variable. We

will have to return to an individual-level analysis when we have looked at (dh) and the vocalic variables.

4.6.1.3 *Individual SES*

The third and final point of interest with regard to (ing) is that SES correlates poorly with this variable, both in 2005 and 2006. A glance back at Figure 4.5 serves to remind us that although the highest users of [ɪn] are in SES 1 and the lowest in SES 3, within this range there is little pattern. Naturally, we cannot expect to see perfect correlation at the individual level. Nonetheless, we will look in Chapter 6 at alternative ways of grouping the girls other than by parents' socioeconomic status.

4.6.2 (dh)

(ing) and (dh) are not equally sensitive indicators of the increasing social awareness of the 22 panel speakers. Unlike the findings for (ing), the panelists' use of non-standard (dh) variants does not significantly decrease between 2005 and 2006. The range of (dh) index scores for individuals over the period is great, at 5 to 123 points, where 5 indicates a low frequency of non-standard variants, and 123 indicates a high frequency of such variants⁶. There is also a great deal of intra-speaker variation in increase and decrease of index value, with a range of +22 to -34 index points between 2005 and 2006. Yet the average (dh) scores for each cohort as a whole are no greater than 55. As can be seen in Figure 4.8, the (dh) score for Cohort 1 is the same, at 49, in both years. Cohort 2 registers a very slight decrease, from 55 to 53 points.

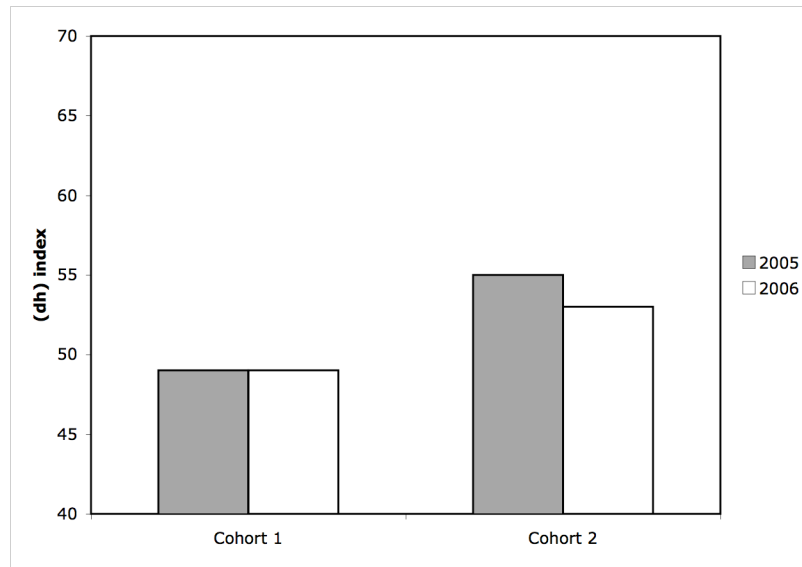


Figure 4.8 (dh) index values by Cohort and Year of Recording

The overall stability of (dh) as displayed in Figure 4.8 again conceals the differential behavior of the three socioeconomic groups. In Figure 4.9 , it is once again clear that only the highest social group, SES 3 registers a significant decrease in non-standard forms, $t(679) = 1.96$, $p < 0.1$, while SES 1 and SES 2 showed no significant change, $t(837) = 1.96$, $p = 0.582$ and $t(950) = 1.96$, $p = 0.610$ respectively.

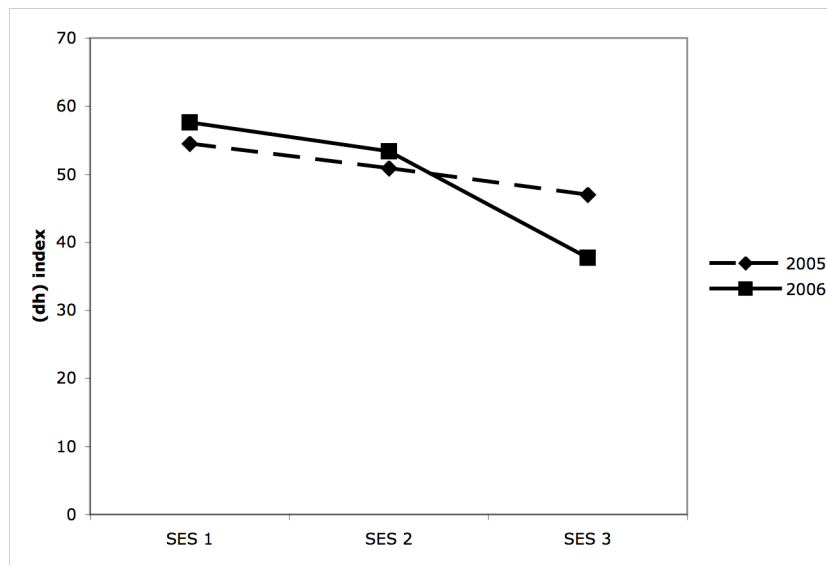


Figure 4.9 (dh) index values by SES and Year of Recording

Overall, then, while speakers in SES 1 and 2 show no change in (dh) use⁷, speakers in SES 3 again show a marked dispreference for non-standard variants in the second recording session. The hypothesis that speakers in this age group will decrease their rate of use of non-standard variants in the last two years of high school is true only for the highest social class group.

Nonetheless, it was noted in Chapter 2 that by a number of qualitative measures, the 2006 interviews were more informal than the first interviews in 2005. They tended to be longer, some took place out of school, and the participants were familiar both with me and with the interview procedure. In addition, everyone who agreed to a second interview did so under no pressure from me, and those who did not wish to be interviewed a second time left the project. Thus the 2006 interviews reflect interactions with a group of girls who were positively oriented towards myself and the project, and who were motivated to

reunite for a second time. Under such circumstances, one would expect the number of non-standard variants to have increased, not decreased, over time. Instead, we find confirmation in the stability of SES 1 and 2 that the first interviews were already reflective of these speakers' most informal style⁸. In the rapid withdrawal from non-standard variants in SES 3, we see that in this social class group, it is age (and its accompanying awareness of age-appropriate sociolinguistic variants) that trumps familiarity. Speakers in SES 3 decrease their use of non-standard (ing) and (dh) in the second interviews, despite the increased informality of the interview context.

If we list the values for individual speakers, given in Table 4.6, we see that only in SES 3 do speakers consistently decrease their index score, or remain roughly stable. The overall stability in SES 1 and 2 is accounted for by a “cancelling out” effect, whereby individuals decrease and increase their index score within each group.

	(dh) index score		Change in pts 06-05	SES
	2005	2006		
Alison	98	90	-8	1
Kerry	7	8	1	1
Lynne	33	47	14	1
Erin	123	108	-15	1
Natalie	53	75	22	1
Kathleen	28	45	17	1
Melanie	38	30	-8	1
Joanna	70	57	-13	2
Julia	48	68	20	2
Emma	53	70	17	2
Mia	33	32	-1	2
Veronica	62	72	10	2
Abby	85	75	10	2
Kaitlyn	28	27	-1	2
Amanda	18	13	-5	2
Hayley	65	78	13	2
Chelsea	47	53	6	3
Melissa	58	47	-11	3
Angela	42	30	-12	3
Deirdra	45	27	-18	3
Lucia	50	38	-12	3
Claire	23	5	-18	3

Table 4.6 (dh) index score by speaker, year of recording and SES

As we saw for the (ing) variable, then, individual SES does not pattern consistently with (dh) production, at least for individuals in SES 1 and 2. While Erin, the girl with the highest index score is in SES 1 as we would expect, it is one of the other SES 1 girls, Kerry, who has the lowest overall score. Between these polar speakers lie a mixture of seniors and juniors, community college-goers and Ivy League students.

Two possibilities suggest themselves. Firstly, the socially stratified patterns for (ing) and (dh) that we have come to expect from large-scale surveys of adult speakers simply cannot be captured in a small, highly homogenous group of adolescents. Rather,

we can capture only the broadest of trends: in this case, that girls in the highest social class show the most consistent decrease in use of non-standard variants over time.

The second possibility is that the methods used here to calculate social and/or linguistic factors were not sufficiently sensitive or fine-grained to fully capture patterns of (ing) and (dh) use. Social categories are discussed further in Chapter 5. To test whether a linguistic factor might have been set up incorrectly, I re-calculated the (dh) data to show speakers' per cent use of stops versus the other two variants. Stops, after all, are more socially salient and more stigmatized than the intermediate (usually zero) variants, and might be expected to co-vary more tightly with social class than a general index score. The outcome, however, was similar, in that all three SES groups demonstrated very little change over time. Indeed, this is true for all three variants of (dh), as shown in Table 4.7:

	% stops				% intermediate				% fricatives		
	SES 1	SES 2	SES 3		SES 1	SES 2	SES 3		SES 1	SES 2	SES 3
2005	20	14	17		15	23	11		65	63	72
2006	22	16	14		14	21	10		64	63	76

Table 4.7 Variants of (dh) as a percentage of all variants, by SES and year of recording.

Within every SES group, the change over time for any variant is no greater than $\pm 4\%$. In other words, the proportion of standard to non-standard variants remains approximately the same in every group from 2005-2006. Using a (dh) index score confirmed the finding for (ing) that it is the highest social group who recedes from non-standard variants after high school. However, a breakdown by variant shows that this group actually remains more or less stable with respect to its proportional use of the three variants, although

there is a significant increase over time in the number of fricatives for SES 3, χ^2 (1, N=720) = 3.32, $p < 0.1$, which is due to small decreases in the number of stops and intermediate variants.

At both points in time, across social classes, the lowest social group has the highest proportion of stops, the middle social group has the highest proportion of intermediate variants, and the highest social group has the highest proportion of fricatives. This symmetry is surprising, but pleasing. While speakers in SES 2 align with SES 3 in disfavoring the socially stigmatized stops (at around 16% for both groups), their second-highest status is nonetheless reflected in their use of intermediate (mainly zero) variants:

Um, so [ð]then we come out and we do cheers and dances. And then always, every year, our last dance [Ø]that we do, it's [Ø]the last thing we do before we get off the court, it's always like [d]this really um upbeat high-energy dance. It always looks really good.

Julia (E05-S031-I015-R039), talking about cheerleading in 2005

To conclude, then, we have found that the (dh) index score illuminates the retreat of the highest social class from non-standard variants in real time, while a breakdown by percent use of each variant gives a more nuanced picture in apparent time.

4.7 Summary

The stable sociolinguistic variables (ing) and (dh) have repeatedly been found to co-vary with a number of social variables, including age, sex, style, social class, and sometimes

ethnicity. For the Sacred Heart panelists, the independent variable examined was social class, calculated on a 3-point composite scale of parents' education, occupation and residence value (SES). Commensurate with earlier studies, social class was found to be inversely correlated with use of non-standard variants, with the highest social group particularly disfavoring them.

Other relevant independent variables, such as gender, style and ethnicity, were excluded from the analysis for reasons explained in this and previous chapters. The two cohorts represent two age groups (16-17 and 17-18), but the very different social distributions of the cohorts precluded any apparent time comparison. In other words, a comparison of the (dh) and (ing) use of younger and older teenagers could not be carried out.

Real time use of (ing) and (dh), however, was examined in two time periods: 2005 and 2006. This represents a step forward in the sociolinguistic analysis of these two well-known variables, since they have not previously been the subject of a longitudinal study. As predicted, and despite greater informality in the second interviews, the overall rate of non-standard alveolar (ing) dropped for both cohorts. Contrary to expectations, on the other hand, there was no such overall decrease in non-standard variants for (dh). A breakdown of the data by SES revealed that in fact only speakers in the highest social group significantly decreased their use of non-standard variants from one year to the next. This suggests that not only are speakers from higher status backgrounds more likely to use standard variants of stable variables in general, but that they are sensitive to the importance of standard variants for their future place in the linguistic market (cf. Chambers (1995) and Sankoff (2004)'s interpretation of age-grading among Glasgow

youth in Macaulay (1977)). This preparation is ongoing in the last year of high school and first year of college, and if the apparent time findings for teenagers in the LCV and Glasgow do indeed reflect age-grading, may have begun a year or two before, at around the age of 15 or 16. A follow-up study of the panelists would show whether speakers in the next highest socioeconomic group are simply lagging behind, and will significantly decrease their non-standard variants after they have been out of school for more than a year; or whether they (as might be expected for the lowest group, SES 1) will maintain their high school levels of non-standard variants into early adulthood and beyond.

In the next chapter, we will turn to ethnographically-based social categories as a basis for real time analysis, to see if they provide further illumination. The categories are explored in relation to Philadelphia vowels engaged in change from below.

NOTES

¹ Social evaluation data may be collected overtly via direct questions to the informant, or more covertly, via more experimental means such as matched guise tests (Lambert, Hodgson, Gardner, & Fillenbaum, 1960). The overt method will only be successful in those speech communities where awareness of the variation is similarly explicit. Labov (2001:196) remarks that unlike (neg), (ing) and (dh), the deletion of (-t, -d) is subject to overt social judgement in formal tests, but is rarely commented on.

² Stressed /In/ in monosyllabic *ring*, *king*, *sing* etc. is not considered to be within the envelope of variation for (ing). For most native speakers, these are pronounced categorically with the velar variant (Hazen, 2006:583). Stressed variants of (ing) also occur in Chicano English (Mendoza-Denton, 1997:108) in multisyllabic words such as *nothing*, and have been included in variationist studies of (ing) use in this dialect.

³ In working-class varieties of English, [v] can be heard in both medial position, eg. *bovver* for *bother*, and in final position, eg. *smoov* for *smooth*. In African-American English, [v] for [ð] is heard only in final position.

⁴ N < 20 for (ing) and N < 30 for (dh).

⁵ Joanna, Julia and Angela are at research universities on the East Coast; Melissa attends a liberal arts college near Philadelphia.

⁶ Scores over 100 are only possible if the speaker uses some stops.

⁷ The very slight increase in (dh) index values in 2006 for SES 1 and SES 2 is hard to account for. However, since the difference is less than or equal to 5 index points in each social group, I consider it to be of little importance to the interpretation of the data.

⁸ By this I mean their most informal style in a sociolinguistic interview. We can only speculate on the rate of non-standard (ing) and (dh) use outside of the interview. The results suggest that informants in SES 1 and 2 were already speaking in their most casual interview style in the first interviews.