TEACHERS' EVALUATIONS OF FOREIGN-ACCENTED SPEECH

By

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This study gathered empirical data concerning teachers' evaluations of foreign-accented speech. It was hypothesized that these evaluations would indicate the teachers' underlying attitudes to the speakers of the language varieties presented. Current literature states that these attitudes will conform to a particular ethnic stereotype and the intent of this investigation was to examine the presence and extent of such biases in Vancouver teachers.

The administration of language stimuli and semantic differential scales to a subject population indicates how favourable or unfavourable the Ss will be toward the language variety and subsequently, to the speakers themselves. In order to investigate the possible presence of stereotyped attitudes to foreign-accented speakers, all subjects were presented with language stimuli and semantic differential scales. The language stimuli consisted of two levels of foreign-accented English speech from the following language groups: 1) Chinese, 2) Québécois, and 3) Punjabi, in addition to two standard English samples used both as a control and for purposes of comparison. The semantic differential scales were designed to elicit the reactions of the Ss on four dependent variables of speech, personal, social distance and work characteristics.

One hundred and nineteen practicing and prospective teachers attending courses at UBC were administered the
experiment in eight sessions. The sample was identified as coming from the Vancouver district and was representative of the target population.

The data collected were analysed using a repeated measures analysis of variance and the Bonferroni t-test.

Evaluations of the slight and heavy foreign accents were compared to those of the standard English speech, revealing negative stereotyped attitudes on the speech (t=14.51, p < 0.01) and personal (t=12.23, p < 0.01) variables. Insignificant findings were reported for the social distance variable and a significant t (t=5.72, p < 0.01) on the work variable indicated positive stereotyped attitudes for the ethnic groups.

Stereotypes conforming to a predicted pattern were not significant, though a supplementary analysis revealed a new pattern for the Québécois-accented speakers (t=3.37, p < 0.01).

Analyses performed on the three slightly-accented speakers compared to the three heavily-accented speakers within accent groups revealed significant results on the speech variable (Chinese: t=6.59, Québécois: t=7.37, Punjabi: t=6.73, p < 0.01), indicating stereotyped attitudes are a function of accent broadness. A significant result (p < 0.05) for the Punjabi-accented speakers on social distance and the insignificant findings on personal and work further indicate stereotyping. An additional analysis comparing the two standard English speakers found
differentiations, not according to stereotypes but to paralinguistic features on speech ($t=14.36, p < 0.01$), personal ($t=7.67, p < 0.01$) and social distance ($t=9.84, p < 0.01$). The result on the work characteristics was insignificant.

A repeated measures analysis of variance revealed ethnicity of listener was the only teacher characteristic to yield a significant result on the personal ($F=8.21, df=3/115, p < 0.01$) and work ($F=3.85, df=3/115, p < 0.05$) variables, indicating this characteristic mediated these teachers' ratings.

This study concluded with a discussion of the practical and research implications of these results.
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CHAPTER I: THE PROBLEM

Introduction

A considerable body of literature in the social sciences has investigated the idea that, based on speech clues alone, listeners will make evaluations about the personality, ethnicity, education, intelligence or even appearance of a speaker. The independent variables in this research have been speech stimuli ranging from any given language to the details of particular dialects, accents or styles. The dependent variables have been just as diverse, ranging from personality assessments to details about individual behavior or traits. The tendency of the individual judges in these experiments to respond with a high degree of consensus points to the phenomenon of stereotyping.

The work of Williams et al. (1976) shows that these reactions are also present in teachers and this can have an effect on both the scholastic achievement and the self-perception of the students in their classes. This research and a number of other investigations of such stereotyping have identified variables of educational concern, namely, listener characteristics, degree of accent, speaker ethnicity and academic expectations. These empirical studies argue that people respond to speech in terms of cultural stereotypes and that these responses are influenced by the previously stated variables (Anisfeld, Bogo and Lambert, 1962; Ryan and associates, 1975, 1977, 1980(b)). The
investigations into the effects of teacher characteristics, speaker ethnicity and accent broadness are of major interest to this researcher.

The implications of these generalizations and the results this present research may have for curriculum development must be considered. If it is true that teachers also hold stereotyped attitudes of accented speakers, educators in their commitment to improve the learning environments of their students might well address themselves to this fact in teaching training programs, workshops and in-service training. It is important in a pluralistic society that the schools do not perpetuate, either directly or indirectly, a doctrine that supports ethnocentrism and a unitary culture.

Statement of the Problem

Current research literature suggests that listeners, upon hearing some minimal cues in a person's speech, call up a stereotype and that this stereotype colours all their perceptions of that person. This study proposes to examine such reactions as elicited by foreign-accented English speech samples. Of central concern is the presence and description of the differentiations teachers will make between the various accents and accent groups presented. Broadly stated, will the listeners make gross generalizations about the speakers of accented English speech and will these generalizations pattern a stereotype for each accent group?
Linguistic stereotyping is measured by indirect scaling methods such as the semantic differential scale (Appendix B). Subjects are required to choose between bipolar adjectives and mark the degree of their choice. The degree ranges from neutral to highly in the direction of their chosen adjective. The adjectives used in this study are a compilation of personal traits e.g., likeable, sociable), speech characteristics (e.g., indistinct, good speaking ability), social distance scales (e.g., similar to myself), and work characteristics (e.g., ambitious).

Another variable discussed in the literature on speech styles and stereotyping is that of listener characteristics. Language and ethnic background, SES, age and, of interest to this study, years of teaching experience are factors which have shown both significant and insignificant results (Lambert et al., 1966; Miller, 1972; Williams et al., 1971). This study intends to investigate the influence of various teacher characteristics on the responses. These characteristics will be collected through the use of a questionnaire requesting biographical data.

Accent broadness was the focus of several studies (Arthur, Farrar and Bradford, 1974; Giles, 1972(b); Rey, 1981) and its incorporation into the study is an attempt to assess the degree of stereotyping afforded minimally and heavily-accented English speech. It is expected, in light of the findings in previous studies, that an increase in
accent features will lead to the perception of speech as more nonstandard and of the listener according more social distance between him or herself and the speaker.

In summary, the following variables will be considered in this study, 1) the English language stimuli consisting of speakers from each of the following native language groups; Cantonese, Québécois and Punjabi in addition to two standard English speakers, 2) two degrees of accentedness for each of the Cantonese, Québécois and Punjabi groups, 3) teacher characteristics and 4) stereotyped attitudes of teachers.

Objectives of the Study

The major objectives of this study are to answer the following questions:

When presented with semantic differential scales and stimuli consisting of foreign-accented and standard English speech,

1. how will teachers rate the social distance and the personal, speech and work characteristics of the foreign-accented speakers as compared to the standard English speakers?
2. how will teachers evaluate the foreign-accented speakers from the three accent groups?
3. how will teachers rate the speech characteristics of heavily-accented speakers as compared to those of slightly-accented speakers within the same accent group?
4. how will teachers rate the personal characteristics of heavily-accented speakers as compared to those of slightly-accented speakers within the same accent group?
5. how will teachers perceive the social distance between themselves and the heavily-accented speakers and the slightly-accented speakers within the same accent group?
6. how will teachers perceive the work characteristics of heavily-accented speakers as compared to those of slightly-accented speakers within the same accent group?
7. how will teacher characteristics affect the evaluations of the foreign-accented speakers?

Hypotheses
The following hypotheses will be tested:
When presented with stimuli consisting of foreign-accented and standard English speech,
1. teachers will rate negatively the speech, personal, and work characteristics of the foreign-accented speakers and accord more social distance to such speakers than to the standard English speakers.
2. teachers will conform to stereotyped attitudes when evaluating the foreign-accented speakers. In particular,
   (A) the Cantonese-accented speakers will be perceived as hard-working, ambitious, conscientious . . . .
   (B) the Punjabi-accented speakers will be perceived as unsociable, untrustworthy . . . .
(C) the Québécois-accented speakers will be perceived as humourous, likeable.

3. teachers will rate the speech characteristics of heavily-accented speakers more negatively than those of slightly-accented speakers within the same accent group.

4. teachers will rate the personal characteristics of heavily-accented speakers more negatively than those of slightly-accented speakers within the same accent group.

5. teachers will accord greater social distance to heavily-accented speakers than to slightly-accented speakers within the same accent group.

6. teachers will rate the work characteristics of heavily-accented speakers more negatively than those of slightly-accented speakers within the same accent group.

7. teacher characteristics (e.g., ethnicity, years of teaching experience, sex ...) will not have a significant effect on the evaluations of the foreign-accented speakers.

Definitions of Terms Used

The terms used in this study were defined as follows:

1. **Accent** is the degree to which only the phonological structures of English are influenced by the phonological structures of the speaker's native language.
2. **Heavy foreign accent** is the higher frequency, relative to the lower frequency of a slight foreign accent, with which specific pronunciations influenced by the phonological structures of the speaker's native language occur in the phonological structures of English.

3. **Slight foreign accent** is the lower frequency, relative to the higher frequency of a heavy foreign accent, with which specific pronunciations influenced by the phonological structures of the speaker's native language occur in the phonological structures of English.

4. **Stereotype** is the degree to which there is a consensus among members of one group regarding the attributes of another (Taylor, 1981, p.155) as measured by the semantic differential rating scale.

5. **Attitude** is a system of affective, evaluative reactions based upon and reflecting the evaluative concepts or beliefs which have been learned about the characteristics of a social object or class of social objects (Shaw and Wright, 1967, p.10) as measured by the semantic differential rating scale.

6. **Social distance** is the different degrees of understanding and feeling that exist between given persons and certain social groups or the degree of intimacy an individual would allow the members of these groups (Bogardus, 1925, p.299) as measured by the semantic differential rating scale.
Pilot Study

A pilot study was carried out at UBC to identify any unexpected points of difficulty in administering the experiment. Factors such as approximate length of time for each administration, willingness of Ss to participate in the study and the most appropriate method of recording measures for scoring were also established. One further purpose of the pilot study was to validate the perceived ethnicity of the individual speakers in the language stimuli.

A complete discussion of the pilot study and its findings is included in Chapter III.

Significance of the Study

Much research has been devoted to the relationship between speech style and listeners' attitudes. Studies have shown that the general public responds to speech in terms of cultural stereotypes and that teachers are not exempt from these stereotypes when evaluating children's oral language (Lambert et al., 1960; Williams et al., 1976). To date though, there has only been one study that has dealt specifically with teachers' reactions to the accented speech of second language speakers (Rey, 1981) and it is this area which is of central concern to this researcher.

If the present study confirms the supposition put forth in the Statement of the Problem it can be shown that students with foreign accents are at a disadvantage in
school. Such findings would be in accordance with other research that shows that this is the case with students of different dialects and possessing nonstandard speech characteristics.

The implications for the training of teachers is addressed by Burling (1971). Teachers must be helped to learn more about the nature of dialectical variability and nonstandard English. He feels this is necessary because children with such speech characteristics must learn to cope not only with linguistic codes regarded as 'inferior' but also with the severely depreciatory attitudes of their teachers toward their speech. The necessity of the development of curricula, teacher training programs and the like, that alert teachers and future teachers to the danger of conveying negative stereotyped attitudes has been pointed out in much of the previous research.

A further concern of the present research is also the interpretation of the results in terms of other recent research.

Suter (1976) and Purcell and Suter (1980) examined predictors of pronunciation accuracy in second language learning. It was found that with the sixty-one subjects tested, the variables which were the most important were those that teachers have the least influence on in their second language classes. Out of the four variables which measured aspects of formal training, none proved important
in accounting for variations in pronunciation accuracy. In view of these findings, as language teachers we have very little or no control over the pronunciation accuracy or degree of accentedness the students acquire.

The work of Fathman (1975), Oyama (1976), Snow and Hoefnagel-Höhle (1977) and the many more who have dealt with the question of age and native pronunciation fluency is enlightening in that it tells us older learners can learn to pronounce a second language as well as younger learners but it is limited in that it does not tell us how or if this goal can be achieved pedagogically. To date, their findings have not been instrumental in finding solutions to eradicate foreign accents.

Accents, it appears, are still very much a reality and probably quite inevitable. Time must be spent training and retraining teachers and the general public to respond less negatively to foreign-accented speech. Intergroup behavior and racial judgements are concerns of everyone but they are of particular concern to educators.

In view of the previously stated findings, this is the area in which remedial work must be instigated and the results of the problem being investigated in this study will, it is hoped, further support this statement.
CHAPTER II: REVIEW OF THE LITERATURE

The research involving evaluations of teachers' attitudes to speech must be viewed in relation to the numerous other studies in the social sciences which pertain to speech perception as it is these studies which have provided the context and much of the theory and methodology used. This section, which is not meant to be an exhaustive review of all such literature, will present only the findings of attitudinal studies pertaining to stereotyping through linguistic cues.

The methodology of all these studies follows a similar pattern. Taped speech samples are presented to an experimental group which is then asked to rate these samples on a semantic differential scale (Osgood et al., 1957). An example of such a scale is as follows:


The development of this type of scale provides an indirect measurement technique for eliciting and quantifying attitudinal evaluations of the speech samples (Williams, 1974). In addition, direct attitude measures, prejudice scales, open-ended questionnaires and the like are frequently introduced into the studies.

Attitudes to Languages

The most prominent name in the field of attitudes to languages is Wallace E. Lambert. In Lambert et al. (1960)
the matched-guise technique - one speaker, two languages - was introduced provoking much research and literature.

The major principle underlying this technique is the control which is exercised over all variables (i.e., voice quality and personality of speaker) except that of language variety. If there is adequate control of the other variables, the evaluations made of the speakers must be prompted by the judge's general reaction to the speakers of that particular language rather than by any reaction to the specific speaker in the experimental situation. Any significant uniformity in the evaluations made by a group of raters is said to indicate that the reactions represent the stereotyped impressions of that group toward the speakers of the particular language or language variety presented.

In the study, 130 French and English Canadian subjects were presented with taped speech samples of bilingual speakers of French and English reading a passage in philosophy. The fact that the same speaker read both the French and English guises was unknown to the subjects and they were asked to rate the speakers according to 14 personality traits ranging from 'very little' to 'very much'. Traits such as sociability, intelligence, dependability and good looks were used to form these semantic differential scales. It was found that when the speakers adopted the French Canadian guise they were not only regarded less favourably by English Canadians but also by French Canadians.
This supported Lambert's hypothesis that community-wide stereotyping of French and English speaking Canadians exists and people respond to speech in terms of cultural stereotypes. Commenting on the matched-guise technique as an indirect measure, Tucker and Lambert (1969) state that

The technique appears to expose the listeners' more private feelings and stereotyped attitudes towards a contrasting group or groups whose language, accent or dialect is distinctive, and it appears to be reliable in that the same profile of reactions emerges on repeated sampling of a particular group (pp. 463-64).

Similar Studies: Since the publication of Lambert's research, several similar studies have been undertaken, some using matched-guise, others individual or free speech samples. These studies have maintained the same point of view as Lambert and the results provide strong evidence to the relationship between voice cues and stereotyping.

A study by d'Anglejan and Tucker (1972) which included a questionnaire and free speech samples showed that teachers, students and workers in Québec also devalued their French in relationship to European French. Standard European French speakers were consistently rated as more intelligent, likeable and ambitious than either upper or lower class Canadian French speakers. Lambert, Anisfeld and Yeni-Komshian (1965), investigating Arab Israeli and Jewish Israeli adolescents' reactions to Arabic and Hebrew, did not reveal devaluation of one language over another but
instead, perfect polarisation in that Arabic was consistently rated less favourably by Jewish Israeli adolescents and Hebrew was similarly rated by Arab adolescents.

One factor to be considered in the evaluation of personality from speech is that of the listener's language background. In a further study by Anisfeld and Lambert (1964) mono- and bilingual French Canadian 10 year olds listened to tape-recordings of children's English and French voices and rated their personalities on 15 traits. The French-speaking monolinguals upgraded the French Canadian speakers on all traits whereas the bilinguals tended to give all speakers similar ratings. The results indicate that these 10 year olds, unlike the college students in Lambert et al. (1960), do not yet have a negative bias toward their own group.

Lambert, Frankel and Tucker (1966) found that a negative bias against one's own group emerged at about 12 years of age and that social background was an important variable in the evaluations given by the French Canadian girls. These upper middle class girls were especially biased in favour of the English Canadian guises.

In a study using different dialects rather than different languages, Ryan (1969) found that 10 and 11-year-old White middle class children rated the personalities of speakers of White middle class, White lower class and Black lower class dialects in a descending order of favourability.
The trends in ratings were consistent with those found in adults and show that 10 and 11-year-old children are aware of the social significance attached to language differences. It is interesting to note that stereotypes exist at all in subjects of such a young age. If, as many researchers suggest, stereotypes are evoked through attitudes expressed by the dominant social or ethnic group then it seems obvious that these attitudes are absorbed at a very young age and that schools, as socializing institutions, could actually aid in this rapid absorption.

In a more recent study, Saint-Jacques (1978) attempted to elicit stereotyped attitudes to English and Chinese speakers. It was predicted that the Chinese speakers, on characteristics such as politeness and thrifty-economical, would be rated according to stereotypes found in the Greater Vancouver area. The higher rating for the Chinese voices on "family-oriented" was the only characteristic strongly supported by the results. The author interprets these results as indicating that many of the traditional cultural stereotypes concerning Chinese and English Canadians in the Greater Vancouver area are no longer present in the minds of young people. Perhaps replications of the earlier studies done in Québec would yield similar results or even a trend in the opposite direction because of separatist feelings.
Attitudes to Dialects and Second-Language Accents

Studies of attitudes to dialects probably comprise the largest body of studies of language attitudes. Williams et al. (1976) has classified these studies into two categories:

(1) those which deal with extended samples of dialects, and

(2) those which deal with specific features of dialects - especially phonetic features.

Dialects: In the first category, much work has been devoted to distinguishing race, occupation and SES from White and Black speakers of both standard and nonstandard accented dialects and also rating the favourableness of speech samples (Tucker and Lambert, 1969). Using individual speech samples it was reported that not only did Southern Negro college students have more favourable impressions of people who used Standard Network Style English than they did of those who spoke their own style but in addition they were more impressed with their own speech style than with that of educated Southern Whites. These judges appeared to be classifying the dialects along a continuum of acceptability and the results tended to confirm the social stereotyping hypothesis suggested in the previous research by Lambert et al. (1960).

In a further study using the matched-guise technique, speakers who were bidialectal in standard and Jewish-accented English provided speech samples which were rated by Gentile
and Jewish judges (Anisfeld, Bogo and Lambert, 1962). When using the Jewish-accented guise, speakers were less favourably regarded by Gentiles and variably regarded by Jews. The authors, commenting on the less favourable ratings, state that

in this virtually impossible task of evaluating people from their voices (Licklider and Miller, 1951), the Ss apparently seized upon whatever information was available to them. The main sources of information, it seems were community-wide stereotypes about people with accents, i.e. immigrants (p.229).

In Britain, extensive research has been carried out by Giles (1970, 1971 (a)). This work has dealt mostly with Ss' perception of regional accents and an important finding was the fact that it was possible to place the accents at a relative point on a continuum ranging from high to low status (Giles, 1970). Each accent possesses a specific prestige value which, according to Giles, can formulate stereotyped impressions. Received Pronunciation (RP) is perceived as having the highest prestige value, various regional accents are next whereas accents found in industrial towns possess the least prestige.

Giles (1971 (a)), citing the research of Strongman and Woosley (1967) and Cheyne (1970), was interested in finding the personality characteristics associated with various regional accents. Strongman and Woosley, after studying the reactions of northern and southern English listeners to
matched-guises of London and Yorkshire accents found that both groups judged the Yorkshire speakers as more honest and reliable while the London speakers were perceived as more self-confident. Cheyne, studying ratings of Scottish and English regional accents, discovered that male English speakers were viewed as possessing more intelligence, ambition and self-confidence.

Giles thus hypothesized that since RP, South Welsh and Somerset-accented speech represented high, intermediate and low positions respectively on the status continuum a similar pattern would emerge on the personality traits. It was shown that the RP speaker was stereotyped as possessing more competence (i.e., intelligence and self-confidence) than a regional speaker while the regional speakers were associated with possessing more personal integrity and social attractiveness (i.e., humour and good nature). All three studies also noted the ratings of personal integrity and social attractiveness were linked to the presence of accent loyalty. In other words, voices representative of the judge's own speech community would be evaluated more favourably in particular aspects that the other accents presented.

Findings of the above studies have been largely supported by a number of other studies that have employed the same approach (Giles, 1972(a), 1973; Giles et al. (1975) and Bourhis, Giles and Lambert, (1975)).
Specific features of dialects: The pioneering study dealing with the second category, specific features of dialects, is Labov (1966). His study on the social stratification of English in New York city is monumental and the findings are enlightening. Social survey style techniques were used in order to attempt a correlation of five phonological variables (i.e., degree of 'r' colouring) with social status. His hypothesis that a greater degree of 'r' colouring would be associated with higher status was tested and confirmed by asking shop attendants at stores which he believed to correspond to three levels of social status for the location of a certain department. It was either on the [f,ɹfl,ɹ], the [f,ɾəfl,ɾ] or somewhere in between.

He also examined the five phonological variables in several contexts and found that speakers varied their speech in different ways according to their social class and that these variables were effective indicators of social class to the population at large. Most interestingly, the majority of New Yorkers felt out-of-towners did not like New York speech and more than half the New Yorkers did not like it either. One can speculate that the New York accent is such due to the large Eastern European immigrant population. It may be possible, as Anisfeld, Bogo and Lambert state, that the speech elicits unfavourable stereotypes about immigrants in general.
Second language accents: Dominating much of the recent literature in the field of second language accents are Carranza and Ryan (1975), Ryan and Carranza (1975, 1980(b)) and Ryan, Carranza and Moffie (1977), with their work on reactions to accentedness in the speech of Spanish English bilinguals. The results obtained were consistent with the findings revealed in other research.

Using taped readings of standard passages, Ryan and Carranza (1975) found that Mexican-American speakers of strongly-accented English were not viewed as favourably as speakers of standard English. The evaluators were Anglo, Black and Mexican-American high school females.

In an attempt to demonstrate the functional separation of speech styles, two additional variables of home and school speech contexts plus two sets of rating scales were incorporated into the study. It was discovered that in addition to English receiving more favourableness, the differences were significantly greater in the school context than in the home context and for the status ratings than for the solidarity ratings. Thus the subjects were more tolerant of deviations from standard speech in a home context than in a school context. It would seem that a wider range of speech styles is acceptable in an informal setting than in a formal setting (Giles and Powesland, 1975, p. 85).

These findings are similar to those found in Carranza and Ryan (1975), where it is noted
that listeners also react to the appropriateness of the language variety used by the speaker for a particular situation (p. 99).

One difference was revealed in this study though. Using the English and Spanish languages instead of accents, the results obtained in an attempt to support the hypothesis that the Mexican-American Ss would rate Spanish higher on the solidarity ratings were not conclusive. Carranza and Ryan, commenting on this phenomenon, speculate that perhaps the Mexican-American student has deeply internalized the value placed on English by the dominant society to such an extent that Spanish may seem less and less as a symbol of solidarity (p. 99). This same speculation is voiced in Ryan and Carranza (1980(b)), where as language minority children become assimilated, they tend to adopt the dominant beliefs held by society, including the view that accented English is down-graded (p. 200).

Accent broadness: Accent broadness or thickness has also been the focus of several investigations.

Anglo college students in Arthur, Farrar and Bradford (1974) rated speakers who at the beginning of the rating sessions were all identified as Mexican-Americans and who all possessed at least some phonetic features that identified them as such. The results showed that the negative reactions were not towards this particular ethnic group but towards those belonging to this group who speak English heavily laden with nonstandard phonetic features. Such speakers
were viewed as less educated, less intelligent and less dependable.

Similar findings are reported in Ryan, Carranza and Moffie (1977), Brennan, Ryan and Dawson (1975) and Giles (1972b). The results showed that Ss make rather fine discriminations among varying degrees of accentedness in rating a person's personal attributes and speech. Giles (1972b) states that people are clearly able to detect differences in pronunciation broadness and that their evaluations are a function of this perceptual dimension.

In Ryan et al. (1977), small increments of accentedness were associated with gradually less favourable ratings of status, solidarity and speech characteristics. These findings support the proposition that Spanish accent features in spoken English are negatively stereotyped and the greater the prominence of these features, the stronger the stereotyping.

Through scaling methods of magnitude estimation and sensory-modality matching, Brennan et al. (1975) demonstrated that even non-linguistically trained listeners were able to give reliable judgments of degree of accentedness and these were highly correlated with the occurrence of specific pronunciation features endemic to accented speech.

Attitudes and Employment

In an investigation of the role which the language attitudes of employers plays in employment interviewing,
Hopper and Associates (reported in Williams, 1976) tested the thesis that an interviewee's speech characteristics furnish cues which form employer's attitudes toward the speaker and that these attitudes influence employment decisions. The results included the fact that judgments of ethnicity of speech did not appear to militate against employment, although standard speakers were favoured in the sphere of white collar jobs, while speech seemed to be of little importance in hiring manual labour.

These results are contrary to those found by Shuy (1970). In this study employers ranked speech samples collected from all social strata of the Black community. It was found that employers consistently ranked professional Blacks in the same 'lower' categories along with salesmen and mechanics. Rey (1977) found that to possess a standard White American accent enabled one to achieve the highest occupational status, slight accents (Black American and Cuban National) the next highest and a heavy accent (Cuban National) only the lowest positions possible.

**Teachers' Attitudes to Speech**

Of the research literature in the social sciences which deals with speech perception and language attitudes, only a relatively small section pertains to teacher attitudes in particular. The work which generated much of this literature is Rosenthal and Jacobson's (1968) *Pygmalion in the Classroom* and the presumption that teachers' beliefs
may affect the teachers' expectations of the children in the classroom and, as a consequence, affect the children's progress in school.

The work of Frederick Williams and his associates (1973, 1976) dominates the literature on stereotyped attitudes of teachers to student language. The methodology employed in the numerous studies undertaken was multifaceted and a wide variety of data was collected.

The first step in their methodology was the construction of semantic differential scales to use in the experiments. Teachers were presented with audio or videotape samples of intermediate school children's language and were asked to comment freely on them. The adjectives produced in these sessions went into the development of the scales which could then be used to measure teacher reactions to language samples.

After the actual experiment in which teachers were asked to rate speech samples and through the application of factor analysis, it was found that underlying the teachers' use of the scales was a two-dimension judgemental model. The majority of the teachers' reactions could be accounted for by two gross dimensions: confidence-eagerness and ethnicity-nonstandardness. According to Williams, these two main dimensions were relatively independent and quantified characteristics (predictor variables) of the speech samples were reliable predictors of teacher's ratings.
Characteristics such as hesitation frequencies, enthusiasm and continuous and fluent speech could predict confidence-eagerness ratings, while a variety of nonstandard English grammatical or pronunciation features could predict ethnicity-nonstandardness. The researchers note that as the frequency of hesitation phenomena increases, the ratings of confidence-eagerness become more negative and as characteristics associated with low prestige or a particular ethnic group increases (i.e., $d$ for $th$ substitutions), the more ratings of ethnicity-nonstandardness will also increase.

Using this two-dimension judgemental model, semantic differential scales consisting of scales representing both dimensions and several filler scales were constructed and used in various experiments investigating speech stereotypes.

Upon presenting teachers with audio, video and audio-video tapes, Williams, Whitehead and Traupman (1971) expected differentiations in accordance with the speech characteristics of middle and lower class children of White, Black and Mexican-American ethnic groups. On the average, results indicated that middle status children were rated less non-standard and more confident than lower status children. It was also found that among the middle income groups White and Black children were rated more confident-eager than Mexican-American children, while in the lower income groups White and Mexican-American children were rated more confident-eager than Black children. As the authors explain,
these results suggest that teachers will consistently evaluate children's speech and such evaluations are along the two aforementioned dimensions.

Using the knowledge gained in this study, Williams, Whitehead and Miller (in Williams, 1976) attempted among other things to:

(a) Find the relationship of teacher experience and ethnicity to the differentiations of speech samples,

(b) find the degree to which speech ratings could be used to predict teachers' expectations of pupils' academic performance (p. 57).

The Ss, 175 elementary school teachers from the Central Texas area were presented with a randomized sequence of videotaped Anglo, Black and Mexican-American children each from a middle or low status group. The children were responding, in their own words, to two questions designed to elicit spontaneous speech. Each Ss was asked to evaluate the tapes on both a semantic differential scale and on a card requiring assignment of the child to a graded class. The graded classes ranged from (1) remedial class to (5) far above average class in subjects such as art, P.E., grammar and reading.

Many of the results were consistent with other studies in that teachers held stereotypic views of the ethnicity-nonstandardness of minority children and rated the language samples as such. In addition, the teachers' amount of experience appeared unrelated in any way to the ratings and
their academic expectations for the children were predictable on the basis of their language attitudes. This increased when the subject matter was directly related to language arts subjects. Generally the findings are that students whose speech was judged more nonstandard were expected to perform worse academically than those whose speech was judged more standard.

Williams implies that the close association between language and expectations in language arts related subjects is a result of the tendency of teachers to confuse language differences with deficits. It is further noted that given the accurate evaluation of a child's language as ethnic and nonstandard, it may be inaccurate to expect this type of speech in all speech situations. To prevent language attitudes from serving as false or self-fulfilling prophecies, teachers must be trained to be sensitive to variations in dialects or performance (p. 68).

Teacher ethnicity: A study by Miller (1972) uses the data from this study and further analyses it in terms of the reactions of the Mexican-American teachers in the subject population. It was found that these teachers held stereotypes similar to those of Anglo teachers in that Anglo children were thought to possess more confidence and be less ethnic-sounding. They were also thought to have higher academic expectancies than their Mexican-American counterparts.
The social status of the Mexican-American children was an important factor also in making both language and academic judgments, whereas this was not found to be true for the Anglo children. The most interesting conclusion to this study is the fact that teacher ethnicity did not account for any significant differences in rating behavior. Miller speculates that the teachers of a minority race may have internalized the values and expectations of the majority race along with fluency in the language.

Naremore (1971), also using Williams' data, seems to confirm the above results.

In no case did black subjects consistently rate children of their own race above white children (p. 24).

In other words, all teachers reacted similarly to race and this was the most important factor when evaluating speech samples. It was noted that these ratings were somewhat independent of the children's actual performance and points to the phenomenon of visual evidence of the children's ethnic identity influencing raters' judgments.

Additional research concerning teachers' stereotyped linguistic attitudes has been done by Frender, Brown and Lambert (1970) and Crowl and MacGinitie (1974).

The hypothesis that lower class children with better grades should have distinctly more favourable speech characteristics than lower class children with poorer grades was tested in Frender et al.. The results supported the
hypothesis even though all pupils were matched for age, verbal and nonverbal intelligence. The contrasting pattern of speech characteristics showed that "better" students had more appropriate intonation, higher pitch and spoke more quickly than "poorer" students. It was concluded that

how a child presents himself through his speech . . . may very well influence teachers' opinions and evaluations of him (Prender et al., 1970, p. 304).

Crowl and MacGinitie (1974) attempted to find out if students' actual academic performance is judged differently because of voice cues. Six White and six Black fifteen-year-olds gave identical taped answers to two questions. It was predetermined that the ethnic background could be accurately identified from the speech samples. In all cases the White judges rated the White students as answering the questions better than the Black students.

The overall findings of the study supported the notion that the content of the same oral answer is evaluated differently when spoken by different persons whose difference in ethnic group is identifiable from their speech (p. 307).

Prospective teachers: In addition to these studies, other research has dealt with the linguistic attitudes of teacher trainees.

The research of Williams, Whitehead and Miller (1971) was an investigation to assess the effects of ethnic stereotyping in a design where ratings of the same standard English audio samples could be compared when matched with a video
image of a White, Black and Mexican-American child. In other words, how would the Ss evaluate speakers whom they hear as standard English speaking but whom they see as belonging to an ethnic minority. It was hypothesized that if ethnic stereotyping does affect speech ratings then the ratings of the same language sample would differ under the various conditions (p. 167).

The results showed statistically significant differences among the standard English samples. The confidence-eagerness ratings revealed that the same tapes paired with Mexican-American children were rated lower than tapes paired with White or Black children. Analysis of the ethnicity-nonstandardness ratings revealed that pairings with Black and Mexican-Americans were rated as more ethnic-nonstandard than pairings with Whites. Thus, despite the fact that all tapes had been superimposed with standard White speech, the ethnic children were perceived as speaking less standardly (more ethnic) than the White children.

It should be noted that these ratings were not as stereotyped as video ratings of the minority children with their original sound track, which were included in the study, but the influence of ethnicity on stereotyping and the subsequently lower evaluations of speech nonetheless attained significance.

Seligman, Tucker and Lambert (1972) explored the influence of speech samples on raters' judgments when
combined with compositions, drawings and photographs. The authors hypothesized that the powerful effect of speech style reported in earlier studies would affect the Ss overall evaluation of each child even in the presence of other attributes to consider during the assessment. The teachers were asked to rate 8 hypothetical pupils on scales labelled for example: intelligent, good student and self-confident. The results showed that

the boys with good voices were always evaluated significantly more favorably than those with poor voices (p. 135).

The effects of speech style did not diminish when combined with the other cues present and a pupil with a good voice was judged more intelligent, privileged, enthusiastic, self confident, gentle and a better student.

Hypothesizing that prospective English teachers would have unfavourable stereotypes of speakers of nonstandard English dialects, Hewett (1971) asked White, native-speaking Ss to rate certain personality characteristics, the races and probable occupations of speakers. Many of the personality characteristics used were identical to those used by Lambert (1968). Judging solely on phonological characteristics the following results were obtained: standard speakers were ranked highest on education and lowest on personality, while nonstandard speakers were ranked highest on honesty and lowest on speaking ability. The author interprets these evaluations as fitting some interesting
stereotypes. The subjects were also almost unanimous in their perceptions of the speaker's race; all races were accurately identified by speech with the exception that Black standard speakers were perceived as White. The particular occupations chosen for each group were also consistent with the stereotypes present in the personality and race ratings and thus the results supported Hewett's hypothesis.

Students speaking RP in the United Kingdom were perceived as having the best speech and behavior and the most likely to do well in school in a study by Edwards (1978). In light of these results and those found in the other studies reviewed, Edwards notes that teachers differ little from the rest of society in the stereotypes which they hold of minority groups (p. 57).

A note of caution in interpreting the results of these three latter studies is necessary. In not one of the experiments did the subject population exceed 25 and thus the results are not highly generalizable.

Accent broadness: Accent broadness (Arthur, Farrar and Bradford, 1974; Ryan et al., 1977; Giles, 1972(b); and Brennan, Ryan and Dawson, 1975) has been included in an investigation by Rey (1981) in which the attitudinal effect of a Spanish accent on teachers in South Florida is examined. The main concern was to determine what effect an accent or lack of accent would have on teachers'
evaluations of that speaker's possible educational success (p. 59).

The speech samples consisted of White American (W.A.), Black American (B.A.) and Cuban National (C.N.) speakers. Of the C.N. speakers, these were divided into minimal, medial and heavy accent categories. The results show that W.A. speech was judged most positively on all 3 dimensions: social status, standardness-style and correctness-complexity, while medial and heavy-accented C.N. speech was judged the least favourably. The general trend was that W.A. speakers were rated as having the highest potential for academic success than any of the other speakers. B.A. and minimally-accented C.N. speakers in that order would be next, while medial and heavy-accented C.N. speakers could possibly achieve only the lowest educational levels.

**Summary**

The intent of the first section of this chapter was to present a broad, historical outline of the studies showing the relationship between speech and stereotyping. Studies using either the matched-guise technique or individual speech samples were largely unanimous in their findings that the general population does indeed possess stereotyped attitudes to speakers of a variety of languages, dialects and accents (Lambert et al., 1960; Labov, 1966; d'Anglejan and Tucker, 1972; and Ryan et al., 1977). These attitudes were for the most part measured using semantic differential scales.
(Osgood et al., 1957) which are indirect measures that are of more value than direct questioning in eliciting a person's feelings toward varieties of speech (Edwards, 1978).

The development of the matched-guise technique and the subsequent results of Lambert's (1960) study was the impetus for numerous studies and Lambert's methodology has served as a basis on which to build more methodologically complex research (Ryan, 1973).

Speech samples, semantic differential scales and other attitude measurement instruments have been used to investigate the presence of stereotypes in speech sample evaluations in many areas of study, e.g., personal characteristics, SES, employability, solidarity; but the one of major interest to this study is teacher evaluations. The second section of this chapter deals with the suggestion existing in the literature that teachers also hold stereotyped opinions of a person and these can be elicited using speech samples.

This second section is to provide support for the research problem of this thesis.

Williams et al. (1976) states that the general conclusions obtained in this area of research, though restricted to the subject and student populations, are that stereotype reactions did exist consistently throughout the experimental subject populations, that these stereotypes were constant across time and they could be correlated with
stereotype reactions elicited from audio-visual cues. It was further concluded that

personstend to employ stereotyped sets of attitudes as anchor points for their evaluation of whatever is presented to them as a sample of a person's speech (Shuy and Fasold, 1973, p. 126).

In other words, teachers are not exempt from employing these attitudes to evaluate speech and

although we cannot predict with certainty how they will actually behave towards . . . minority group children in the classroom, there seems a very real danger that they will convey these negative feelings to the children (Edwards, 1978, p. 57).

Translated into terms of the present research, this review of the literature would suggest that teachers, upon hearing certain pronunciation deviations will immediately react with a stereotyped judgment and will accordingly rate the speaker lower on all measures, regardless of his actual characteristics. As suggested in the literature, variables such as teacher ethnicity, language background and years of experience will be included.
CHAPTER III: DEVELOPMENT OF SEMANTIC DIFFERENTIAL SCALES

Introduction

The technique of semantic differential was chosen to measure the reactions of the subjects to the speech stimuli. The major criteria for choosing this type of scale were 1. the simplicity of such a scale relative to other attitude scales, 2. the ability to use object specific adjectives and 3. the reported effectiveness of the scale in eliciting raters' evaluations of objects. Test - retest reliabilities ranging from .83 to as high as .97 have been reported and evidence of validity is apparent in correlations with other scales ranging from .74 to .82 (Shaw and Wright, 1967, p. 30).

The semantic differential scales used by the Ss in evaluating the speech samples were developed specifically for this task and were tested using factor and item analysis. Construction of the biographical data sheet is also included in this chapter.

Semantic Differential Scales

The concept of 'semantic differential' (Osgood et al., 1957) operationally defines attitude as quantified sets of responses to bipolar scales. The evaluative factor in attitude measures the direction and intensity of an individual's attitude toward the objects being rated and the bipolar scales focus directly on the objects, as it is these objects which stimulate the scored responses (Agheyisi
and Fishman, 1970). Attitude is further defined as the internal state aroused by the stimulation and the subsequent external response is a measure of this attitude. In this sense, attitude may be considered object specific.

In making language evaluations the listener usually hears speech stimuli and then rates them against such a series of bipolar adjectives. The differentiation between the adjectives implies an underlying continuum, as respondents can score each adjective on an intensity scale from positive through neutral to negative, as in the following example:

<table>
<thead>
<tr>
<th>highly</th>
<th>very</th>
<th>somewhat</th>
<th>somewhat</th>
<th>very</th>
<th>highly</th>
</tr>
</thead>
<tbody>
<tr>
<td>tall</td>
<td>pos.</td>
<td>pos.</td>
<td>pos.</td>
<td>neutral</td>
<td>neg.</td>
</tr>
</tbody>
</table>

Choosing from a set of provided categories removes the problem of the listeners' failing to focus on the expected dimension only and seems to provide a practical measurement technique for eliciting and quantifying evaluations of speech.

Selection of Adjectives

The adjectives used to construct the scales (Appendix B) were a composite of specific adjectives found in previous research (Lambert, 1967; Strongman and Woosley, 1967; Bourhis et al., 1975; Williams et al., 1976; Saint-Jacques, 1978). In some cases the opposites were revised to conform more closely to regional speech. It was felt that these items were valid and reliable in eliciting evaluations of
speech in the previous studies and it was expected they would perform in the same manner in the present research. This technique of developing semantic differential scales was common throughout the research literature (Strongman and Woosley, 1967; Giles, 1971(a)), though the arbitrariness of this method of selection has been criticized (Lee, 1971).¹

After all 19 items had been selected, they were randomly ordered to produce the final scale, which was identical for all eight speakers as well as for the practice voice.

In addition to these items, the pilot study also included the open-ended question: perceived ethnicity of speaker is ____________________.

Factor Analysis of the Scale

The 19 variables were initially classified into three subtests labelled 1) personal characteristics, 2) speech characteristics, and 3) social distance (Table 1).

The personal characteristics were taken largely from Lambert (1967) and were included in an attempt to elicit evaluations which were on what could be termed a

¹Previous research (Giles and Bourhis, 1973; Williams et al., 1976) states that a more valid selection technique is available through the elicitation of adjectives from a subject population similar to the one in the experiment and then applying these adjectives to the scale. This was attempted by the current researcher but the results were unsatisfactory for scale construction.
### Table 1

<table>
<thead>
<tr>
<th>Subtests 1 (Personal)</th>
<th>Subtests 2 (Speech)</th>
<th>Subtests 3 (Social Distance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>likeable character</td>
<td>speaking ability</td>
<td>similarity to self</td>
</tr>
<tr>
<td>conscientious</td>
<td>distinctness</td>
<td>desirability as colleague</td>
</tr>
<tr>
<td>ambitious</td>
<td>standardness</td>
<td></td>
</tr>
<tr>
<td>sociable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>nervous/calm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>self-confidence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>humour</td>
<td></td>
<td></td>
</tr>
<tr>
<td>intelligence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>attractive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>trustworthy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>hard-working</td>
<td></td>
<td></td>
</tr>
<tr>
<td>conservative</td>
<td></td>
<td></td>
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</tbody>
</table>

### Table 3

<table>
<thead>
<tr>
<th>Subtests 1 (Personal)</th>
<th>Subtests 2 (Speech)</th>
<th>Subtests 3 (Social Distance)</th>
<th>Subtests 4 (Work)</th>
</tr>
</thead>
<tbody>
<tr>
<td>likeable</td>
<td>nervous/calm</td>
<td>similar to self</td>
<td>conscientious</td>
</tr>
<tr>
<td>character</td>
<td>self-confidence</td>
<td>attractive</td>
<td>ambitious</td>
</tr>
<tr>
<td>sociable</td>
<td>intelligence</td>
<td>conservative</td>
<td>hard-working</td>
</tr>
<tr>
<td>trustworthy</td>
<td>education</td>
<td>similarity to self</td>
<td>conservative</td>
</tr>
<tr>
<td>standardness</td>
<td>standardness</td>
<td>desirability as colleague</td>
<td></td>
</tr>
<tr>
<td></td>
<td>speaking ability</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>distinctness</td>
<td></td>
<td></td>
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</tbody>
</table>


personality dimension. The speech characteristics were found in Williams (1976) and the inclusion of these variables was to determine possible speech differentiations of the speakers, even though they were all reading a standardized passage. Bourhis et al. (1975) provided the two social distance scales which were added to investigate the distance the listeners were willing to accord the speakers. The division of the variables into these subgroups was the result of an attempt to find any differentiations in attitude the Ss might have along these dimensions. An example of this would be that the listeners might have a positive attitude toward the personality of the speaker but still grant them greater social distance than this personal dimension would indicate.

After the data had been collected a Factor Analysis was performed using the AGFAP package (Hakstian, 1977). The number of factors to be retained was determined using the Kaiser Guttman rule, the SCREE test and image analysis after the factor extraction was completed. These three methods suggested that the 19 variables could be interpreted in terms of five underlying common factors. The loadings of the variables on five orthogonal rotated factors (following a varimax rotation) were examined to determine whether the variables clustered in meaningful groups.

Using the criterion of interpretability, it was decided (after an AGFAP run retaining four factors and in which a
varimax rotation was performed) that four factors should be used in clustering the 19 variables. The variables which clustered on each factor could be divided into four subtests instead of only three as hypothesized. An oblique solution was then tried using a Harris-Kaiser transformation on the four factors retained from the principal component extraction. The final results are shown in Table 2. A variable was considered to load substantially on a factor when its pattern coefficient for that factor was greater in absolute value than .30. When a variable had two significant loadings it was included in two subtests.

As can be seen in the factor loadings, a new factor, labelled 'work' emerged over and above those hypothesized to be present in the instrument. The 19 variables also regrouped themselves accordingly within the four subtests and a new pattern appeared (Table 3). This new pattern shows that the listeners were responding to the speakers in terms of these four dimensions and evaluating them accordingly. In other words, the evaluations reflect four basic dimensions of judgement instead of 19 dimensions corresponding to the individual scales or the previously hypothesized three.

In view of these findings all subsequent analyses were done using the four subtests and an additional hypothesis pertaining to work characteristics was incorporated into the study.
Table 2

Factor Loading of Teacher Responses to 19 Semantic Differential Scales

<table>
<thead>
<tr>
<th>Variables</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>likeable</td>
<td>1</td>
<td>-.05</td>
<td>-.43*</td>
<td>.50*</td>
</tr>
<tr>
<td>character</td>
<td>2</td>
<td>.17</td>
<td>-.01</td>
<td>.69*</td>
</tr>
<tr>
<td>conscientious</td>
<td>3</td>
<td>-.06</td>
<td>.10</td>
<td>.08</td>
</tr>
<tr>
<td>ambitious</td>
<td>4</td>
<td>.21</td>
<td>-.27</td>
<td>-.02</td>
</tr>
<tr>
<td>sociable</td>
<td>5</td>
<td>.12</td>
<td>-.15</td>
<td>.75*</td>
</tr>
<tr>
<td>nervous/calm</td>
<td>6</td>
<td>1.06*</td>
<td>.27</td>
<td>-.00</td>
</tr>
<tr>
<td>self-confidence</td>
<td>7</td>
<td>.82*</td>
<td>-.10</td>
<td>-.03</td>
</tr>
<tr>
<td>humour</td>
<td>8</td>
<td>-.10</td>
<td>-.87*</td>
<td>-.00</td>
</tr>
<tr>
<td>intelligence</td>
<td>9</td>
<td>.58*</td>
<td>-.03</td>
<td>.13</td>
</tr>
<tr>
<td>attractive</td>
<td>10</td>
<td>.07</td>
<td>-.58*</td>
<td>.26</td>
</tr>
<tr>
<td>education</td>
<td>11</td>
<td>.72*</td>
<td>.29</td>
<td>.14</td>
</tr>
<tr>
<td>trustworthy</td>
<td>12</td>
<td>-.12</td>
<td>.20</td>
<td>.92*</td>
</tr>
<tr>
<td>speaking ability</td>
<td>13</td>
<td>.53*</td>
<td>-.24</td>
<td>.07</td>
</tr>
<tr>
<td>distinctness</td>
<td>14</td>
<td>.65*</td>
<td>-.05</td>
<td>.08</td>
</tr>
<tr>
<td>standardness</td>
<td>15</td>
<td>.51*</td>
<td>-.12</td>
<td>-.34*</td>
</tr>
<tr>
<td>hard-working</td>
<td>16</td>
<td>.06</td>
<td>-.08</td>
<td>-.20</td>
</tr>
<tr>
<td>conservative</td>
<td>17</td>
<td>-.00</td>
<td>.61*</td>
<td>.21</td>
</tr>
<tr>
<td>similarity to self</td>
<td>18</td>
<td>.13</td>
<td>-.68*</td>
<td>-.25</td>
</tr>
<tr>
<td>desirability as</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>colleague</td>
<td>19</td>
<td>.04</td>
<td>-.40*</td>
<td>.24</td>
</tr>
</tbody>
</table>

*factor loadings above .30
**Item Analysis**

The 19 items were further analysed using the LERTAP item analysis package (Nelson, 1974) and the four subtests were checked to see if the instrument was unidimensional. The results for speakers number 1, 4, 6 and 8 are presented in Table 4. These four speakers were the same for all Ss in both presentations and it was felt that these results would be representative of all speakers and subtests in the study.

Cronbach's stratified alpha for the instrument ranged from .81 to .85, which indicates that the instrument was not as unidimensional as desired. In other words, the four subtests were somewhat correlated and were not discrete categories testing distinct attitudes. This level of homogeneity was expected in that certain variables occupied more than one category.

Hoyt's estimate of reliability ranged from .88 to .91, which indicates that the instrument has internal consistency.

**Biographical Data Sheet**

An open-ended biographical data sheet was also constructed by the researcher and attached to the semantic differential scales distributed to the subjects (Appendix A). The purpose of this questionnaire was to elicit teacher characteristics to apply to the research hypotheses as well as to assist in the description of the sample population.
Table 4

LERTAP

<table>
<thead>
<tr>
<th>Speakers</th>
<th>1</th>
<th>4</th>
<th>6</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Personal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoyt Estimate of Reliability</td>
<td>.73</td>
<td>.75</td>
<td>.80</td>
<td>.73</td>
</tr>
<tr>
<td><strong>Speech</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoyt Estimate of Reliability</td>
<td>.83</td>
<td>.72</td>
<td>.87</td>
<td>.80</td>
</tr>
<tr>
<td><strong>Social Distance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoyt Estimate of Reliability</td>
<td>.71</td>
<td>.71</td>
<td>.64</td>
<td>.71</td>
</tr>
<tr>
<td><strong>Work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoyt Estimate of Reliability</td>
<td>.77</td>
<td>.75</td>
<td>.68</td>
<td>.86</td>
</tr>
<tr>
<td><strong>Total Test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hoyt Estimate of Reliability</td>
<td>.91</td>
<td>.88</td>
<td>.91</td>
<td>.91</td>
</tr>
<tr>
<td>Cronbach's Alpha</td>
<td>.83</td>
<td>.81</td>
<td>.85</td>
<td>.83</td>
</tr>
</tbody>
</table>
CHAPTER IV: RESEARCH PROCEDURES

Introduction

The purpose of this chapter is to give the reader additional information about the sample population, the experimental procedures and the materials used in this study. A more detailed description of the pilot study will also be given.

Description of the Sample Population

The subjects consisted of 119 practicing and prospective teachers attending day, late afternoon and evening courses at the University of British Columbia. Of these 119 Ss the majority attended late afternoon and evening classes (n = 94). The remaining Ss (n = 25) attended day classes and these Ss were all prospective teachers, while those attending the other classes were a combination of prospective (n = 24) and practicing (n = 70) teachers. The original intent to use only practicing teachers was expanded to include student teachers when it was found that the teacher characteristics of practicing versus prospective teachers and years of teaching experience did not affect the ratings.

Teachers who taught many different subject areas in the school system were included to avoid a highly specialized subject population that might be more sensitized to language variations. It should also be noted that in all probability
a large percentage of these practicing teachers would be graduate students and this must be considered when generalizing any findings.

Prior to the date of the testing session all classes had been asked by their professors if they were willing to give up class time to partake in an experiment. All classes agreed and this fact combined with the fact that all Ss had the freedom to withdraw at any time during the experiment makes them volunteers.

Despite this apparent selection by convenience, there was no reason to expect vast differences between this type of listener and the type of listener found teaching in Vancouver schools. It was felt that these listeners would be fairly representative as they came from all different schools and areas in Vancouver and taught diverse subject matter.

Overall there were more female than male subjects (n = 96 and 23, respectively) and the age range was from 21 through 52, with the majority falling in the 20 - 29 category (n = 63).

The subjects' years of teaching experience ranged from 0 for a prospective teacher to more than 11 years. It was found that the majority had 0 years of experience (n = 49), while the second largest group fell into the category of 1 - 5 years (n = 33). A broader comparison between prospective and experienced teachers revealed that in total numbers,
there were more experienced \( (n = 70) \) than inexperienced \( (n = 49) \) teachers.

In terms of ethnic minority students taught, the largest group \( (n = 34) \) taught less than 20% of such students and the ethnicity of the subject population itself was overwhelmingly of Western or Eastern European descent \( (n = 101) \).

It appears that except for being remarkably homogeneous in terms of ethnicity the total subject population does reach a degree of heterogeneity which would be found in the total population the researcher wishes to generalize to. A complete sample profile is included in Appendix E.

**Development of the Test Passage**

A test passage (Appendix C) containing maximum opportunity for the elicitation of the phonological variations of the six foreign-accented speakers was adapted by the researcher from a passage found in *Mastering Essential English Skills* (McClelland et al., 1978: p. 90). The context of the passage was both simple and emotionally neutral and required approximately 18 seconds to read. It was felt that 18 seconds was long enough for the listeners to identify the accent and to formulate a judgment without finding either the passage too long or the task too tedious.

Though it has been suggested in the literature (Lee, 1971) that free speech samples are more indicative of natural speech and thus more likely to elicit authentic listener responses, a reading sample was used in the present research
to control for grammar and vocabulary. The context of the passage was also controlled through the use of a reading passage, though it has been argued that the contextual domain of the speech stimuli is very important (Agheyisi and Fishman, 1970; Carranza and Ryan, 1975; Williams, 1976).

Selection of the Stimulus Voices

Speech samples were selected by the researcher from the following accent groups: 1) standard Canadian English, 2) Punjabi-accented English, 3) Cantonese-accented English, and 4) Québécois-accented English.

Two speakers were selected to represent each accent category and in the three foreign-accented groups these two representatives were further divided into heavily and slightly-accented speakers. The degree of accent was determined by the researcher and was dependent on the presence of specific foreign-accent features relative to standard English speech.

For this experiment the matched-guise technique was considered inappropriate for representing the range of accents and accentedness necessary. Two basic difficulties in using matched-guise were also considered: 1) perfect guises in two languages (or in two accent groups) are hard to find and 2) Ss can easily identify the voice of a perfect guise (Saint-Jacques, 1978) and as a result only native speakers were used. Any differences in the speech characteristics of the speakers within and between each
category were purposely overlooked even though important speaker differences have been suggested in previous research (Anisfeld et al., 1964; Lambert et al., 1966).

Male voices were used for the speech stimulus and in addition, largely due to the availability of such speakers, only adult voices were used. Since teachers who taught all age levels (K—adults) in the school system were included as subjects, it was decided that adult voices would be fairly representative of the type of foreign-accented speech frequently heard by the sample population.

Each speaker was given time to become familiar with and rehearse the reading passage. The experimenter also answered questions concerning the pronunciation and meaning of words and about the general procedure for taping. The passage was taped as often as needed to ensure that it had been recited verbatim and in as natural a sounding manner as possible. A natural-sounding manner was perceived as a necessity in order to have language samples that were representative of some universe of speakers and discourse (Williams, 1976) and to keep artificiality to a minimum.

**Development of the Tapes**

After all the original samples had been recorded, editing for the final tapes began. These final tapes consisted of the best recording of the eight individual speakers plus one standard English practice voice. Each speaker read the test passage only once.
To develop presentation A the speakers were randomly ordered, with qualification, and randomized once again to develop presentation B (Appendix D). The practice test voice was the same for both presentations. The qualification to the randomization procedure was that a standard English speaker was to occupy position number 1. It was felt that this was a necessary qualification to ensure that the Ss would not, upon hearing the accented voice, immediately guess the actual intent of the experiment and perhaps refuse to participate or give unauthentic responses. Even though this response was a possibility further along in the experiment, it was decided the Ss might feel more comfortable and less inclined to react in such a manner as the study progressed.

In addition to the 18 seconds allowed for each speaker on the tape, a pause of 45 seconds preceded by a 'beep' signal to begin filling in the scale was provided to give time for the Ss to fill in the semantic differential rating scale before the next speaker's recording was played. At the end of the 45 seconds a standard English voice asked the Ss to turn to the next rating scale. The purpose of this voice was both to ensure that the subjects turned the page and to prevent them from comparing the stimulus voices.

The final editions of both taped presentations were 14 minutes long, a time span considered not long enough to tire the listeners.
The original speech samples were recorded using a Sony Cassette-Corder TC-182 and were reproduced onto a Wollensak 3M:2820 AV to develop the final tapes. Sony UCX-S 60, Type II (C₁₀₂) cassette tapes were used for both the original and final stimulus materials. The tapes were presented on a Wollensak 3M:2520 AV in all the experimental sessions.

**Validation of the Speech Samples**

To ensure that each speaker's accent group could be identified accurately from his speech, the subjects in the pilot study were asked to write down the perceived ethnicity of each speaker.

The overall accuracy of the individual subject's identification of the standard English speakers and the heavily-accented speakers was high, ranging from 80% to 100% with a mean of 88.8%. The identification of the slightly-accented speakers was much less accurate, ranging from 32% to 59% with a mean of 45.3%. The low percentage here can perhaps be explained by the inability of non-linguistically trained people to detect slight accent variations or the inability to classify accent variations when only minimal cues are given. It is the researcher's opinion that the latter case is a more valid explanation. All Ss perceived the slightly-accented speakers as belonging to a different ethnic group (i.e. not 'English Canadian') but they were simply unable to accurately identify that group. In other words, they had the ability to perceive a
differentiation between heavily and slightly-accented speech as is apparent by these results; even though in a number of cases the results tended to be incorrect.

In light of the above findings a further attempt was made to validate the speech samples. Based on the phonological variations present in each voice, a linguist accurately classified all speakers according to their ethnicity.

The implications these findings might have for the interpretation of the results will be discussed in a later chapter.

Format of the Testing Sessions

The testing was carried out in eight sessions by an assistant external to the experiment to avoid contamination and in order to reduce errors the procedure was standardized for all groups. The only departure from uniformity in the eight sessions was the difference in presentation orders given to the various groups. The two orders were almost equally divided among the groups with 61 Ss receiving presentation A and 58 Ss receiving presentation B.

At the beginning of the sessions booklets containing 2 instruction pages, 9 pages of semantic differential scales and a biographical data sheet were distributed (Appendix A). Subjects were told a cover story which, keeping in mind the characteristics of the subject population and their probable ability to guess the real intent of the study, was
not far from the truth. They were told that the purpose of the study was to examine the extent to which different people react to different varieties of speech and that more questions could be answered when it was over (Rey, 1979). At no time in the instructions to the subjects were judgements of races or cultural stereotypes mentioned.

The first page of general instructions which contained the cover story and explained the testing procedure was read aloud by the tester while the subjects followed in their booklets. Page two, which contained instructions on the use of the 7-point rating scales, was similarly read, taking special note of the Ss' need to fill in all the scales and cells carefully to indicate their judgement of the degree to which the speaker possessed the named characteristic. Next the test passage was read to the Ss to familiarize them with the content and to leave them free to concentrate only on the phonological variations in each speech sample (Lambert et al., 1960).

When the Ss felt familiar with the instructions, the practice tape was played and the listeners made their ratings. At this point, all questions were answered and the formal testing session began.

After all eight speakers had been evaluated, the Ss were given five minutes to fill out the short biographical data sheet attached to the back of the booklet and the
booklets were then collected. The approximate length of each administration was thirty-five minutes.

Pilot Study

In order to identify procedural difficulties in the actual administration of the experiment, a pilot study was carried out at UBC.

It was found that for the most part subjects were willing to cooperate after the cover story and the procedures were explained to them and that the total length of time for administering the experiment was as adequate as expected. The data from this study were also used to devise a suitable method of scoring for future data analysis. The fact that the Ss in the pilot study were fairly representative of the total sample population made this possible. As noted in the previous section, validation of the speech samples was another purpose of this study.

It should also be noted here that in both the pilot and the actual experiment there were some unexpected subject reactions which may or may not have influenced the results of this study. Ss were given the freedom to withdraw at any time during the experiment and a very small percentage did take advantage of this by walking out after the first page of instructions was read to them. An explanation for this may be the fact that the Ss felt uncomfortable making judgements based on speech alone. This attrition might have been avoided by the tester stressing the importance of
the study to the main researcher and should be considered for future research.

Those who did remain filled out all the information as requested, though in several cases notes to the researcher were written at the bottom of the biographical data sheet. These notes commented either on the format of the instrument in that neutral should have been easier to find, or on the perceived true intent of the study. The search for prejudiced and/or racist attitudes was the overall consensus of such comments. Two Ss noted the difficulty of completing the task, i.e., how could they possibly judge attractiveness from speech alone, and had doubts as to the validity of any future results.

Twenty-five subjects were involved in this study and since the means and variances of this group were similar to those found in the actual study, all the data were combined to create a larger subject population.

**Scoring of the Instrument**

Response data on the semantic differentials were quantified by the assignment of the numbers one through seven to correspond with the pole marked with an asterisk in Appendix B. The assignment of one to the negative adjective and of seven to the positive adjective of these bipolar adjectives was consistent throughout the data tabulation. An example of the scoring procedure follows:

unsociable 1: 2: 3: 4: 5: 6: 7 sociable
Subsequently matched with these response data were the presentation orders and the selected teacher characteristics identified for this research project (Appendix E).

Analysis of the Results

Three techniques were used for the statistical analysis of the data.

The initial step in data analysis was to determine the presence of presentation order effects. An analysis of variance and covariance with repeated measures was performed two ways on each of the four dependent variables. Both three levels (heavy, slight, none) and two levels (heavy, slight), of accent as the trial factor were used with presentations A and B as the grouping factor.

After the differentiations in the presentation orders were found to be insignificant, another repeated measures analysis of variance was then executed to examine listener and interspeaker characteristics. Listener characteristics was the grouping factor with the four subtests as the trial factor.

Using the results from this last analysis, comparisons between the speakers were calculated using the Bonferroni t-test (Kirk, 1968).

Conclusion

Chapter IV began with a detailed description of the subject population, followed by an outline of the procedures
and materials used in the investigation. The chapter concluded with a plan for the analysis of data. The following chapter presents the results of data analysis.
CHAPTER V: RESULTS AND DISCUSSION

Introduction

This chapter presents descriptive data and the results of the statistical analyses of the data relevant to the seven hypotheses tested in this investigation.

Presentation Order Analysis

Prior to the main analysis, the possible influence of presentation order differentiations was investigated using a repeated measures analysis of variance. Keeping the four dependent variables and the grouping factor constant the data were analysed two ways by incorporating different accent levels into the trial factor.

The results for the three levels of accent were found to be insignificant, as recorded in Table 5.

The incorporation of two levels of accent into the analysis resulted in insignificant findings for the dependent variables of speech, personal and work. A significant F ratio, $F=4.24$, df=$1/117$, $p < 0.05$ was found for the social distance variable (Table 6).

In light of the insignificant ratios for all the other dependent measures tested in both analyses and the uninterpretability of this result, the significance of this ratio was not considered indicative of a presentation order effect due to the possibility of it occurring by chance alone.
In summary, when all speakers were compared with presentation order as a grouping factor, only one significant difference on this grouping factor was found. The possibility of this occurring by chance alone and the uninterpretability of its occurrence lead the researcher to reject its significance in favour of the insignificance of the other ratios. Presentation order differences was thus ignored in subsequent analyses.
Table 5
F Ratios for the four dependent measures when presentation order tested and three levels of accent used

<table>
<thead>
<tr>
<th>Dependent Measures</th>
<th>Speech F</th>
<th>Personal F</th>
<th>Social Distance F</th>
<th>Work F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech F</td>
<td>.86</td>
<td>.3549</td>
<td>3.17</td>
<td>.0775</td>
</tr>
<tr>
<td>Personal F</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Distance F</td>
<td>3.40</td>
<td>.0675</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work F</td>
<td>1.92</td>
<td>.1683</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6
F Ratios for the four dependent measures when presentation order tested and two levels of accent used

<table>
<thead>
<tr>
<th>Dependent Measures</th>
<th>Speech F</th>
<th>Personal F</th>
<th>Social Distance F</th>
<th>Work F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech F</td>
<td>.60</td>
<td>.4385</td>
<td>2.95</td>
<td>.0885</td>
</tr>
<tr>
<td>Personal F</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Distance F</td>
<td>4.24</td>
<td>.0417*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work F</td>
<td>2.20</td>
<td>.1403</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05
Listener Characteristics

Hypothesis seven proposes that teacher characteristics will not have an affect on the evaluations of the speech samples. Performing a repeated measures analysis of variances, six independent variables (teacher characteristics) were used as the grouping factor and were analysed with the four subtests as the trial factor. The influence of the individual independent variables is presented in this section. Also included are the interspeaker characteristics which show any rating differentiations between the speakers in the language stimuli. Any interaction between teacher characteristics and speakers and its significance is also noted.

To reduce the complexity of Tables 7 to 12 the following diagram will serve as a legend (Diagram 1).

**Diagram 1**

*Legend for Teacher Characteristics Tables*

<table>
<thead>
<tr>
<th>Source</th>
<th>MS</th>
<th>DF</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listener Characteristics (LC)</td>
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</tr>
<tr>
<td>Error</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speaker (S)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction (LC x S)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Practicing vs Prospective Teachers

As stated in Chapter IV, Research Procedures, the original intent to use only practicing teachers was expanded
to include prospective teachers when it was found there were no differentiations between the ratings made by these two groups. Table 7 shows the effect of this teacher characteristic on the ratings of the four subtests.

The listener characteristic of practicing versus prospective teacher is thus shown to have an insignificant effect on the ratings of the four dependent variables.

This finding was anticipated in that the student teachers included in the subject population divided into two distinct categories: 1. those in the final year of a B.Ed. program and 2. those enrolled in the fifth year transfer program. Student teachers in the B.Ed. program would have been exposed to teaching experience through their practica and thus to a large extent would have experiences similar to those of a practicing teacher. Enrollment in the transfer program requires the student to have completed an undergraduate degree in another faculty and though teaching experience per se may be limited to one practicum (at the time of data collection), such students are generally older and in possession of a wide and varied range of experiences.

In conclusion, it is felt that subject homogeneity on this characteristic can be attributed to these two reasons.

Table 7 further notes there were significant inter-speaker differentiations, \( F = (84.51), (32.08), (17.48), (7.36), \) \( df=7/819, p <0.01. \)
Table 7

Effect of practicing versus prospective teachers on the four dependent variables

<table>
<thead>
<tr>
<th>Practice</th>
<th>Speech Rating</th>
<th>Personal Rating</th>
<th>Social Distance Rating</th>
<th>Work Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.84 1 .01 146.9 1 2.13</td>
<td>69.9 1 1.00 54.2 1 1.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practicing and Prospective Teachers</td>
<td>163.4 117</td>
<td>68.9 117</td>
<td>70.0 117</td>
<td>38.9 117</td>
</tr>
<tr>
<td></td>
<td>2405.4 7 84.51** 281.4 7 32.08** 207.4 7 17.48** 55.9 7 7.36**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>57.2 7 2.01 11.6 7 1.32 23.2 7 1.96 8.3 7 1.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>28.5 819</td>
<td>8.8 819</td>
<td>11.9 819</td>
<td>7.6 819</td>
</tr>
</tbody>
</table>

**p < .01

63
These significant F ratios indicate the evaluations of the eight speakers are different though additional analyses must be performed to determine their direction and significance. These analyses will be presented in the section Interspeaker Characteristics.

**Sex**

The effect of sex on the four dependent variables was also found to be insignificant (Table 8).

It is clearly indicated by these results that women and men similarly rated the speech stimuli. There is also nothing to indicate that even though all speakers were male, this influenced the ratings of one sex more than another. It would thus appear that the sexes are comparable in their evaluations of speech and in spite of literature pointing to the fact that women more than men tend to speak the more standard form of a language (Trudgill, 1974; Scherer and Giles, 1979) this does not in any way seem to differentiate them from men when rating speech stimuli.

These results tend to support current research that has shown no differences between the sexes in a subject population that included high school, college and university teachers (Rey, 1978).

Since sex as a variable engendered considerable cell inequality (n = 96, n = 23), this finding enabled the researcher to ignore it in subsequent analyses.
Table 8

Effect of sex on the four dependent variables

<table>
<thead>
<tr>
<th>Sex</th>
<th>Speech Rating</th>
<th>Personal Rating</th>
<th>Social Distance Rating</th>
<th>Work Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>81.0</td>
<td>38.4</td>
<td>21.3</td>
<td>38.4</td>
</tr>
<tr>
<td>162.7</td>
<td>1</td>
<td>1.50</td>
<td>1</td>
<td>1.55</td>
</tr>
<tr>
<td></td>
<td>69.8</td>
<td>69.8</td>
<td>70.4</td>
<td>70.4</td>
</tr>
<tr>
<td>117</td>
<td>117</td>
<td>117</td>
<td>117</td>
<td>117</td>
</tr>
<tr>
<td></td>
<td>1560.6</td>
<td>132.0</td>
<td>93.4</td>
<td>93.4</td>
</tr>
<tr>
<td>35.0</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>15.09**</td>
<td>15.09**</td>
<td>7.85**</td>
<td>7.85**</td>
</tr>
<tr>
<td>38.7</td>
<td>819</td>
<td>11.9</td>
<td>7.6</td>
<td>7.6</td>
</tr>
<tr>
<td></td>
<td>819</td>
<td>819</td>
<td>819</td>
<td>819</td>
</tr>
</tbody>
</table>

**p < .01
Age

The characteristic of age does not differentiate the listeners in any way as indicated by the insignificant F ratios presented in Table 9.

This finding was not unexpected and appears compatible with the results obtained for practicing versus prospective teachers. It seems that teachers, regardless of age, will rate spoken language similarly. In other words, no particular age group within the teaching profession is more or less tolerant of deviations in speech when compared to other age groups.

Research showing evaluation differentiations according to age has been reported (Lambert et al., 1966; Giles, 1970) but it appears this distinction will disappear past the age of 20 when more homogeneity between various ages occurs.

Years of Experience

Consistent with the results for teacher experience and age are the insignificant F ratios for years of teaching experience (Table 10).

The amount of contact a teacher has had with students does not appear to influence the way in which he or she will evaluate speech. Similar findings have been reported in previous research (Williams et al., 1976), so this finding was not unexpected. The supposition that as teachers come in contact with a large number of students with varying speaking abilities they will be more sympathetic of
Table 9
Effect of age on the four dependent variables

<table>
<thead>
<tr>
<th>Age</th>
<th>Speech Rating</th>
<th>Personal Rating</th>
<th>Social Distance Rating</th>
<th>Work Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>146.1</td>
<td>48.6</td>
<td>34.4</td>
<td>11.5</td>
</tr>
<tr>
<td></td>
<td>162.3</td>
<td>69.9</td>
<td>70.6</td>
<td>39.5</td>
</tr>
<tr>
<td></td>
<td>2064.4</td>
<td>219.3</td>
<td>145.9</td>
<td>35.5</td>
</tr>
<tr>
<td></td>
<td>31.7</td>
<td>12.7</td>
<td>15.4</td>
<td>11.9</td>
</tr>
<tr>
<td></td>
<td>28.7</td>
<td>8.7</td>
<td>11.9</td>
<td>7.5</td>
</tr>
<tr>
<td>2</td>
<td>.90</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>116</td>
<td>116</td>
<td>116</td>
<td>116</td>
<td>116</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>72.04**</td>
<td>25.12**</td>
<td>12.26**</td>
<td>4.72**</td>
</tr>
<tr>
<td>14</td>
<td>1.11</td>
<td>1.46</td>
<td>1.30</td>
<td>1.59</td>
</tr>
<tr>
<td>812</td>
<td>812</td>
<td>812</td>
<td>812</td>
<td>812</td>
</tr>
</tbody>
</table>

**p < .01
Table 10

Effect of years of experience on the four dependent variables

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>Speech Rating</th>
<th>Personal Rating</th>
<th>Social Distance Rating</th>
<th>Work Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>165.3</td>
<td>35.8</td>
<td>50.6</td>
<td>33.3</td>
<td>39.2</td>
</tr>
<tr>
<td>115</td>
<td>1.22</td>
<td>70.0</td>
<td>71.0</td>
<td>39.0</td>
</tr>
<tr>
<td></td>
<td>7.00</td>
<td>115</td>
<td>115</td>
<td>115</td>
</tr>
<tr>
<td>2279.7</td>
<td>229.7</td>
<td>260.9</td>
<td>193.3</td>
<td>33.0</td>
</tr>
<tr>
<td>7</td>
<td>80.57</td>
<td>7</td>
<td>16.40</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>8.8</td>
<td>1.57</td>
<td>1.04</td>
<td>1.22</td>
</tr>
<tr>
<td></td>
<td>805</td>
<td></td>
<td>805</td>
<td></td>
</tr>
<tr>
<td>44.5</td>
<td>9.1</td>
<td>1.04</td>
<td>18.5</td>
<td>9.2</td>
</tr>
<tr>
<td>21</td>
<td>1.57</td>
<td>21</td>
<td>21</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>805</td>
<td>805</td>
<td>7.6</td>
<td>805</td>
</tr>
</tbody>
</table>

**p < .01
deviations in speech performance was obviously not supported by these results.

Percentage of Ethnic Minority Students Taught

Table 11 shows the insignificant effect of the characteristic, percentage of ethnic minority students taught, on rating differentiations.

This finding, though anticipated, is somewhat surprising. It was felt that the teachers teaching large percentages of minority students would differentiate from the rest in their evaluations. It can be speculated that direct contact with such students would lead to if not a more positive attitude, at least a more neutral attitude than the one held by those who do not teach ethnic students. This was obviously not the case though the insignificant results may be attributed to the distribution of the percentage throughout the sample population. As can be seen in Appendix E, the majority of Ss taught 60% or fewer ethnic students (n = 75) compared to those who taught 60% or more (n = 44).

In addition to the significant results on the interspeaker characteristics, a significant interaction between the listener characteristic and speakers on the speech rating is reported.

A more thorough examination of this interaction was not considered necessary by the researcher because of the complexity of the different combinations of listener
Table 11

Effect of percentage of ethnic minority students taught on the four dependent variables

<table>
<thead>
<tr>
<th>Percentage of Ethnic Minority Students Taught</th>
<th>Speech Rating</th>
<th>Personal Rating</th>
<th>Social Distance Rating</th>
<th>Work Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>259.5</td>
<td>5</td>
<td>1.65</td>
<td>71.8</td>
<td>5</td>
</tr>
<tr>
<td>157.7</td>
<td>113</td>
<td>69.5</td>
<td>113</td>
<td>66.4</td>
</tr>
<tr>
<td>1944.2</td>
<td>7</td>
<td>70.26**</td>
<td>7</td>
<td>27.97**</td>
</tr>
<tr>
<td>52.0</td>
<td>35</td>
<td>1.88**</td>
<td>35</td>
<td>.93</td>
</tr>
<tr>
<td>27.7</td>
<td>791</td>
<td>8.8</td>
<td>791</td>
<td>12.0</td>
</tr>
</tbody>
</table>

**p < .01
characteristic and speaker. The possibility of it occurring by chance alone was also considered.

**Teacher Ethnicity**

Analysis of the listener characteristic, teacher ethnicity, yielded two significant results as reported in Table 12.

In order to interpret this significance it was necessary to examine the means and graphs shown below (Table 13, Figures 1 and 2).

The means on the personal rating (Table 13) clearly indicate a division between the evaluations of the Indian and Southern European groups and those of the European and Asian groups. The plotted means for all groups on all eight speakers further substantiate this (Figure 1). A t-test analysis (Table 14) shows all speakers were rated more favourably on the personal subtest, by Indian and Southern European teachers than by the European and Asian teachers ($t = 13.16; p < 0.01$). Table 14 also shows a significant difference between the European group and the other three subgroups on the work variable as indicated by Table 13 and Figure 2.

It is interesting to note that of all the teacher characteristics tested, only ethnicity had an effect and only on two dependant variables. Interpretation of these results is complicated by the fluctuations in ratings made by the teachers for the individual speakers. The non-European teachers, while generally giving more positive
Table 12

Effect of teacher ethnicity on the four dependent variables

<table>
<thead>
<tr>
<th>Teacher Ethnicity</th>
<th>Speech Rating</th>
<th>Personal Rating</th>
<th>Social Distance Rating</th>
<th>Work Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>370.0</td>
<td>482.5</td>
<td>139.6</td>
<td>140.4</td>
</tr>
<tr>
<td></td>
<td>156.6</td>
<td>58.8</td>
<td>68.2</td>
<td>36.4</td>
</tr>
<tr>
<td></td>
<td>354.3</td>
<td>34.6</td>
<td>59.1</td>
<td>30.6</td>
</tr>
<tr>
<td></td>
<td>41.3</td>
<td>8.6</td>
<td>15.0</td>
<td>22.2</td>
</tr>
<tr>
<td></td>
<td>28.4</td>
<td>8.8</td>
<td>11.9</td>
<td>7.2</td>
</tr>
</tbody>
</table>

*p < .05

**p < .01
Table 13
Mean ratings for teacher ethnicity on two dependent variables

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Personal</th>
<th>Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>European (E)</td>
<td>21.3</td>
<td>17.5</td>
</tr>
<tr>
<td>Asian (A)</td>
<td>22.3</td>
<td>19.1</td>
</tr>
<tr>
<td>Indian (I)</td>
<td>26.7</td>
<td>20.4</td>
</tr>
<tr>
<td>Southern European (SE)</td>
<td>27.0</td>
<td>19.6</td>
</tr>
</tbody>
</table>

Table 14
t-statistics for teacher ethnicity on two dependent variables

<table>
<thead>
<tr>
<th></th>
<th>Personal</th>
<th>Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>I &amp; SE compared to E &amp; A</td>
<td>13.16**</td>
<td>--</td>
</tr>
<tr>
<td>I &amp; SE &amp; A compared to E</td>
<td>--</td>
<td>7.55**</td>
</tr>
</tbody>
</table>

**p < .01
Figure 1
Plotted Means for Teacher Ethnicity on Personal
Figure 2
Plotted Means for Teacher Ethnicity on Work
ratings, are inconsistent in their differentiations for both within group slight and heavy accents and between group accents. One explanation for this may be the small number of Ss in this group (n = 18) compared to the larger group (n = 101). A portion, or all, or these teachers may have guessed the intent of the study and given unauthentic responses, thereby causing the responses to deviate from a particular pattern. The chance of this occurring in the larger group is controlled by the larger n.

It may also be the case that the three ethnic subgroups feel a degree of solidarity towards the speakers and accordingly rate them more favourably. This would be most applicable on the work subtest where the standard English speakers are rated the least favourably by all groups but in particular, by Southern Europeans.

Differentiations in ratings according to teacher race have been found in previous research (Naremore, 1971) but also of interest to this study is research showing insignificant results. Miller (1972) found no differentiations between Mexican-American and Anglo teachers when rating the speech of children. The ethnic teachers (Black American and Cuban National) in Rey (1978) rated similarly to the White Americans in the subject sample. This study further supports these results by the insignificant results on the speech and social distance ratings. The suggestion that ethnic minority teachers have
internalized the values of the dominant culture must be considered here.

The similarity of response made by the ethnic Asian and European teachers on the personal rating must also be noted. Two interpretations are possible: 1. the Asian teachers have internalized the values of the dominant society or 2. the large Asian population has integrated so completely into a 'Canadian' society, as the ethnic Europeans have, so as to create true 'Canadians' with 'Canadian' attitudes. These attitudes would be indistinguishable according to ethnicity.

As in the previous section, further analysis of the interaction between the listener characteristic and the work variable was considered unnecessary.

Interspeaker Characteristics

Hypotheses one to six are different from hypothesis seven in that they are concerned with differentiations between the evaluations of the speakers rather than differentiations between the evaluators. As noted in the previous section, while differentiations in listener characteristics yielded mostly insignificant results, there were significant differences (p < 0.01) in the evaluations of the eight speakers. This is further evidenced in the variations between the means for all eight speakers on the four dependent variables (Table 15).
Table 15
Mean ratings for all eight speakers on the four dependent variables

<table>
<thead>
<tr>
<th></th>
<th>Speech</th>
<th>Personal</th>
<th>Social Distance</th>
<th>Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slight Chinese</td>
<td>28.5</td>
<td>21.5</td>
<td>24.5</td>
<td>18.5</td>
</tr>
<tr>
<td>Heavy Chinese</td>
<td>23.9</td>
<td>20.5</td>
<td>23.5</td>
<td>18.4</td>
</tr>
<tr>
<td>Slight Québécois</td>
<td>29.9</td>
<td>21.6</td>
<td>24.5</td>
<td>17.7</td>
</tr>
<tr>
<td>Heavy Québécois</td>
<td>24.8</td>
<td>20.7</td>
<td>24.4</td>
<td>17.5</td>
</tr>
<tr>
<td>Slight Punjabi</td>
<td>32.1</td>
<td>21.5</td>
<td>24.7</td>
<td>18.2</td>
</tr>
<tr>
<td>Heavy Punjabi</td>
<td>27.4</td>
<td>20.5</td>
<td>23.5</td>
<td>18.3</td>
</tr>
<tr>
<td>Standard English (1)</td>
<td>28.6</td>
<td>22.3</td>
<td>22.8</td>
<td>16.5</td>
</tr>
<tr>
<td>Standard English (2)</td>
<td>38.6</td>
<td>25.2</td>
<td>27.2</td>
<td>17.3</td>
</tr>
</tbody>
</table>
This section analyses each hypothesis separately, using the mean values and the Bonferroni t-test (1 tailed) to examine both the location and direction of this significance among the eight speakers. For a further description of the mean values and aid in data interpretation, the reader is directed to Appendix F, which contains the plotted means for all speakers on the four dependent variables.

Hypothesis I - Foreign-accented versus standard English speakers

Hypothesis I proposes that the foreign-accented speakers will be rated negatively on all four dependent variables when compared to the standard English speakers.

This was clearly the case on both the speech and personal subtests, as can be seen in Table 16.

These findings correspond to those found in previous research using both teaching and non-teaching subjects, and indicate that Vancouver teachers are not exempt from possessing negative attitudes to both the speech and personal attributes of ethnic minority group members. They also support the theory that negative attitudes are associated with particular varieties of non-standard language. Teachers display negative attitudes to these types of 'foreign' speech and in turn attach unfavourable personal characteristics to the speakers of such speech. As a result the speakers are rated as being unlikeable, unsociable, untrustworthy, etc.,
Table 16

$t$-statistics for foreign-accented versus standard English speakers

<table>
<thead>
<tr>
<th>Speech</th>
<th>Personal</th>
<th>Social Distance</th>
<th>Worka</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign-accented versus Standard English</td>
<td>14.51**</td>
<td>12.23**</td>
<td>.92</td>
</tr>
</tbody>
</table>

**$p < .01$

aSignificance is in favour of foreign-accented speakers
in addition to being uneducated, unintelligent and having poor speaking ability.

The insignificant finding for social distance is at variance with the other two findings. Difficulty in explaining this is increased when it is seen that the item likeable is present in both subtests. It appears that the Ss found foreign-accented speakers unlikeable on a personal dimension but likeable, attractive, similar to self, etc., on a social distance dimension. This result can perhaps be interpreted to mean that though the Ss have negative feelings toward the speech and personal characteristics, they are quite willing to associate with such speakers on a social level. Unfortunately this result does not tell us the level or type of social interaction the Ss would afford such speakers.

The result for the work category is the reverse of that hypothesized in this study. The significance indicates the foreign-accented speakers are more conscientious, ambitious, harder working and conservative than their standard-accented counterparts. This finding was unanticipated in terms of the argument of this study and a possible explanation of this result will be discussed in Chapter VI.

Thus Hypothesis I was supported to some extent, though the results were not as conclusive as predicted.
Hypothesis II - Stereotyped attitudes to foreign-accented speakers

The stereotyped attitudes of teachers toward the three ethnic minority groups as presented in Hypothesis II were all found to be insignificant (Table 17).

This can be translated to mean that even though negative attitudes toward foreign-accented speakers were present, these attitudes did not conform to a particular group stereotype.

To conclude that there was no stereotyping according to ethnicity was an attractive proposition to this researcher, until an examination of the means for the foreign-accented speakers (Table 15, Figure 6 (Appendix F)) revealed more negative work ratings for the Québécois-accented group when compared to the other two accent groups. The results of the Bonferroni t-test performed to test this difference shows a significant t-value ($t = 3.37, p < 0.01$). In other words, the Québécois-accented speakers were stereotyped at being less work-oriented than either the Chinese or Punjabi-accented speakers. This finding is different but nevertheless consistent with the stereotype proposed for the Québécois in the hypothesis. Though they were not rated as more likeable, humourous, etc., the presence of these factors in the attitudes of the listeners may have mediated the work ratings to the extent that the evaluations became significantly more negative.
Table 17

t-statistics for stereotyped attitudes toward foreign-accented speakers

<table>
<thead>
<tr>
<th></th>
<th>Personal</th>
<th>Social Distance</th>
<th>Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Punjabi vs Chinese and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Québécois-accented</td>
<td>.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>speakers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Québécois vs Chinese</td>
<td></td>
<td>1.32</td>
<td></td>
</tr>
<tr>
<td>and Punjabi-accented</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>speakers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chinese vs Québécois</td>
<td></td>
<td></td>
<td>2.46</td>
</tr>
<tr>
<td>and Punjabi-accented</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>speakers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Québécois vs Chinese</td>
<td></td>
<td></td>
<td>3.37</td>
</tr>
<tr>
<td>and Punjabi-accented</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>speakers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\*\*p < .01
In conclusion, it can be said that Hypothesis II was not supported, though in the process of statistical analysis an additional finding was discovered. The relationship of this finding to the original hypothesis was discussed.

Slightly versus heavily-accented speakers on four dependant variables

Table 18 reports the results for hypotheses three, four, five and six. Reference will be made to both this table and Appendix F during the discussion of each of the individual hypotheses.

Hypothesis III - Slightly versus heavily-accented speakers on Speech

Hypothesis III proposes that the speech of heavily-accented speakers will be more negatively rated than the speech of slightly-accented speakers within the same accent group. This was clearly the case as indicated in Table 18. Figure 3 (Appendix F) graphically illustrates the differentiation between the mean ratings of all foreign-accented speakers.

It is obvious by these results that the listeners were discriminating speech on the basis of the phonological deviations present (or absent) in the speech stimuli. Heavily-accented speech was viewed more negatively in spite of the fact that intelligibility did not diminish with the increase in nonstandard features and the content of the message remained constant. These findings support the
Table 18

\( t \)-statistics for slightly-accented versus heavily-accented speakers within accent groups

<table>
<thead>
<tr>
<th>Accent Group</th>
<th>Speech</th>
<th>Personal</th>
<th>Social Distance</th>
<th>Work</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slight versus Heavy Chinese</td>
<td>6.59**</td>
<td>2.66</td>
<td>2.35</td>
<td>.12</td>
</tr>
<tr>
<td>Slight versus Heavy Québécois</td>
<td>7.37**</td>
<td>2.23</td>
<td>.26</td>
<td>.66</td>
</tr>
<tr>
<td>Slight versus Heavy Punjabi</td>
<td>6.73**</td>
<td>2.62</td>
<td>2.68*</td>
<td>.26</td>
</tr>
</tbody>
</table>

*p < .05

**p < .01
contention that as speech diverges from the standard 'acceptable' form it will receive less favourable ratings. The speakers of this nonstandard form will also receive less favourable ratings in terms of intelligence, education, self-confidence, etc. A stereotyped attitude toward such speakers is revealed through the results presented here. These results also point to the fact that the teachers had the ability to detect accent broadness and rated the speakers' speech accordingly.

Thus Hypothesis III was supported. A further discussion of how this may affect heavily-accented speakers in school is presented in Chapter VI.

Hypothesis IV - Slightly versus heavily-accented speakers on Personal

The insignificant results for the personal ratings in Table 18 do not support Hypothesis IV. The Ss did not distinguish the personal characteristics of heavily-accented speakers as being different from those of slightly-accented speakers within the same accent group.

These results need to be interpreted in conjunction with those found for the personal ratings in Hypothesis I (Table 16). It appears that the reason the Ss did not differentiate between speakers on the basis of degree of accent was because they simply rated all the foreign-accented speakers more negatively on this dimension. These unfavourable ratings can also be seen in Figure 4 (Appendix F),
where in no case does the mean rating for a foreign-accented speaker exceed that of a standard English speaker. Examination of the other graphs reveal that this is a unique tendency.

The devaluation of foreign-accented speech seems to be translatable into devaluation of the speaker as indicated by these results. Such speakers are unlikeable, have bad characters and are untrustworthy, among other things. The fact that spoken language exerts a major influence on a listener's impression of a speaker is of social importance and the susceptibility of teachers to this influence is a critical issue.

Hypothesis IV was not supported by the obtained results, though it is noted that such results are not inconsistent with the overall premise of this study.

Hypothesis V - Slightly versus heavily-accented speakers on Social Distance

Hypothesis V proposes that the listeners will accord greater social distance to the heavily-accented speakers than to the slightly-accented speakers within the same accent group. Table 18 indicates that the results reached significance (p < 0.05) for the Punjabi-accented speakers only.

The overall insignificance of these findings was anticipated through the insignificant results for this dimension reported in Table 16. It seems that listeners
who rate negatively the speech and personal characteristics of foreign-accented speakers will still interact with them on a social dimension, though the degree this interaction will attain is not evident.

The significant finding for the Punjabi-accented speakers, though, would indicate that a hierarchy of acceptance based on accent broadness does exist within this social dimension. More specifically, the heavily-accented Punjabi speaker may have been perceived as possessing the heaviest accent of all, or conversely, the slightly-accented Punjabi speaker the slightest accent of all, or both (Figure 5 (Appendix F) indicates that the latter is the case). This would result in a large enough distinction between the two degrees of accent to yield a significant result and warrant the statement that there are differences in social distance according to accent broadness. In this case the insignificance of the other two results would be attributed to the smaller distance between the degrees of accent. This smaller distance would be the result of the Ss perceiving the two levels of accent as less distinct for the Chinese and Québécois-accented speakers and would not be strong enough to ferret out differences in social distance.

Another interpretation of this finding is that the listeners felt the most socially distant from the Punjabi speakers. This may be due to the fact that Punjabi speakers are a highly visible minority and integration of this group
into Vancouver society is minimal when compared to the other two groups studied.

Hypothesis V was thus partially, though not conclusively, supported by these results.

Hypothesis VI - Slightly versus heavily-accented speakers on Work

Hypothesis VI proposes that heavily-accented speakers will be more negatively rated on work characteristics than slightly-accented speakers within the same accent group. Table 18 indicates that all results for this hypothesis failed to reach significance.

Interpretability of these results depends on the findings reported in Table 16, where it is noted that the significance reached is in the direction opposite to that hypothesized. It appears that foreign-accented speakers in general, regardless of degree of accent, are perceived more positively than standard English speakers on work characteristics. Figure 6 (Appendix F) further supports this. In no case does the mean rating for a standard English speaker exceed that of a foreign-accented speaker. This finding conforms to a prevalent stereotype that Canadians are in fact lazy people.

Discrimination according to degree of accent cannot be concluded from these results and Hypothesis VI is thus not supported. As noted in a previous section, though, such findings are not contradictory to the assumptions set forth
in this inquiry and will be discussed further in Chapter VI.

**Residual Issues**

Throughout the data analysis, tendencies for the evaluators to respond in manners different from, or in addition to those hypothesized, were realized by the researcher. One of these findings has already been examined in a previous section. The intent of this section is not to present all such findings, as that is beyond the scope of this paper, but rather to present an analysis similar to the analyses put forth in hypotheses three through six. Differences between the two speakers within each accent group were examined in the preceding section and the decision to examine the differences between the two standard English speakers was made when it became obvious that standard English speaker one was consistently rated more negatively than standard English speaker two.

Table 19 indicates that the ratings were indeed significantly more negative for speaker number one than for speaker number two on the three dependent variables of speech, personal and social distance.

It is obvious by these results that even though both speakers spoke with a standard accent, other factors influenced the ratings of these two speakers. These factors, which can be termed paralinguistic phenomena (i.e., speech
Table 19  
t-statistics for standard English speaker (1) versus standard English speaker (2)

<table>
<thead>
<tr>
<th></th>
<th>Speech</th>
<th>Personal</th>
<th>Social</th>
<th>Work</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard English speaker (1) versus Standard English speaker (2)</td>
<td>14.36**</td>
<td>7.67**</td>
<td>9.84**</td>
<td>2.0</td>
<td></td>
</tr>
</tbody>
</table>

**p < .01
rate, hesitation pauses, tone of voice), are very difficult to control except through the use of the matched-guise technique. The evaluators appear to have reacted quite negatively to the voice quality of speaker number one and also quite positively to the voice quality of speaker number two. Figures 3, 4 and 5 graphically illustrate this (Appendix F).

It can be speculated that both speakers are unique in opposite directions and that the inclusion of two different standard speech samples would yield different results in terms of these findings and those presented for Hypothesis I. This may be the case but it can also be argued that the mean ratings for these two speakers are averaged in the analyses and thus tend to balance each other's uniqueness.

The insignificant result on the work subtest indicates that voice quality was not an important factor when determining the work characteristics of standard English speakers. This is compatible with the results of Hypotheses IV and VI, where it was found that degree of accent failed to have a significant effect on the evaluations. In other words, regardless of differences in paralinguistic phenomena, standard-accented speakers are rated more negatively than foreign-accented speakers on work characteristics.
Conclusion

Chapter V has presented the results of data analysis. In the first analysis, presentation order was found to have an insignificant effect on the speech evaluations. This result was anticipated in view of the fact the presentation orders were almost identical.

The effect of teacher characteristics on the evaluations was also examined. Even though the teachers differed in terms of sex, age, years of teaching experience, percentage of ethnic minority students taught and ethnicity, the only characteristic which differentiated the teachers was that of ethnicity. The significance of this characteristic on two of the dependent variables (personal and work) was discussed.

The results of Hypotheses I through VI were also presented and discussed. In addition to these hypothesized results, several supplementary findings were reported.
CHAPTER VI: SUMMARY AND CONCLUSIONS

Summary

The following hypotheses and their analyses have been presented in this study.

Hypothesis I states that teachers will have negative reactions toward foreign-accented speakers on speech, personal, social distance and work characteristics. When compared to the standard English speakers it was found that the foreign-accented speakers were rated significantly more negatively on both the speech and personal subtests (p < 0.01). An insignificant result was reported for the social distance subtest and an unanticipated finding, a significantly more positive (p < 0.01) rating for the foreign-accented speakers on the work subtest, was discovered.

Hypothesis II tested the stereotyped reactions of the teachers to the three ethnic minority groups included in the study. The results of data analysis did not support any of the hypothesized stereotypes, though supplementary analysis of the data revealed a significant t-value (t = 3.37, p < 0.01) for the Québécois on the work subtest. How this result indirectly supported the previously stated hypothesis was discussed.

Hypothesis III states that heavily-accented speakers will be rated more negatively on speech characteristics than slightly-accented speakers within the same accent group.
The results firmly support this statement \( (p < 0.01) \), indicating that possession of a heavy accent results in a more negative evaluation of one's speech. This negative evaluation consists of, among other items, unfavourable ratings in terms of education, intelligence and speaking ability.

Insignificant results are reported for Hypothesis IV, which proposes that heavily-accented speakers will be rated more negatively on personal characteristics than slightly-accented speakers within the same accent group. Examination of this result in conjunction with Hypothesis I led to the interpretation that possession of an accent, regardless of how slight or broad, results in negative personal evaluations (for example, unlikeable, unsociable).

The proposal in Hypothesis V, that heavily-accented speakers will be afforded more social distance than slightly-accented speakers within the same accent group, was only partially supported. Insignificant findings were reported for the ethnic Chinese and Québécois groups, but a significant \( t (t=2.68, p < 0.05) \) was reported for the ethnic Punjabi group. An explanation of this finding included the suggestion that the phonological deviations between the slight and heavy Punjabi speakers were greater than those between the speakers in the other two ethnic groups and this contributed to the probability of it attaining significance. The fact that the teachers regard East Indians
as being the most socially distant from themselves was also considered.

The analysis of Hypothesis VI, which states that heavily-accented speakers will be rated more negatively on work characteristics than slightly-accented speakers within the same accent group, yielded insignificant results. It was concluded that, in view of the results of Hypothesis I, speakers possessing a foreign accent were considered hard-working, conscientious, ambitious and conservative, regardless of accent broadness.

Listener characteristics were hypothesized to have an insignificant effect on the teachers' evaluations of the speech samples in Hypothesis VII. This was clearly the case for the teacher characteristics of age, sex, years of experience and percentage of ethnic minority students taught. The characteristic of teacher ethnicity attained significance on the dependent variables of personal and work. A discussion of these results reveals that the ethnic minority teachers gave more favourable ratings to the foreign-accented speakers and this can be attributed to feelings of solidarity toward the ethnic minority speakers.

Supplementary analysis of the data revealed significant differences \( p < 0.01 \) between the evaluations of standard English speaker one and standard English speaker two on the three dependent variables of speech, personal and social distance. These differentiations were attributed to voice
quality. The insignificant finding on the work subtest indicates that standard English speakers are considered less work-oriented than their foreign-accented counterparts, irrespective of differences in voice quality.

Interpretation of the Findings

The most striking finding presented in this study is the fact that, based on irrelevant information such as presence and degree of foreign accent and voice quality, teachers will make serious judgements about a person. These judgements will include assumptions about a person's intelligence, education, ambition, sociability and even attractiveness.

The social importance of this finding cannot be overlooked. If we depend on the schools as socializing institutions to transmit the values and ideals of the culture, to what degree do the teachers' attitudes toward the students in the classroom inhibit the growth of multiculturalism in society? Speech is a conspicuous indicator of ethnicity and is important in that it can evoke a stereotype that listeners feel is appropriate to the social group represented by the speech.

This stereotyping is a reflection of the teachers' attitudes towards various ethnic groups and reflects socially shared beliefs. Whether these beliefs are true or not is of small consequence. In one sense they may be true and be
useful as a guide to behavior in intergroup relations. In the other sense they may be false or negative and lead to prejudice. Group membership is the basis for this prejudice, not individual characteristics or behavior. The Ss in this study tended to agree in their beliefs about the ethnic groups and evaluated the speakers accordingly, regardless of the validity of the common stereotype information they share.

Stereotyping of the ethnic groups represented by the speech samples would account for both the negative and positive results found in Hypothesis I. Particular language varieties may be rated favourably on some dimensions, but less favourably on other dimensions. The tendency of the Ss to rate the foreign-accented speakers negatively on the speech characteristics, which included intelligence, education, self-confidence and standardness of speech, reflects the image of the uneducated, not-so-bright immigrant. Positive results on the work characteristics combine with the preceding negative findings to create the uneducated, not-so-bright but hard-working, conscientious immigrant.

This dichotomy in stereotyped attitudes can lead to differential behavior intentions toward such immigrants, both in and out of the classroom.

On the social level, a non-immigrant may be willing to interact with immigrants in business relationships of a
non-professional nature because they are hard-working and conscientious, but less willing to interact with them on a professional level because they are uneducated and less intelligent.

In the classroom these attitudes could conceivably work in the students' favour. If the teacher expects the ethnic students to work harder and be more ambitious they probably will. This motivation, coupled with the intelligence which, though contrary to the teacher's opinion, the student probably has, will indubitably lead to the student attaining academic success. The truth of this can be validated by the fact that large numbers of immigrant students do attain a very high level of success in school.

It can also be argued though that the reverse of this is true and this is evident by the numbers of immigrants who do not attain any level of academic success. The teacher could actually be promoting this state of affairs by 1) attitudes toward the students and their variety of language, 2) social and personal beliefs about the ethnic groups to which these students belong (i.e., stereotypes), and 3) compilation of these attitudes and beliefs with behavior to project unfavourable images to the students.

The attitudes a teacher has toward the ethnic minority students in the classroom mediates but does not predict the behavior the teacher will display toward these students. The results of this study do not indicate the overt behavior
of teachers. Rather they suggest that such attitudes may have consequences on the way teachers behave and this in turn may have consequences on the educational performance of the students. Motivation is affected by the feedback a student receives from teachers concerning his probability of success. Whether attitudes are translated into behavior which affects the feedback a student receives is not yet known, as the relationship between attitude and behavior is infrequently stable.

The overall results of this study tend to support the hypothesis that teachers will respond to speech with stereotyped attitudes and that these attitudes are evoked by foreign-accented speech in particular. The following section discusses the implications these results will have on teacher training.

Implications for teaching

The nature of teacher-student interaction in the classroom is an obvious concern when reading the results of this study. Vocal stereotyping has an impact on both the students' self-perception and attitudes toward school through the projection of the teacher's expectations based on stereotypes.

Even the most well-meaning teacher may be making judgments of students which conform to a stereotype. Considering the frequency of teacher-student verbal interaction in the
classroom, the impact this may have on the students can be great.

Teacher training curricula must be designed to include studies in attitudes to sensitize teachers to variations in language and performance and make them aware of the socio-cultural dynamics underlying language learning and language use. To accept cultural diversity is to accept language diversity, though at the present time it seems we are only paying lip-service to cultural diversity as a social fact. In other words, our real attitudes lie elsewhere and are revealed through studies such as this.

Teachers must also be informed that the degree of accent a speaker possesses does not indicate how intelligent he or she is. The present study seems to indicate that the concept of intelligence is still linked to a foreign accent as in previous years. The fact that teachers believe this is of great importance to everyone. They must be alerted to attitudinal tendencies such as these to avoid the undetection of possible bias in their classrooms.

To summarize, the implications for teaching lie in the direction of changing the teacher rather than the student.

Implications for Research

These findings support the results reported in previous research using different language varieties and different
subject populations as well as research involving attitudes to ethnic minority groups.

There are two directions research can follow which can be entitled: 1) inquiry and 2) implementation.

Further inquiries can be made into the relationships between teacher-student ethnicity to find the effect they have on classroom interaction. Inquiries into actual classroom behavior on the part of the teacher is another important area to examine whether these attitudes are translated into action. Research examining the accent specific linguistic cues that evoke various stereotyped responses on the part of the listener has obvious practical implications for the second or foreign language teacher. Though previous research has reported the minimal influence the teacher has over pronunciation accuracy, the student could nonetheless be made aware of these cues.

The development and implementation of attitude studies into teacher training programs and workshops to alert teachers to the presence and consequences of these attitudes seems to be an obvious long-term proposal for research. It is unlikely that the ethnic structure in our society will change to a vast degree and teachers must accommodate this structure into their attitudes, behavior and classrooms to support multiculturalism. The far-reaching effects of teacher ethnocentrism can be reduced only by reducing the ethnocentrism that fosters them.
Weaknesses of the study

Several basic weaknesses of this study must be discussed in this section.

First, it is obvious that the experimental situation presented does not simulate the actual classroom. Thus any discussion of how a teacher may act in a typical classroom situation is speculative. Teachers have many other cues to base their judgements of students on. Various visual cues and also their acquaintance with individual students are two of the more prominent ones.

It should also be noted that there are so many complex factors in a person's attitude on any social issue or object that it cannot be adequately described by a single number on a scale. Such a weakness is present in many studies of attitudes.

The inability of the subjects to accurately identify the ethnic group to which the slightly-accented speakers belonged could also be considered a weakness. This inability may have manifested itself in the insignificant results reported for Hypothesis II. In other words, a group stereotype did not emerge because the listeners could not classify the speakers into three distinct ethnic groups. The supplementary finding for the Québécois-accented group refutes this to some degree. The fact that the subject population may have been reacting to the foreign accents in
a more general sense though does not compromise the findings in this study.

A final point to note is the fact that the teachers in the study were all attending classes at university and may be somewhat different from teachers who do not attend classes. It can be speculated that they are a more sensitized or liberal group but the reported results do not seem to confirm this.
REFERENCES


BIBLIOGRAPHY


The purpose of this study is to examine the extent to which different people react to different varieties of speech. More questions can be answered after it is over. You will be asked to listen to eight (8) speakers and to evaluate them according to the personal traits outlined in the scales contained in the booklet. There is a separate scale for each speaker and each evaluator has a different form of the same scale.

You will hear each speaker only once. PLEASE LISTEN CAREFULLY. The tape will tell you when to begin filling in the scale. Do not write anything until you are asked to. When you are finished writing, the tape will then ask you to turn to the next scale and you will hear the next speaker.

The third page of the booklet contains a practice scale. You will hear a practice tape and be asked to fill in the scale. If you have any questions, please ask them after the practice tape.

After the speakers have all been evaluated, the booklets will be collected and you will be asked to fill out a short questionnaire.

PLEASE NOTE THAT YOU HAVE THE FREEDOM TO WITHDRAW AT ANY TIME OR TO REFUSE TO ANSWER ANY QUESTIONS WITHOUT PREJUDICING FURTHER TREATMENT OR INFLUENCING CLASS STANDING. IF THE QUESTIONNAIRE IS COMPLETED IT WILL BE ASSUMED THAT CONSENT HAS BEEN GIVEN.
The semantic differential scales contained in the booklet consist of a series of adjectives given in opposites. Between the opposites are seven (7) cells. The positions nearest the adjectives indicate 'highly', the next cells indicate 'very' and 'somewhat' until the centre cell indicates 'neither' or 'neutral'.

For example:

tall highly : very : somewhat : neutral : somewhat : very : highly short

Please mark only one (1) cell with a check mark (✓) to show to which degree the adjective best describes your response to the speaker's voice.

Please fill in all the cells in each scale. If you feel you cannot respond, please check (✓) neutral.

Thank you.
THE SPEAKER SOUNDS:

THE SPEAKER SOUNDS:

likeable___:___:___:___:___:___:___unlikeable
bad character___:___:___:___:___:___:___good character
conscientious___:___:___:___:___:___:___unconscientious
ambitious___:___:___:___:___:___:___unambitious
unsociable___:___:___:___:___:___:___sociable
nervous___:___:___:___:___:___:___calm
not selfconfident___:___:___:___:___:___:___selfconfident
humourous___:___:___:___:___:___:___humourless
unintelligent___:___:___:___:___:___:___intelligent
attractive___:___:___:___:___:___:___unattractive
uneducated___:___:___:___:___:___:___educated
trustworthy___:___:___:___:___:___:___untrustworthy
good speaking ability___:___:___:___:___:___:___poor speaking ability
indistinct___:___:___:___:___:___:___distinct
non-standard speech___:___:___:___:___:___:___standard speech
hard-working___:___:___:___:___:___:___lazy
conservative___:___:___:___:___:___:___unconservative
similar to myself___:___:___:___:___:___:___dissimilar to myself
undesirable as colleague___:___:___:___:___:___:___desirable as colleague
THE SPEAKER SOUNDS:

likeable__:_:_:_:_:_:_:_:_unlikeable
bad character__:_:_:_:_:_:_:_:_good character
conscientious__:_:_:_:_:_:_:_:_unconscientious
ambitious__:_:_:_:_:_:_:_:_unambitious
unsociable__:_:_:_:_:_:_:_:_sociable
nervous__:_:_:_:_:_:_:_:_calm
not selfconfident__:_:_:_:_:_:_:_:_selfconfident
humourous__:_:_:_:_:_:_:_:_humourless
unintelligent__:_:_:_:_:_:_:_:_intelligent
attractive__:_:_:_:_:_:_:_:_unattractive
uneducated__:_:_:_:_:_:_:_:_educated
trustworthy__:_:_:_:_:_:_:_:_untrustworthy
good speaking ability__:_:_:_:_:_:_:_:_poor speaking ability
indistinct__:_:_:_:_:_:_:_:_distinct
non-standard speech__:_:_:_:_:_:_:_:_standard speech
hard-working__:_:_:_:_:_:_:_:_lazy
conservative__:_:_:_:_:_:_:_:_unconservative
similar to myself__:_:_:_:_:_:_:_:_dissimilar to myself
undesirable as colleague__:_:_:_:_:_:_:_:_desirable as colleague
THE SPEAKER SOUNDS:

likeable___:___:___:___:___:___:___unlikeable
bad character___:___:___:___:___:___:___good character
conscientious___:___:___:___:___:___:___unconscientious
ambitious___:___:___:___:___:___:___unambitious
unsociable___:___:___:___:___:___:___sociable
nervous___:___:___:___:___:___:___calm
not selfconfident___:___:___:___:___:___:___selfconfident
humourous___:___:___:___:___:___:___humourless
unintelligent___:___:___:___:___:___:___intelligent
attractive___:___:___:___:___:___:___unattractive
uneducated___:___:___:___:___:___:___educated
trustworthy___:___:___:___:___:___:___untrustworthy
good speaking ability___:___:___:___:___:___:___poor speaking ability
indistinct___:___:___:___:___:___:___distinct
non-standard speech___:___:___:___:___:___:___standard speech
hard-working___:___:___:___:___:___:___lazy
conservative___:___:___:___:___:___:___unconservative
similar to myself___:___:___:___:___:___:___dissimilar to myself
undesirable as colleague___:___:___:___:___:___:___desirable as colleague
THE SPEAKER SOUNDS:

likeable___:___:___:___:___:___:___unlikeable
bad character___:___:___:___:___:___:___good character
conscientious___:___:___:___:___:___:___unconscientious
ambitious___:___:___:___:___:___:___unambitious
unsociable___:___:___:___:___:___:___sociable
nervous___:___:___:___:___:___:___calm
not self confident___:___:___:___:___:___:___self confident
humourous___:___:___:___:___:___:___humourless
unintelligent___:___:___:___:___:___:___intelligent
attractive___:___:___:___:___:___:___unattractive
uneducated___:___:___:___:___:___:___educated
trustworthy___:___:___:___:___:___:___untrustworthy
good speaking ability___:___:___:___:___:___poor speaking ability
indistinct___:___:___:___:___:___:___distinct
non-standard speech___:___:___:___:___:___:___standard speech
hard-working___:___:___:___:___:___:___lazy
conservative___:___:___:___:___:___:___unconservative
similar to myself___:___:___:___:___:___:___dissimilar to myself
undesirable as colleague___:___:___:___:___:___:___desirable as colleague
THE SPEAKER SOUNDS:

unconscientious
similar to myself : : : : : : : : dissimilar to myself
THE SPEAKER SOUNDS:

likeable___:___:___:___:___:___:___ unlikeable
bad character___:___:___:___:___:___:___ good character
conscientious___:___:___:___:___:___:___ unconscientious
ambitious___:___:___:___:___:___:___ unambitious
unsociable___:___:___:___:___:___:___ sociable
nervous___:___:___:___:___:___:___ calm
not selfconfident___:___:___:___:___:___:___ selfconfident
humourous___:___:___:___:___:___:___ humourless
unintelligent___:___:___:___:___:___:___ intelligent
attractive___:___:___:___:___:___:___ unattractive
uneducated___:___:___:___:___:___:___ educated
trustworthy___:___:___:___:___:___:___ untrustworthy
good speaking ability___:___:___:___:___:___ poor speaking ability
indistinct___:___:___:___:___:___:___ distinct
non-standard speech___:___:___:___:___:___ standard speech
hard-working___:___:___:___:___:___:___ lazy
conservative___:___:___:___:___:___:___ unconservative
similar to myself___:___:___:___:___:___ dissimilar to myself
undesirable as colleague___:___:___:___:___:___ desirable as colleague
THE SPEAKER SOUNDS:

likeable__:_:_:_:_:_:_:_:_ unlikely
bad character__:_:_:_:_:_:_:_:_ good character
conscientious__:_:_:_:_:_:_:_: unconscientious
ambitious__:_:_:_:_:_:_:_: unambitious
unsociable__:_:_:_:_:_:_:_: sociable
nervous__:_:_:_:_:_:_:_: calm
not selfconfident__:_:_:_:_:_:_:_: selfconfident
humourous__:_:_:_:_:_:_:_: humourless
unintelligent__:_:_:_:_:_:_:_: intelligent
attractive__:_:_:_:_:_:_:_: unattractive
uneducated__:_:_:_:_:_:_:_: educated
trustworthy__:_:_:_:_:_:_:_: untrustworthy
good speaking ability__:_:_:_:_:_:_:_: poor speaking ability
indistinct__:_:_:_:_:_:_:_: distinct
non-standard speech__:_:_:_:_:_:_:_: standard speech
hard-working__:_:_:_:_:_:_:_: lazy
conservative__:_:_:_:_:_:_:_: unconservative
similar to myself__:_:_:_:_:_:_:_: dissimilar to myself
undesirable as colleague__:_:_:_:_:_:_:_: desirable as colleague
THE SPEAKER SOUNDS:

likeable__:__:_:_:_:_:_:_: unlikeable
bad character__:_:_:_:_:_:_:_:_: good character
conscientious__:_:_:_:_:_:_:_:_: unconscious
ambitious__:_:_:_:_:_:_:_:_: ambitious
unsociable__:_:_:_:_:_:_:_:_: sociable
nervous__:_:_:_:_:_:_:_:_: calm
not selfconfident__:_:_:_:_:_:_:_:_: selfconfident
humourous__:_:_:_:_:_:_:_:_: humourless
unintelligent__:_:_:_:_:_:_:_:_: intelligent
attractive__:_:_:_:_:_:_:_:_: unattractive
uneducated__:_:_:_:_:_:_:_:_: educated
trustworthy__:_:_:_:_:_:_:_:_: untrustworthy
good speaking ability__:_:_:_:_:_:_:_: poor speaking ability
indistinct__:_:_:_:_:_:_:_:_: distinct
non-standard speech__:_:_:_:_:_:_:_:_: standard speech
hard-working__:_:_:_:_:_:_:_:_: lazy
conservative__:_:_:_:_:_:_:_:_: unconservative
similar to myself__:_:_:_:_:_:_:_:_: dissimilar to myself
undesirable as colleague__:_:_:_:_:_:_:_:_: desirable as colleague
QUESTIONNAIRE

Please answer the first two questions with reference to your present or most recent teaching position.

1. grade level(s) most frequently taught
   K-3 ___  11-12 ___
   4-7 ___  adults ___
   8-10 ___

2. subject(s) taught ____________________________________________

3. years of teaching experience _________________________________

4. Are you a prospective teacher ________________________________

5. highest academic degree held __________________________________

6. percentage of ethnic minority students taught 100% ___
   80-100% ___
   60-80% ___
   40-60% ___
   20-40% ___
   less than 20% ___

7. What is your age _______
   nationality ________________________________
   ethnic background __________________________
   sex _______

8. Do you speak another language besides English fluently
   yes _____ no _____

9. If - yes - how many ______________
APPENDIX B

THIS IS SPEAKER NO: ______

THE SPEAKER SOUNDS:

1. likeable___:____:____:____:____:____unlikeable*
2. *bad character___:____:____:____:____:____good character
3. conscientious___:____:____:____:____:____unconscientious*
4. ambitious___:____:____:____:____:____unambitious*
5. *unsociable___:____:____:____:____:____sociable
6. *nervous___:____:____:____:____:____calm
7. *not selfconfident___:____:____:____:____:____selfconfident
8. humourous___:____:____:____:____:____humourless*
9. * unintelligent___:____:____:____:____:____intelligent
10. attractive___:____:____:____:____:____unattractive*
11. * uneducated___:____:____:____:____:____educated
12. trustworthy___:____:____:____:____:____untrustworthy*
13. good speaking ability___:____:____:____:____:____poor speaking ability*
14. *indistinct___:____:____:____:____:____distinct
15. *non-standard speech___:____:____:____:____:____standard speech
16. hard-working___:____:____:____:____:____lazy*
17. conservative___:____:____:____:____:____unconservative*
18. similar to myself___:____:____:____:____:____dissimilar to myself*
19. *undesirable as colleague___:____:____:____:____:____desirable as colleague

*Asterisks define the pole of the scale assigned a value of '1' in the data tabulation. They do not appear on the actual instrument.
THE SPEAKER SOUNDS:

likeable:____:____:____:____:____:____:____:____ unlikeable
bad character:____:____:____:____:____:____:____:____ good character
conscientious:____:____:____:____:____:____:____:____ unconsientious
ambitious:____:____:____:____:____:____:____:____ unambitious
unsociable:____:____:____:____:____:____:____:____ sociable
nervous:____:____:____:____:____:____:____:____ calm
not selfconfident:____:____:____:____:____:____:____:____ selfconfident
humourous:____:____:____:____:____:____:____:____ humourless
unintelligent:____:____:____:____:____:____:____:____ intelligent
attractive:____:____:____:____:____:____:____:____ unattractive
uneducated:____:____:____:____:____:____:____:____ educated
trustworthy:____:____:____:____:____:____:____:____ untrustworthy
good speaking ability:____:____:____:____:____:____:____:____ poor speaking ability
indisctinct:____:____:____:____:____:____:____:____ distinct
non-standard speech:____:____:____:____:____:____:____:____ standard speech
hard-working:____:____:____:____:____:____:____:____ lazy
conservative:____:____:____:____:____:____:____:____ unconservative
similar to myself:____:____:____:____:____:____:____:____ dissimilar to myself
undesirable as colleague:____:____:____:____:____:____:____:____ desirable as colleague

perceived ethnicity of speaker is: ____________________________
APPENDIX C

TEST PASSAGES

SLIGHT PUNJABI

Arabian horses, which are noted for their beauty, stamina and grace, have been used for hundreds of years to develop new breeds. A man named Homer Davenport, who first saw these horses at World's Fair in eighteen ninety-three, later succeeded in bringing twenty-seven of them into the United States. Today about one hundred and eighty Arabian horses go back directly to these imports.

Characteristic Features:
1. syllable-timed vs. stress-timed
2. slight retroflexion on consonants
3. \[ \ddot{a} \rightarrow [d], \quad \theta \rightarrow [t] \]

HEAVY PUNJABI

Arabian horses, which are noted for their beauty, stamina and grace, have been used for hundreds of years to develop new breeds. A man named Homer Davenport, who first saw these horses at World's Fair in eighteen ninety-three, later succeeded in bringing twenty-seven of them into the United States. Today about one hundred and eighty Arabian horses go back directly to these imports.

Characteristic Features:
1. syllable-timed vs. stress-timed
2. all consonants are retroflex - \[ t \rightarrow [t], \quad d \rightarrow [q], \quad s \rightarrow [q] \]
3. \[ \ddot{a} \rightarrow [d], \quad \theta \rightarrow [t] \]
SLIGHT QUEBECOIS

Arabian horses, which are noted for their beauty, stamina and grace, have been used for hundreds of years to develop new breeds. A man named Homer Davenport, who first saw these horses at a World's Fair in eighteen ninety-three, later succeeded in bringing twenty-seven of them into the United States. Today about one hundred and eighty Arabian horses go back directly to these imports.

Characteristic Features:
1. slightly syllable-timed vs. stress-timed
2. absence of [h] in one word - initial position
3. \[\delta\] \rightarrow [d]
   \[\Theta\] \rightarrow [t] or [th]

HEAVY QUEBECOIS

Arabian horses, which are noted for their beauty, stamina and grace, have been used for hundreds of years to develop new breeds. A man named Homer Davenport, who first saw these horses at a World's Fair in eighteen ninety-three, later succeeded in bringing twenty-seven of them into the United States. Today about one hundred and eighty Arabian horses go back directly to these imports.

Characteristic Features:
1. syllable-timed vs. stress-timed
2. total absence of [h] in word - initial position
3. velar[\delta] + friction
4. \[\delta\] \rightarrow [d]
   \[\Theta\] \rightarrow [t]
Arabian horses, which are noted for their beauty, stamina and grace, have been used for hundreds of years to develop new breeds. A man named Homer Davenport, who first saw these horses at World's Fair in eighteen ninety-three, later succeeded in bringing twenty-seven of them into the United States. Today about one hundred and eighty Arabian horses go back directly to these imports.

**Characteristic Features:**

1. syllable-timed vs. stress-timed
2. slight retroflexion of fricatives and voiceless consonants
   
   \[\text{HEAVY CHINESE (CANTONESE)}\]

Arabian horses, which are noted for their beauty, stamina and grace, have been used for hundreds of years to develop new breeds. A man named Homer Davenport, who first saw these horses at World's Fair in eighteen ninety-three, later succeeded in bringing twenty-seven of them into the United States. Today about one hundred and eighty Arabian horses go back directly to these imports.

**Characteristic Features:**

1. syllable-timed vs. stress-timed
2. \(\text{[s]} \rightarrow \text{[z]}\) (retroflexion)
3. \(\text{[d]} \rightarrow \text{[t]}\)
4. \(\text{[b]} \rightarrow \text{[p]}\)
APPENDIX D

Presentation 'a'

Practice Test
1. Standard English
2. Heavy Punjabi
3. Slight Chinese
4. Heavy Québécois
5. Slight Punjabi
6. Standard English
7. Slight Québécois
8. Heavy Chinese

Presentation 'b'

Practice Test
1. Standard English
2. Slight Québécois
3. Heavy Punjabi
4. Heavy Québécois
5. Slight Chinese
6. Standard English
7. Slight Punjabi
8. Heavy Chinese
APPENDIX E

Coding Legend and Sample Profile

<table>
<thead>
<tr>
<th>Characteristics (A)</th>
<th>sex</th>
<th>female</th>
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<tr>
<td></td>
<td>male</td>
<td></td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>(B) age</td>
<td></td>
<td>20-29</td>
<td>1</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td></td>
<td>30-39</td>
<td>2</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40-</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>(C) % of ethnic minority students taught</td>
<td>100%</td>
<td>1</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>80-100%</td>
<td>2</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>60-80%</td>
<td>3</td>
<td>13</td>
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</tr>
<tr>
<td></td>
<td>40-60%</td>
<td>4</td>
<td>18</td>
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</tr>
<tr>
<td></td>
<td>20-40%</td>
<td>5</td>
<td>23</td>
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<tr>
<td></td>
<td>less than 20%</td>
<td>6</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>(D) years of experience</td>
<td>0</td>
<td>1</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1-5</td>
<td>2</td>
<td>33</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6-10</td>
<td>3</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>4</td>
<td>15</td>
<td></td>
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</table>

(E) ethnicity

<p>| | | |</p>
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<th></th>
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</thead>
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<tr>
<td>Asian</td>
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<td>Indian</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Southern European</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

(English, Scottish, Polish, etc.)
(Chinese, Japanese, etc.)
(from India)
(Spanish, Greek, Portuguese, etc.)
APPENDIX F

Plotted Means for All Speakers on All Four Dependent Variables
Figure 3
Plotted means for all speakers on Speech
Figure 4

Plotted means for all speakers on Personal
Figure 5

Plotted means for all speakers on Social Distance
Figure 6

Plotted means for all speakers on Work