AN INVESTIGATION OF ATTITUDES AND REACTIONS
OF PRESCHOOL AND SCHOOL-AGE CHILDREN
TOWARD A CHILD SPEAKER WITH
STUTTERING PATTERNS

THESIS

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By

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This study compared the attitudes and reactions of thirty preschool and thirty school-age children toward a child speaker with stuttering patterns. An introduction reviewed previous literature on defining stuttering, adults' and children's attitudes toward stuttering, and the stutterer's personality traits. The children of the study rated either a normal child speaker or a child speaker with stuttering patterns on a sociometric scale. In a giving task, the children were asked to choose one of the speakers. Statistical testing revealed that the school-age children had a more negative attitude toward and less social acceptance of the child speaker with stuttering patterns than the normal-speaking child. Implications for the speech-language pathologist in treating the child stutterer are discussed.
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CHAPTER I

INTRODUCTION

An area of continuing concern in speech-language pathology is the presumed negative attitudes of society towards individuals with speech disorders. The basis for such attention is the assumption that speech which is noticeably different from "normal" speech is less socially acceptable by the general public. This assumption is frequently cited by speech-language pathologists as a justification for therapy. These professionals typically believe that achievement of normal speech by a speech-disordered individual will minimize the negative reactions he/she may experience.

One type of speech disorder which has received many negative reactions from society is stuttering. The definition of stuttering and etiology differs among authorities. However, in a recent review of research (Andrews et al, 1983) and commentary on the review (Perkins, 1983), several points concerning the definition of stuttering were addressed. To summarize these points, a definition of stuttering must reveal: 1) the involuntary nature of stuttering (World Health Organization, 1977; and Perkins, 1983); and 2) the dimensional aspect of stuttering
The definition of stuttering should also include prominent visible and audible characteristics other than prolongations or repetitions of speech (Perkins, 1983; Bloodstein, 1981). These viewpoints along with the definitions of stuttering from other notable authorities (Van Riper, 1982; Adams and Runyan, 1981; Riley, 1981; Myers and Wall, 1981; Riley and Riley, 1979; Hedge, 1978) have been used to define stuttering for purposes of this investigation. Stuttering is defined as the involuntary interruption in the forward flow of speech by sound or syllable repetitions, vowel prolongations, air and voice stream arrest at the laryngeal level, or impedance of air flow by abnormal articulatory posturing for consonants. These interruptions may also be accompanied by aberrant rate of speech, voice characteristics, articulation patterns, and/or unusual facial expressions and postural adjustments. These characteristics may vary in degree of severity and appear in various combinations, such as a sentence said with the initial sounds of three words repeated twice and one word said with a three-second prolongation of the first vowel. The occurrence of stuttering moments should be agreed upon by more than one reliable observer.

Due to the complex nature of stuttering, this study will only investigate public reactions to the audible disfluent moments of stuttering. Furthermore, the study
will only examine the public's reactions to what they interpret as the audible components of stuttering. Two studies (Williams and Kent, 1958; and Boehmler, 1958) investigated what types of disfluent moments the public defines as stuttering. As part of the procedure, these studies analyzed what types of disfluencies in taped speech samples were judged more often to be stuttering than other types of disfluent moments. These findings suggest that the public's perception of abnormal disfluencies is in some degree consistent with what has been defined as the core behaviors of stuttering (Van Riper, 1982). Therefore, the public reactions to the stuttering pattern of prolongation and repetitions will be studied.

Currently, there are only speculation and differing opinions as to what factors may influence the severity and occurrence of stuttering patterns. Riley (1981), and Riley and Riley (1979) contended that the occurrence and severity of stuttering is influenced by the individual's reactions to his disfluencies when the individual "attempts to avoid sounds, words, situations, or audiences associated with those disfluencies." Based upon his own clinical experience, Van Riper (1982) stated that the majority of stutterers begin to develop these avoidance reactions as fear, frustration, and embarrassment are experienced. It may be that these emotions are reinforced by negative audience reactions, particularly since the stutterer
will often go to great lengths to avoid an audience (Van Riper, 1982).

Lemert (1951), a sociologist, described the social handicap of a stutterer as follows: "The stutterer finds himself at a distinct loss in a culture where such a large proportion of adjustments are predominantly verbal and where competitive success in many areas depends upon the ability of the person to manipulate others through verbal controls." The stutterer is characterized in this statement as lacking the ability to manipulate his listeners. It is presumed that listeners lose interest in, ignore, or act adversely to what a stutterer has to say because of the way he says it. Current research has not adequately investigated what type of negative reactions a listener may display, although many have inquired about the attitudes of various groups of listeners by using a sociometric rating scale (Woods and Williams, 1976; Woods, 1978; Fowlie and Cooper, 1978; Ragsdale and Ashby, 1976; St. Louis and Lass, 1981; Turnbaugh, Guitar, and Hoffman, 1979; Silverman, 1982). In several of these studies, significant groups of individuals, such as peers, teachers, and parents, rated stutterers on a bipolar adjective rating scale as having more negative qualities than normal speakers. However, whether or not those individuals would react differently to stutterers in actual situations has not been thoroughly researched.
The majority of the research which investigated listener reactions to a stutterer has been conducted with adult participants. Since several authors (Johnson, 1959; Shames and Sherrick, 1963; Sheehan, 1975) indicated that the audience is a key factor in the onset and development of stuttering during childhood, it would seem beneficial to analyze the types of audience reactions a child stutterer may receive. Van Riper (1982) stated that most of his clients felt socially punished by their audiences during childhood. He described these audience reactions and their consequence as follows:

Most of our cases report having had listeners mock or humiliate them. Most have met at least a few vivid reactions of impatience and irritation. They remember the occasional cruel comment of a stranger, teacher, parent, or playmate. They have watched their friends be amused by some stuttering character on television and many come to think these reactions were universal, although perhaps kept hidden out of politeness. They have winced when, as children, they read about P-p-porky the pig in comic strips. There are many jokes about stutterers, some of them very funny too -- except to the stutterer. In short, most stutterers have been badly hurt by society's reaction to their disability. Most of them sense their deviance keenly.

Even though stutterers themselves may be acutely aware of such social penalties, little has been done to study if and how these occur during childhood. This is particularly true in the area of peer reactions. It may be that the child stutterer is socially penalized more by being ignored by peers than receiving direct abuse. Children may demonstrate their judgement that an individual is an
ineffective communicator by simply preferring to associate with normal speakers. It is also possible that the existence of negative reactions towards a child stutterer may vary according to the age of the child listener. These factors have not been investigated in previous literature. The purpose of this study is to investigate the reaction of preschool and school-age children toward a child speaker with stuttering patterns.
CHAPTER BIBLIOGRAPHY


CHAPTER II

REVIEW OF THE LITERATURE

The following sections will explore previous findings investigating the reactions of adults and children toward speakers with stuttering patterns. The chapter will terminate with a summary of the literature review.

Attitudes of Adults Toward Stuttering

As it has been previously stated, most of the past research investigating listener attitudes toward stuttering speakers has attempted to measure the opinions of adult listeners. In general, these investigations conclude that adults have negative attitudes toward stuttering.

Several of these studies compared the social acceptability of stuttering with other handicaps (Shears and Jensema, 1968; Ford, 1977). In one of these studies, Shears and Jensema (1968) examined differences in the acceptability of certain handicaps or anomalies and the variables that influence the acceptability of these handicaps among adults. These authors hypothesized that social acceptance of people with various anomalies depends on certain perceptions of differences made by the public. To understand the attitudes and concepts which attribute to these perceptions of anomalous persons, ninety-four college
undergraduates, graduate students, and psychiatric technicians were asked to rank ten anomalies as to desirability in a friend and as to a desirable condition for themselves. The anomalous persons were: a blind person, a deaf mute, a mentally retarded person, a cerebral palsied person, a physically handicapped person (wheelchair), a homosexual, a mentally ill person, an amputee (arm or leg), a severe stutterer, and a person with a harelip.

The subjects were also asked to complete a social distance rating for each anomaly. In this task, subjects checked whether they would accept the anomalous person in certain progressively more intimate relationships from a spectrum of "would live in the same country" to "would marry." To examine the results of the social distance ratings, percentages of subjects who accepted the anomalous person in specific situations were tabulated. It was found that as the level of intimacy increased, the percentage of subjects accepting the anomalous person gradually decreased. At the closest intimacy level, willingness to marry, a drastic reduction in percentages was noted. There tended to be three distinct levels of acceptability: wheelchair bound persons, amputees, and blind persons were most acceptable. Deaf mutes, severe stutterers, and persons with harelips formed a second level of acceptability, and the mentally ill, mentally retarded,
and homosexuals were regarded as least desirable. Persons with cerebral palsy ranked between the second and third group of anomalous persons in acceptability. In interpretation of these groupings of social acceptability it appears that the most unacceptable set is representative of mental disabilities and social stigma. The results of this investigation also suggest that various members of society, in this case college students, may view stuttering as a moderately unacceptable handicap when compared with other anomalies.

Additional studies as examined the attitudes of specific groups of people toward stuttering. These groups include teachers, employers, vocational rehabilitation counselors, store clerks, speech-language pathology and audiology students, and professional speech-language pathologists. Crowe and Walton (1981) investigated the attitudes of 100 elementary classroom teachers toward stuttering using the Teacher Attitudes Toward Stuttering (TATS) Inventory which was designed by the author (Crowe). Teacher attitudes measured by the TATS Inventory were then compared with teacher knowledge of stuttering, the age of the teacher, the number of years' teaching experience, the educational level and whether the teacher had personal experience with a stutterer. A substantial finding was the significant positive correlation between teacher attitudes toward stuttering and knowledge of stuttering. However, a
negative correlation existed between teacher attitudes, knowledge of stuttering and the presence of a stuttering child in the classroom. This study suggests that teachers tend to have enhanced negative attitudes toward stuttering when a stuttering child is a member of a teacher's class, despite how much information a teacher may have about the area of stuttering. This result is consistent with the research of Lloyd and Ainsworth (1954) which suggests that the classroom teachers direct little attention to building accepting attitudes in the classroom towards speech disordered children.

In another study investigating teachers' attitudes, Woods (1975) examined teachers' predictions of social position and speaking competence of stuttering male students. Teachers of twenty-three sixth grade and twenty-three third grade classes with twelve mild and twelve moderate or severe stuttersers at each grade level participated. The teachers made two separate lists of predictions. The first list predicted how the children in their class would rank their male classmates on social position, while the second list predicted rankings of speaking competence. Weeks later the children rated all the boys of their class using the Ohio Social Acceptance Scale, modified to four ranked categories ranging from "my very best friend" to "don't like them." Students stated their reason for the category choice of "don't like them."
A mean social position score was obtained by adding up each child's rankings and dividing it by the number of children. In rating speaking competence a similar scale was devised, using four ranked categories from "best talker" to "poor talker." Reasons for choice of "poor talker" were also given. A mean speaking-competence score was also determined for each boy. The boys were rank-ordered in social position and speaking competence according to their mean score. The rankings of the boys were then compared to the predictions of the classroom teacher. For each pair of teacher versus classroom rank-ordered lists, a Kendall's tau coefficient was computed. Teacher predictions of social position were at a better-than-chance level in seventeen out of twenty-three classrooms at each grade level. Accuracy for predicting speaking competence increased to a better-than-chance level in eighteen out of twenty-three third grades and in twenty-one out of twenty-three sixth grade classes. Therefore, teachers' estimations of the children's judgments on the social position and speaking position did not differ significantly from the children's actual judgment regardless of grade level or stuttering severity. Reasons for unfavorable social evaluations of stutterers were similar between teacher predictions and children's perceptions. As a whole, children rejected stuttering boys on social position for the same reasons they rejected nonstutterers (reasons
such as mean, hits, cheats). However, the teachers, more often than the children, frequently cited stuttering as their reasons for unfavorable speaking rating.

More recently, Hurst and Cooper (1983) examined employers attitudes toward stuttering. The Employer Attitudes Towards Stuttering Inventory (EATS, a seven statement questionnaire designed by authors) was mailed to 2,719 personnel and industrial relations directors to survey employer attitudes toward stuttering. In reviewing background information of the 644 employers who returned the questionnaire: 1) 50 percent had more than five years experience; 2) 75 percent were male; 3) 96 percent were over the age of twenty-five years; and 4) 50 percent had obtained college degrees. Approximately 75 percent of the employers worked with more than fifty employees and 25 percent had interviewed more than four stutterers. Only 14.5 percent of the employers had employed more than four stutterers. A frequency analysis was utilized to categorize subjects into the above-listed background information and to find the percentage of subjects whose choices indicated strength-of-agreement for each seven questionnaire statements. It was found that the majority of the employers agreed that stuttering does not interfere with job performance, but does decrease employability and promotion opportunities. Eighty-five percent of the 642 employers agreed with the statement that stuttering
decreases employability. The statement concerning a concept of affirmative action programs for stutterers was rejected by most of the employers. Three out of five employers agreed they felt uncomfortable when speaking with a stutterer. A conclusion which may be deduced from the results is that even though employers may feel that a stutterer is capable of doing a job, he may not hire or promote the stutterer due to his negative reaction to communicating with a stutterer.

The intent of a study by McDonald and Frick (1954) was to examine store clerks' reactions to conversing with a stutterer. A questionnaire of twenty-five questions was developed and pretested. The questions were divided into eight "feeling" categories: purpose, embarrassment, impatience, pity, amusement, curiosity, sympathy, and repulsion. Immediately following a "set-up" conversation with a severe male stutterer, an interviewer would approach the clerk by casually saying, "What was wrong with that fellow?" After noting his response the interviewer would: 1) explain his intent; 2) ask if the clerk had ever spoken to anyone who spoke like that before; and 3) ask him to fill out the questionnaire. In answering the question, "What was wrong with that fellow?", 58 percent of the store clerks identified the difficulty as a "speech defect." Fifteen clerks did not know what was wrong, three made emotional remarks, and three felt the speaker had a nervous
disorder. Forty out of the fifty clerks had spoken with someone who had stuttered before that time. Common reactions to the stutterer as recorded on the questionnaire were feelings of surprise, embarrassment, pity, curiosity, and sympathy. The reaction of pity was the most frequent feeling recorded while feelings of impatience, amusement, and repulsion were rarely recorded. The researchers concluded that these store clerks feel a stutterer does suffer from something unpleasant, which makes the listener often feel self-conscious distress when listening to a stutterer.

In another recent study, Hurst and Cooper (1983) investigated the attitudes of vocational rehabilitation counselors toward stuttering. The attitudes of 152 Alabama vocational rehabilitation counselors were measured, using the Alabama Rehabilitation of Counselors' Attitudes Toward Stuttering (ARCATS) Inventory. The inventory consisted of twenty-five true/false statements designed by the authors to evaluate knowledge of stuttering and fifteen statements designed to evaluate attitudes toward stuttering. No attempt was made to examine reliability or validity of inventory items. The identifying data and answers of the 152 counselors were analyzed, using a frequency analysis to determine: 1) percentage of counselors in the categories of sex, education, experience, position, training, and caseload; 2) percentage of answers to each true/false statement; and 3) percentage of counselors in agreement
with the fifteen attitudinal statements. A correlation analysis was then performed to determine if statistically significant relationships existed between identifying information of the counselors and the responses to the fifteen attitudinal statements. Results of the true/false statements indicated that most counselors had acquired fairly accurate knowledge of incidence, prevalence, and popular beliefs about stuttering. However, a lack of knowledge was noted in areas of: stuttering in children, frequency of stuttering, recovery without therapy, recurrence of stuttering within families, and data conflicting with the belief of a stuttering personality type. In reviewing selected attitudinal statements: 1) 62 percent of the counselors agreed that the public tends to react more negatively toward stuttering than to other speech disorders; 2) 50 percent agreed that most stutterers had psychological problems; 3) 50 percent agreed that of the various speech disorders, stuttering appears to be the most handicapping. However, as a group, most counselors perceived stuttering to be amendable to therapy and vocational rehabilitation. A significant outcome of the correlation between the attitudinal statements and identifying information of the counselor provides data suggesting that those counselors who had speech-disordered clients on their caseloads tended to agree more with the statement that stuttering was more debilitating than other
speech disorders. Summarizing the information on the attitude statements, it can be concluded that at least 50 percent of these counselors had negative views on the personalities of stutterers. Furthermore, it is possible that counselors may perceive stuttering to be more debilitating than other speech disorders because of negative attitudes about the personality of a stutterer.

Previous studies suggested that teachers, employers, vocational rehabilitation counselors, and store clerks have negative attitudes toward stuttering. One reason for this may be that, as laypersons, these groups of people lack an indepth knowledge and understanding of the area of stuttering with which to give them a basis for more positive attitudes. If this is the case, then it follows that advanced students of communication disorders and professional speech-language pathologists may have more positive attitudes toward stuttering. However, some studies indicate that essentially negative views toward stuttering also exist among students and personnel of communication disorders.

St. Louis and Lass (1981) investigated the knowledge and attitudes toward stuttering of students in speech-language pathology and audiology, using Cooper's (1975) Clinician Attitudes Toward Stuttering (CATS) Inventories. The authors also examined attitude changes due to academic and clinical training. The CATS (a fifty-statement
inventory) was sent to instructors in thirty-three universities to give to their students. In addition, the respondents completed a short questionnaire pertaining to their classification, coursework, and experience in observing or doing therapy with stutterers. After the inventories completed by 1,902 students were reviewed, the significant findings were as follows.

1. The majority perceived stutterers as having a psychosocial problem.
2. Seventy-five percent of them believed that parents of stutterers resent their child's abnormal speech.
3. Eighty-six percent agreed that parents' misperceptions frequently impede their children's progress in therapy.
4. Seventy-two percent felt the public reacts more negatively to stuttering than to other speech defects.
5. Fifty-seven percent felt that child peers react more negatively to stuttering than to other speech defects.
6. Most believed client and parental counseling were essential.
7. Most believed stuttering was difficult to modify and that speech clinicians are not capable or comfortable in treating stuttering.
8. Most of the assumptions of Johnson's diagnosogenic theory were held by the majority of the students.

The only attitudes that were significantly affected by training were on effectiveness of the treatment for stuttering and clinician competence. The higher the level of training the more pessimistic the students' views on clinician competence.

In summation, most of these students in speech-language pathology and audiology presented an impression that stutterers have negative personality traits which may have developed due to the negative reactions of significant others towards their stuttering. They also presented the impression of hopelessness in modifying the "chain reaction of stuttering causing negative reactions causing negative personality traits." Furthermore, knowledge about stuttering and clinical training seemed to enhance these negative attitudes.

In another recent study, Ragsdale and Ashby (1982) explored the connotations of 206 public school speech-language pathologists toward stuttering. The speech-language pathologists were divided into groups according to age, experience, courses in stuttering, degree, and certification. The test instruments were six bipolar adjective scales under five factor headings suggested by Osgood et al (1975) and Nunnally (1967). These headings included evaluation (ex: good-bad);
potency (ex: strong-weak); activity (ex: tense-relaxed); understandability (ex: clear-confusing); and anxiety (ex: anxious-calm). Using these bipolar scales, the clinicians were asked to rate their concepts of the following:

1. Stuttering
2. Stuttering therapy
3. Boys who stutter
4. Adult males who stutter
5. Girls who stutter
6. Females who stutter
7. Parents of stutterers.

After a score for each bipolar scale was obtained, the six scale scores were averaged together for each of the five factor headings. Therefore, each of the seven concepts received a mean attitudinal score. These scores were then analyzed according to the background information of the speech-language pathologist.

Overall, varying degrees of negative attitudes were expressed in rating the seven concepts. Although, somewhat conflicting comparisons were made, the data also suggest that the degree of negative attitudes expressed toward the concepts is dependent on the level of training and type of experience. For instance, on the concept of "stuttering," those clinicians with a Certificate of Clinical Competence in speech-language pathology were more positive and less
anxious toward "stuttering" than those not certified. It also appeared that those professionals with master's degrees felt more negative and more anxious about "stuttering" than professionals with baccalaureate degrees. The speech-language pathologists with three or more years of experience tended to show more negativity and anxiety toward "stuttering" than those pathologists just beginning in the profession. The background factor of age or the amount of coursework had little effect in producing less negative connotations of "stuttering." All other concepts were also viewed with varying degrees of negative connotations by the speech-language pathologists. It was interesting to note that findings suggest that the concept of "stuttering therapy" was the most negatively viewed concept, the "stutterer" himself was viewed more negatively than the "parent of stutterers" and the "stutterer" was viewed with similar negative feelings regardless of his/her age or sex.

To further explore differences in negative attitudes of "significant others" toward stutterers, Silverman (1982) studied the impressions of 160 certified speech-language clinicians and 176 university students toward eight hypothetical constructs which included: "a girl," "a girl who stutters," "a boy," "a boy who stutters," "a woman," "a woman who stutterers," "a man," and "a man who stutterers." The majority of the speech-language clinicians were
females, while the university population was approximately one-half male and one-half female. A 47-scale semantic differential form was completed on each hypothetical construct by groups of twenty to twenty-two subjects to determine: 1) if clinicians' impressions of female stutterers differ from their impressions of male stutterers; 2) if clinicians' impressions of women who stutter differ from their impressions of girls who stutter; and 3) if clinicians' impressions of male and female stutterers differ from impressions of university undergraduates.

An analysis of the results showed that the clinicians felt that stuttering had a stronger negative influence on females than males, stating their strongest negative stereotype as being "a girl who stutters." University students, on the other hand, seemed to rate male stutterers more negatively than females, stating their strongest stereotype as being "a man who stutters." Age of a stutterer did not have a very strong influence on the university students' impressions of stutterers; whereas age was factor in the impressions of clinicians. Clinicians considered girls and boys who stutter to differ more from their peers than men and women. Along with the differences in stereotyping a stutterer based upon age and sex, the data generally suggested that professionals in communication disorders may have attitudes toward stuttering which are more negative than those held by laypersons. Therefore,
it appears that as the level of knowledge and experience increases among professionals of communication disorders, the negative views toward stuttering also increases.

All of the studies reviewed thus far seem to agree that the general attitudes among adults toward stuttering are negative. One common methodology among these studies was the use of a questionnaire to measure these attitudes. However, only one study exists that attempted to examine the actual behavior of an adult listener during conversation with a stuttering speaker. Rosenberg and Curtiss (1954) investigated the effects of stuttering on the frequency and duration of 1) loss of eye contact; 2) hand movement; 3) and other body movements of the listeners. Twenty college students were told to wait in a room prior to the "experiment for which they signed up." During this waiting period the subjects conversed for five minutes with a person whose speech was normal and then, were exposed to five minutes of conversation with a stutterer. The speakers (normal and disfluent) were presumably other subjects also waiting their turn. During conversations, observations were made without their knowledge, and the target behaviors mentioned were recorded as to frequency and duration. The conversations were also recorded.

Five significant differences between conversations with the normally speaking person and the stutterer
occurred. The differences in listener responses that were found to occur during stuttering were

a) Increased duration of loss-of-eye contact
b) Decreased frequency of eye contact away from the speaker
c) Decreased frequency of hand movement
d) Decreased total duration of other body movements
e) Decreased frequency of initiation of other body movement.

The investigators concluded that the depression of listener behaviors seems to imply that stuttering acts as a behavioral depressant, or a negative reinforcer such as a noxious stimulus from which there was no escape, except through duration of loss-of-eye contact. Other behaviors seemed to be "frozen." The results of this study suggest that listener behavior is significantly affected by stuttering.

Additional literature goes beyond measuring adult views and reactions toward stuttering to examining assumed personality traits which the public attributes to stuttering individuals. Current research suggests that stutterers are viewed by the general public as being basically overly anxious, insecure individuals who are afraid to talk to people. Woods and Williams (1976) examined differences in this "stereotype of the typical stutterer" among seven groups of people. The effects of familiarity with a stutterer on the "stereotyping" of a
stutterer were also evaluated within the groups. In this study, these seven groups (adult stutterers, parents of stuttering children, parents of children with other speech problems, parents of normal speaking children, classroom teachers, public school speech clinicians, and college students) rated four hypothetical speakers (a typical eight-year-old male, a typical eight-year-old male stutterer, a typical adult male, and a typical adult male stutterer). The concept of the speaker was written at the top of a rating scale of twenty-five bipolar descriptive adjective traits (such as nervous-calm). The scale was previously constructed by speech clinicians with words judged to be descriptive of stutterers and antonyms of those words.

Results revealed that unfavorable "stereotypical" views of a stutterer's personality do not differ with familiarity with a stutterer. Furthermore, negative traits attributed to adult male stutterers were also attributed to boys who stutter. Concerning young boys who stutter, the classroom teacher group strongly rated their personality unfavorably. This could possibly have bearing on young stutterers learning this undesirable stereotype from other people and may also be a factor in the poor academic progress of stuttering boys with normal intelligence.

In a related study (Fowlie and Copper, 1978), the mothers of thirty-four male stutterers, and the mothers of
thirty-four nonstutterers (matched in age, grade level, and race to the male stutterers) completed the Woods and Williams (1976) Adjective Checklist. Each mother rated her perception of her child's behavior on twenty-five bipolar adjectives as either positive or negative. For each group of mothers, a frequency rating analysis on each set of bipolar adjectives was done to determine group differences in rating personality traits. The analysis revealed that the adjectives of insecure, sensitive, anxious, withdrawn, fearful, and introverted were assigned more often to the male stutterers by their mothers than to male nonstutterers by their mothers. The examiners concluded that the mothers of male stutterers had a less favorable view of their child's personality than mothers of male nonstutterers.

Using a similar bipolar-adjective rating scale, Turnbaugh, Guitar, and Hoffman (1979) studied speech clinicians' attribution of personality traits to stutterers. These authors sought to answer the following questions:

1. Do speech clinicians stereotype the personality traits of stutterers and nonstutterers on a qualitative basis or a quantitative basis?

2. Are the assignments of stereotypic traits to stutterers affected by previous clinical experience with stutterers?

Eighty-one clinicians were assigned to a group which rated only one of the hypothetical concepts of mild, moderate, or
severe stutterers on a bipolar-antonym-adjective scale. In addition, all clinicians also rated the typically normal fluent person and gave information concerning their years of experience and how many stutterers they had treated. The following results were reported.

1. Clinicians assigned negative personality traits to all levels of stuttering severity vs. normal fluency. The normally fluent individual was significantly different from all concepts of stuttering severity, indicating a qualitative evaluation of stutterer versus nonstutterer.

2. In further analysis of the ratings, only the mild stutterer was significantly different in trait attributions from the severe stutterer. This indicated some quantitative evaluation of a stutterer's personality is related to severity.

The findings on personality traits attributed to the stutterer by the public raise some additional questions that are beyond the scope of this present study, but are, nevertheless, worthy of mention. One question of related interest is whether or not stutterers do tend to have the personality traits attributed to them by the public. A second question concerns whether a stutterer's behavior influences a listener's reaction or whether the listener's reactions influence the behavior of the stutterer. Finally, the last concern is the question of
what type of attitudes stuttering adults have towards stuttering. Since these questions are relevant to understanding casual factors of why fluent adults tend to react negatively toward adult stutterers, a synopsis of research pertinent to the above questions will be cited.

Many authors (Goodstein, 1958; Sheehan, 1970; Bloch and Goodstein, 1971; Van Riper, 1982) have reviewed literature which attempted to evaluate the personality and adjustments of the stutterer. In reviewing these studies, each of these authors found no substantial evidence that stuttering adults were severely maladjusted or manifested a personality type different from other adults. Although a general consensus of the personality assessments found adult stutterers to be psychologically normal individuals, several tests tended to show that adult stutterers tended to be more anxious, less confident, and less ambitious than adult nonstutterers. Typically, studies on anxiety reflected during stuttering have been conducted with physiological measures of galvanic skin response and pulse rate. Wingate (1976) concluded that the research data using this measurement was inconclusive and conflicting in determining whether stutterers physiologically exhibit fear and anxiety during stuttering.

Amount of verbal discourse by stutterers during a speaking situation is another reaction which has been investigated. It can be postulated that since stutterers
feel less confident and more anxious about speaking, they may tend to talk less. Therefore, listeners may receive the impression that stutterers are shy or withdrawn. In Wingate's (1976) review of the literature, no differences were found in the amount of verbalization of adult stutterers and adult nonstutterers on similar speaking task. Although the evidence of three studies (Brown and Hull, 1942; Trotter and Bergmann, 1952; and Erickson, 1969) suggest that adult stutterers tend to be less confident and less enthusiastic about speaking in certain speaking situations, limited research has been generated to determine whether lack of self-confidence, fear of stuttering, or fear of listener reaction is the primary factor in making these speaking situations difficult.

Freidman (1955) administered the Test of Attitude Toward Stuttering (Johnson, Darley, and Spriestersbach, 1952) to 326 stutterers and 100 speech pathology students and found the same degree of unacceptance towards stuttering in both groups. These results could indicate that stutterers may possibly form their opinions of what is acceptable about stuttering by evaluating the reactions of their audience. This could also have bearing on influencing the stutterer's behavior. Woods (1978) indicated that listeners' expectations that stutterers are nonassertive, tense, insecure, and afraid to talk could actually shape the stutterer's behavior. This area of
research seems to be inconclusive, particularly in examining which was present first - listener expectations and attitudes or the anxiousness of the stutterer.

To summarize the literature on adult attitudes and reactions toward stuttering, studies concur that these reactions and attitudes are negative. In one investigation, it was found that the listener's behaviors while talking with a stutterer significantly differed from a listener's behavior while talking with a non-stutterer. Although the study did not imply that the differing behaviors while speaking with a stutterer were negative, it may be that the stutterer interprets these behaviors negatively. Additionally, adults tend to assign stereotyped personality traits (i.e. insecure, withdrawn, afraid to talk) to stutterers. An important concern is whether these consistent findings regarding negative attitudes of adults toward stuttering are also true for children's attitudes toward stuttering.

Attitudes of Children Toward Stuttering

Relative to the literature investigating the attitudes of adults towards stuttering, few studies exist that directly explore the views children have about speakers who stutter. Much of the previous literature in this area examines children's reactions to speech disorders in general. As examples, Trembly and Arnold (1979) studied
the interactions of hearing and deaf preschool children. The results of this study indicate that hearing children interact more frequently with other hearing children than with the deaf children in behaviors relating to approaches, vocalizations, social playing, and physical contact. These results suggest that among preschool children, negative reactions toward handicapped children may be more a function of ignoring behavior than of an attitude of less social acceptance.

Several other studies have explored the attitudes in the school-age population toward school-aged children with speech disorders. In one such study, Freeman and Sonnega (1956) examined the social acceptability of children enrolled in speech correction classes. To evaluate this relationship the following hypotheses were tested.

1. If children in speech correction classes are viewed differentially by their peers, they would be chosen less often for speech-oriented projects when the criterion for selection is speech ability.

2. If children in speech correction classes are judged to be socially unacceptable, they would be chosen less frequently to participate in a speech-oriented task when the criterion for selection is friendship.
3. If children in speech therapy are perceived by their peers as being socially unacceptable, ratings of personality traits by their peers would reveal this perception.

In measuring these three dimensions, 133 third and fourth graders from five classrooms were pooled as the subjects. Twenty-six of the children attended speech therapy classes. Some classes were given instructions to select five children for the task of telling about after-school activities on the basis of speaking ability. Other classes were told to select five children from their class for the same task on the basis of friendliness. These children were also asked to name three children in their classroom who exhibited the following personality traits: leadership, enthusiasm, daring, tidiness, activeness in recitation, good-looks, frequent laughter, friendliness, and happiness.

For each dimension -- speech ability, friendship, and socially acceptable traits -- children's choices were scored with an inverted value system in which first choice received more points than second choice, and so on. These values were then totaled for each child listed in each dimension. After the totals were calculated, the children were ranked according to their scores for that dimension. Results of the "Speech Scores" revealed that children with speech defects are chosen less often than normal speakers by their peers for a speech task when selection is based on
speaking ability. However, when the criterion of selection was friendliness, scores revealed that children with speech defects were chosen just as often as normal-speaking children. In addition, an analysis of the "Trait Scores" did not indicate that these children were perceived as having less socially acceptable traits than normal-speaking children.

The purpose of an investigation by Perrin (1954) was to gather data concerning the social position of the speech-defective child in the school classroom. A total of 445 elementary age children, grades one through six, participated in the study. Thirty-seven children had speech disorders, with the majority having disorders of articulation. A few children stuttered and two had voice disorders. The school children were asked to answer these questions:

1. What three children would you like to play with?
2. What three children would you like to work with?
3. What three children would you like to have sit next to you?

Children in the second through six grades were asked to write their answers while the experimenter conducted private interviews with the children in the first grade. All were told their answers would be kept secret. In tabulating the results, a child received one point every time his name was elected in response to any of the
questions. The data revealed that the amount of speech-defective children receiving only one vote or less was one third more than normal-speaking children. In the group of children who received only two to four votes, there were fifty percent more of the speech-defective children than normal-speaking children. None of the speech-defective children received twenty or more votes, whereas twenty-nine of the normal-speaking group received twenty or more votes.

These results suggest that children with speech disorders are less desired in social situations with peers than normal-speaking children. A later study by Marge (1966) on this same topic resulted in findings similar to the Perrin (1954) investigation. However, the Marge study found that speech-disordered children held a significantly lower social position than normal-speaking children in social activities, work activities, and desirability as dinner guest. In the areas of playground time and in general speaking activities, however, the speech-disordered child was chosen as frequently as normal-speaking children. The somewhat discrepant findings may be due to the fact that Marge included attitudes of peers, teachers, and parents toward speech-disordered children in her data analysis. The Perrin investigation only analyzed peer attitudes. Additionally, it is possible that some attitude change may have occurred within the twelve years that separate the publication of these articles.
Studies exploring the attitudes of children toward speech disorders have provided some evidence that these attitudes may be negative, but only within school-related speaking activities. One reason why there may not be a consensus among research articles is that different speech disorders were included in the experiments. It is possible that the proportion of various speech disorders in the samples differed from one study to the next. Although there is evidence that speech-disordered children are the recipients of some negative attitudes by peers, these studies do not indicate to what extent, if any, stuttering accounted for the results.

Only three studies exist that investigate children's reactions toward stuttering speech. In one of these studies, Giolas and Williams (1958) investigated the reactions of 120 children in kindergarten and second grade to adult disfluencies. The children listened to taped stories told by one fluent and two disfluent adult women speakers. One disfluent speaker used interjections, while the other disfluent speaker used repetitions. Afterwards, they were asked which lady they would prefer as a teacher and which stories they liked best. The children chose the fluently spoken stories as their first choice, stories with interjections as their second, and stories told with repetitions as their last choice. Comments showed that the children were aware of the disfluency, saying "She
talked funny" or "She sounded like Porky Pig." The majority of both second graders and kindergarteners preferred the fluent speaker as a teacher and made direct reference to the disfluencies of the other speakers. Second graders rated the desirability of the three speech patterns (fluent, interjections, and repetitions) with higher agreement than the kindergarteners and were more specific in their reasons for their preferences. Kindergarteners did choose the fluent pattern as their first preference, but had difficulty choosing between the two nonfluent patterns (interjections and repetitions) for the second and third choice. Generally they were aware of the disfluencies and did not approve of them, but were more vague in their reasoning.

In another study exploring the reactions of children to stuttering, Langer (1969) investigated whether systematic differences existed between reactions of preschoolers to fluent speech and to the various degrees of stuttered speech. A normal-speaking nine-year-old boy, trained to simulate stuttered speech according to standard definitions, was filmed in four speaking sequences. In each sequence, the boy spoke at a different level of fluency -- normal fluency, mild, moderate, and severe stuttering. Eight judges determined the validity of the speech patterns for each level of fluency. One hundred nursery school children observed the films. Afterwards,
each child was asked a series of twelve questions pertaining to the speaker and his speech. In analysis of data the preschoolers did not differ significantly in their reactions to the different fluency levels. However, they did react more negatively to speech-oriented questions about the segments of moderate and severe stuttering than to the speech segment of fluent speech. In comparing children's responses to fluent speech and severe stuttering, the data indicated the greatest number of negative reactions to the severe stuttering of the speaker. It was concluded that preschool children cannot distinguish between fluent speech and mild stuttering, but do tend to react negatively to moderate and severe stuttering. Preschoolers exhibit increasing negative reactions as severity of stuttering increases.

Finally, Culatta and Sloan (1977) attempted to find some indication of when children are aware of the behavior labeled "stuttering." The researchers also attempted to determine if children have a preference for fluent or disfluent speech and are able to identify specific characteristics of stuttering. To achieve these goals, two groups of thirty primary-level children were asked to listen to two recordings of a familiar story. Group I consisted of twenty females and ten males in first and second grades. Group II consisted of twelve females and eighteen males in third and fourth grades. One recording
was of fluent speech and the other was of stuttered speech. None of the children were identified as having fluency problems. Results for Group I indicated that the children could differentiate between stuttered and fluent speech, but could not label the disfluency "stuttering." About one-third of the children identified the behaviors of repeating or prolonging when asked what was different. Some of the children felt the disfluent speech portrayed fear or sadness, or that "she didn't know the words." In Group II, the third and fourth graders not only differentiated between fluent and stuttered speech, but eleven of the children labeled the disfluent speech as "stuttering." This group tended to only identify the speech behaviors and not comment on the feelings of the speaker.

Summary

Previous literature strongly suggests that the attitudes among adults toward stuttering is essentially negative. These studies seem to agree that these negative views are consistent among various adult groups, such as teachers, employers, vocational counselors, and even speech-language pathologists. In all these investigations, however, all these attitudes were measured by use of a questionnaire. One study attempted to determine if the behaviors of normal-speaking listeners differ while talking to a stutterer during a real encounter. This study found
differences in the listeners' behaviors when speaking with a stutterer than when speaking with a non-stutterer. However, this study did not evaluate these behavior differences in terms of negativeness.

There is some evidence that speech-disordered children may be less accepted among their peer groups, at least in school-related tasks. However, these studies do not indicate to what extent stuttering may have influenced those results. Only three investigations were found that examined children's reactions toward stuttering. Of these, one study measured school-aged children's views toward an adult speaker. Another examined school-aged children's perception of the concept of stuttering. Only one previous investigation attempted to gain insight on the views preschool children may have towards a child stutterer. The results of these three studies do provide some rudimentary evidence that preschool and school-aged children may have negative views toward moderate and severe stuttering.

A popular assumption among speech-language pathologists is that children "make fun of" other children who stutter. This assumption is also seen as one reason for enrollment into therapy for remediation of a child's stuttering patterns. However, there is a paucity of empirical evidence to support this assumption. More research designed to investigate the attitudes of children toward children who stutter is therefore warranted.
Additionally, none of the previous literature on children's attitudes toward stuttering or toward speech disorders in general examined how children might actually react to a stutterer. Asking a child questions about his/her feelings toward fluent and disfluent speakers may yield different results from the observations of a child's actual behavior toward a child stutterer. Furthermore, it is also possible that the behaviors of a child listener toward another child who stutters may differ as a function of the child listener's age or grade level. Currently, no study exists which examines the attitudes and behavior of preschool and school-age children toward a child speaker with stuttering patterns.

Statement of the Problem

The purpose of this study is to identify and compare the attitudes and reactions of preschool and school-age children towards a child speaker with stuttering patterns and a normal-speaking child on the basis of their speech. One main hypothesis is that normal-speaking children will have more favorable attitudes toward the normal-speaking child than toward the child speaker with stuttering patterns. A second general hypothesis is that normal-speaking children will tend to show more favoritism toward associating with the child speaker who sounds most like them. The third hypothesis is that school-aged children
will be more explicit in defining their attitudes and preferences than preschool children. To test these main hypotheses, the following specific hypotheses are made.

I. A normal-speaking child will be rated with a more positive attitude and with greater social acceptance by the children than a child speaker with stuttering patterns.

II. The normal-speaking child will be rated with a more positive attitude and with greater social acceptance by school-age children than by preschool children.

III. The child speaker with stuttering patterns will be rated with a more negative attitude and with less social acceptance by school-age children than by preschool children.

IV. The normal-speaking child will associate more often with a normal speaker when given a choice between a normal child speaker and a child speaker with stuttering patterns.

V. School-age children will prefer to associate with a normal-speaking child in a situation more often than preschool children, when given the choice between the two speakers.

VI. The attitudes measured towards both child speakers in the school-age and preschool population will be in agreement with their preference between the two speakers.

VII. School-age children will be more explicit in explaining why they chose a certain speaker than preschool children.

For the purposes of measurement of behavior in this study the following operational terms are defined, as found in Webster's Third New International Dictionary, (Gove et al., eds., 1961).
1. **Attitude** - a disposition that is primarily grounded in affect and emotion and is expressive of opinions rather than belief;

2. **Negative Attitude** - the absence of approval or affirmation in a disposition which is primarily grounded in affect and emotion and is expressive of an opinion rather than belief;

3. **Neutral Attitude** - indifference expressed in a disposition which is primarily grounded in affect and emotion and is expressive of an opinion rather than a belief;

4. **Positive Attitude** - approval or affirmation expressed in a disposition which is primarily grounded in affect and emotion and is expressive of an opinion rather than a belief;

5. **Favoritism** - the treating of one person with special partiality to the correlative neglect of others;

6. **Favorable** - expressing approval;

7. **Preference** - the decision to choose one above another (Operational definition; for the purposes of this study, the definition of preference will refer to the actual action of choosing one above another)

8. **Reaction** - individual's behavioral responses to his situation and experiences;

9. **Social Acceptance** - the positive attitude towards being associated with a certain person, place, thing, or act;

10. **Personal Traits** - particular attributes of a person.
CHAPTER BIBLIOGRAPHY


Erickson, R. L. Assessing communication attitudes among stutterers. Journal of Speech and Hearing Research, 1969, 12, 711-724.


Lloyd, G. W. and Ainsworth, S. The classroom teacher's activities and attitudes relating to speech correction. *Journal of Speech & Hearing Disorders*, 54, 19, 244-249.


CHAPTER III

METHODOLOGY

Subjects

Children

The participants were thirty preschool English-speaking children and thirty school-age English-speaking children, ranging from three to seven years of age. The children were speakers who do not have any speech or language impairments. Children who had a history of intellectual or psychological impairments were excluded from the study population. Participants were chosen from a variety of education and day care facilities. Each child had written permission from the parents to participate in the study. A copy of the permission form is Appendix A.

The Examiner

The examiners (Speech Screeners) for judging speech and language abilities were graduate-level students under the supervision of speech pathologists certified by the American Speech and Hearing Association or speech pathologists who currently had their graduate degree. These examiners (Speech Screeners) screened the speech and language abilities of any child who has not previously been evaluated. The students had completed a graduate-level
course for diagnosing speech and language abilities. The purposes of the present study were unknown to the Speech Screeners.

The examiner (the Recorder) who recorded responses of children during the sociometric testing was a graduate-level student also supervised by a certified speech pathologist. She had met the requirements of the American Speech and Hearing Association's clinical experience in working with preschool and school age children.

Screening Procedure for the Speech Ability

The speech ability of the participants were determined through one of the following procedures:

1. Review of previous speech and language diagnostic records;
2. Evaluation of a thirty minute speech/response sample of each child by two independent examiners. Articulation ability, language, voice quality, and fluency were judged.

In the second procedure, a thirty minute speech/response sample from each child from the mid-point of his conversation was recorded. A high quality cassette tape (D series in TDK cassette tape) and stand-type microphone was utilized. The child was taped in a quiet setting. Conversation and responses was elicited through the use of items from the Developmental Sequences in Language, (Los Angeles Unified School District, 1972), action and spatial pictures, questions about family and friends, and asking for a description of how to make something or play a game.
A list of materials and questions are contained in Appendix B.

Two Speech Screeners listened to these tapes independently of each other and judged whether the articulation, language, voice quality and fluency were appropriate (normal) for the age and sex of each child. Only children whose speech sample had been judged to be normal by both Speech Screeners participated in the study population.

Procedure for the Attitude Study

To devise a method to test reactions and perceptions of children to disfluent speech by a peer, the procedure from Rosenthal's (1974) study was revised and adapted (See Appendix C for a summary of Rosenthal's study). In this study, as in Rosenthal's, three identically decorated boxes were used to represent three persons, two who spoke by tape recording and one who remained silent. Each box was spray-painted blue and had a face with yellow hair, eyebrows, eyes, a nose, ears, and a mouth. The boxes had a hole in the top for children to place a gift to the boy of their choice. Behind two of the boxes, a tape recorder was placed which played a recorded message from one of the two speakers. A drawing of the boxes is contained in Appendix D.
The three boxes were identified as Bobby, Tommy, and Steve. "Bobby's" box played a pre-recorded message from a normal speaker, and "Steve's" box played a message from a child speaker with stuttering patterns. "Tommy's" box was the silent child. The "Tommy's" box was included to prevent a forced choice situation between the normal speaker and the speaker with stuttering patterns during a giving task. However, the "Tommy's" box was excluded in the interview task since the questions were aimed at the participants' perceptions and attitudes toward the speaking boxes, Bobby (the normal speech) and Steve (the stuttered speech). The following is a description of how the participant groups interacted with these three boxes.

The thirty preschool children were randomly divided into two groups, designated as Group I and Group II. Group I was matched with Group II in the ages of the participants within the group. An analysis of the mean ages of each group was done to insure the absence of any significant difference in ages between the two groups. The mean age of Group I and Group II was four years of age.

Thirty school-age children were also randomly divided into two groups, Group III and Group IV, using the same procedure. Groups III and IV were also matched in the ages of group participants, and the mean ages of each group were determined to insure an absence of intergroup differences.
in the ages of the participants. The mean age for Group III and Group IV was six years of age.

To summarize, the following groups and age levels were utilized in this study:

- **Group I** (15 preschool children, mean age 4.0)
- **Group II** (15 preschool children, mean age 4.0)
- **Group III** (15 school-age children, mean age 6.0)
- **Group IV** (15 school-age children, mean age 6.0)

Children in preschool Group I and school-age Group III were assigned to answer interview questions about the normal speaker, Bobby. Children in preschool Group II and school-age Group IV were assigned to answer interview questions about the disfluent speaker, Steve. Therefore, the participant groups paired with a speaker for the interview task were as follows:

<table>
<thead>
<tr>
<th>TABLE I</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PARTICIPANT GROUPS PAIRED WITH A SPEAKER</strong></td>
</tr>
<tr>
<td>Speaker</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Bobby</td>
</tr>
</tbody>
</table>

All participants were given a choice to interact with any of the three boxes during a giving task.

After the children were assigned a participant group, the Recorder individually took each child into the testing area. The Recorder then introduced the three boxes as being or belonging to Bobby, Tommy, and Steve. To the preschoolers the Recorder explained that Bobby and Steve
talk, but Tommy doesn't want to talk. To school-age children the Recorder explained that the boxes belonging to Bobby and Steve had a message on tape, but Tommy did not leave a message in his box. The child was then given two presents: preschoolers were given balls and school-age children were given large erasers. The child was then told to keep one of the presents for himself/herself, and to give the other present to one of the three boxes after he/she listened to "Bobby" and "Steve" talk. The order of presentation of the tapes was randomly assigned.

Just before the child gave the present, the Recorder interviewed the child to determine the child's perceptions and attitudes about a speaker. In order to do this, the examiner had formulated a set of questions that attempted to gauge the level with which children may socially accept fluent speakers and disfluent speakers. The questions were also designed to provide a means to determine children's attitudes toward fluent and disfluent children. For the purpose of this study, these questions were called the Social Acceptability/Attitude Scale (SAAS) (See Appendix E). Preschool children in Group I were asked questions about Bobby (the normal speaker). Preschool children in Group II were asked questions about Steve (the disfluent speaker). School-age children in Group III were asked questions regarding Bobby (the normal speaker). School-age children in Group IV were asked questions regarding Steve
(the disfluent speaker). The following questions were asked regarding a speaker:

1. How nice does this boy sound?
2. How happy does this boy sound?
3. How brave does this boy sound?
4. How smart does this boy sound?
5. How good does this boy talk?
6. How much does this boy want your present?
7. How much would you like to share your Coke with this boy?
8. How much would you like this boy to come to your birthday party?
9. How much would you like this boy to play with you all year?

After answering these questions about Bobby or Steve, the giving task occurred. The child was instructed to put the gift in the box (either Bobby, Tommy, or Steve) of the child's choice. At this point, the Recorder asked the following questions:

10. Do you want to give your present to Bobby, Tommy, or Steve? (as she points to each box while naming it).
11. Why?

Questions 1 through 6 were aimed at determining the child's attitudes toward the speaker. Questions 7 through 9 were aimed at determining the social acceptability of the speaker. Questions 10 and 11 were aimed at determining the child's personal preference toward a speaker.

The Recorder recorded all the child's responses on a questionnaire rating scale. The responses of questions were either rated as negative, neutral, or positive in opinion on a three-point rating scale. An example of the questionnaire and rating scale are in Appendix E. A list
of responses which correspond to negative, neutral, and positive responses is also included. Scoring procedures will be explained further in the Data Analysis section.

The Recording

The tape recordings were of high quality sound (D series in TDK cassette tapes). The taping utilized a stand-type microphone. One boy, ten years of age, who is experienced in acting read the scripts. Two separate scripts for each of the Bobby and Steve characters were used, one for preschool children and one for school-age children. After the script was rehearsed, taping occurred. Retaping was be done until the boy read his part with ease.

The Scripts

An example of each script is contained in Appendix F. The script for the normal fluent speaker contained no breaks in the continuous flow of speech. It can be described as Adams (1982) defines fluency:

A fluent utterance is perceived to start promptly and easily, and involves beginning to end, the coordination and proper sequential execution of respiratory, phonatory, and articulatory activity so that sounds and syllables are seen and heard to emerge in continuous, forward flowing fashion.

The scripts with stuttering patterns utilized part-word repetitions and prolongations during speech. The stuttering patterns are congruent with those characteristics of speech judged by the public as stuttering (Williams and
Kent, 1958; and Boehmler, 1958) and as core behaviors of stuttering by Van Riper (1982). Because there was more listener agreement on the occurrence of stuttering when the stuttering is severe (Williams and Kent, 1958; Boehmler, 1958), two to four stuttered words occurred during each sentence.

Length and complexity of the sentences for the script varied according to the age of the participant. Mean length of a sentence for the preschool population was 8.0 - 8.5 with limited use of embedding of meaning in clauses. Mean length of a sentence for the school-age population was 11.0 - 11.5 words with a variety of phrases and clauses used within a sentence.

Data Analysis

The data was analyzed by someone other than the Recorder. In scoring the questionnaire, children received values for their responses to questions about their assigned speaker, depending upon the type of response. Types of response categories were negative, neutral, and positive. Generally negative responses received one point. Generally neutral responses will receive two points. General positive responses received three points. The three-point rating scale, along with types of positive, neutral, and negative responses, is listed in Appendix E.
Response values for each group (Groups I, II, III, and IV) were totaled. A mean rating score was calculated from the totaled values for each group. A 'Social Acceptability/Attitude Score' towards each speaker, Bobby (normal) and Steve (disfluent), was determined for each population (preschool and school-age). The main effect of age versus type of speaker was then analyzed by determining the significance between the means of each group. This data was analyzed by a two-by-two analysis of variance as shown in Figure 1.

<table>
<thead>
<tr>
<th>Normal Speech (Bobby)</th>
<th>Preschool</th>
<th>School Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stuttered Speech (Steve)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1 -- Two-by-two analysis of variance.

If there was a trend towards overall significance, a Scheffe' Test of Post Hoc Comparisons was done to determine any significance between groups.

In analysis of the giving task, the total percent of the population for each group (Group I, II, III, IV) who gave the present to each different box was determined. The population percentage and 'Social Acceptability/Attitude Score' was then compared for each group's assigned speaker.
This comparison indicated whether a group's attitude and social acceptance towards a speaker type was consistent with their actual preference for a speaker type. The analysis was designed as shown in Figure 2.

<table>
<thead>
<tr>
<th>Preschool</th>
<th>School-Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group I</td>
<td>Group II</td>
</tr>
<tr>
<td>Normal</td>
<td>Stuttered</td>
</tr>
<tr>
<td>Speech</td>
<td>Speech</td>
</tr>
<tr>
<td>Group III</td>
<td>Group IV</td>
</tr>
<tr>
<td>Normal</td>
<td>Stuttered</td>
</tr>
<tr>
<td>Speech</td>
<td>Speech</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Attitude Score</th>
<th>% of population giving gift</th>
</tr>
</thead>
</table>

Figure 2 - Comparison of Social Acceptability/Attitude Score and preference for speaker type.

To compare overall preferences for a speaker in the preschool population versus the school-age population, the total percentage of population for each group who gave to each box was determined. The percentages were compared as in Figure 3.

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Preschool % of Population</th>
<th>School Age % of Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tommy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steve</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 3 - Preference for a speaker type.

To evaluate why children had a particular preference for a speaker, a descriptive analysis of their answers was done. The five most frequent answers to the "why" question
for both the preschool and school-age population were stated and compared. Frequent references made about the speaking ability of personality traits of the speaker were also described.

For purposes of future research, the value of each question toward influencing the scores of significant pairs of groups was studied. For the pairs of groups which were statistically different, the mean score of each question in each group was calculated and compared between the groups. Results were described and compared as shown in Figure 4. The type of reference (i.e., attitude or social acceptability) of each question was listed in parentheses.

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Score of Questions</th>
<th>Group</th>
<th>Mean Score of Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Figure 4 – Comparison of the mean score for each question by group.
CHAPTER BIBLIOGRAPHY


CHAPTER IV

RESULTS

Age Comparisons

Prior to testing any of the hypotheses, it was necessary to determine the validity of the groups according to age. To determine whether there were no significant differences in ages within the preschool population (Groups I and II) and within the school-age population (Groups III and IV), separate t-tests were calculated. The results of these t-tests are contained in Table II. No significant differences were found between the two preschool groups (t=0.03, p<0.979) and the two school-age groups (t=-0.17, p<0.866). The mean age for the preschool population (Groups I and II) was 48 months and the mean age for the school-age population (Groups III and IV) was 78 months. Two separate t-tests were also performed to determine if a significant difference in age existed between the preschool and school-age population. These results are also contained in Table II. A significant difference in age was found between Groups I (preschool) and III (school-age) (t= -13.65, p<.0001). Similarly, a significant difference in age was also found between Groups II (preschool) and IV (school-age) (t= -12.85, p<.0001). These results indicated the validity of the experimental groups.
## TABLE II

RESULTS OF t-TESTS OF AGE COMPARISONS

<table>
<thead>
<tr>
<th>Groups</th>
<th>Mean Age</th>
<th>Standard Deviation</th>
<th>t Value</th>
<th>DF</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>I vs II (Preschool Population)</td>
<td>I</td>
<td>48.20</td>
<td>6.899</td>
<td>0.03</td>
<td>28 0.979</td>
</tr>
<tr>
<td></td>
<td>II</td>
<td>48.13</td>
<td>6.927</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III vs IV (School-Age Population)</td>
<td>III</td>
<td>78.86</td>
<td>4.824</td>
<td>-0.17</td>
<td>28 0.866</td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td>78.20</td>
<td>5.858</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I vs III (Preschool vs. School-Age)</td>
<td>I</td>
<td>48.20</td>
<td>6.899</td>
<td>-13.65</td>
<td>28 0.0001*</td>
</tr>
<tr>
<td></td>
<td>III</td>
<td>77.86</td>
<td>4.824</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II vs IV (Preschool vs School-Age)</td>
<td>II</td>
<td>48.13</td>
<td>6.927</td>
<td>-12.84</td>
<td>28 0.0001*</td>
</tr>
<tr>
<td></td>
<td>IV</td>
<td>78.20</td>
<td>5.858</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*denotes significant p values
Comparisons Among Groups

The mean scores of the Social Acceptability/Attitude Scale (SAAS) was obtained for all groups or combinations of groups. These mean scores are presented in Table III.

To investigate the Hypotheses I, II, and III, a 2 x 2 (age x types of speaker) analysis of variance (ANOVA) was conducted on the mean scores of the SAAS for the groups. This analysis examined the nature of the effect of type of speaker and the effect of age on the data. The results are summarized in Table IV.

The ANOVA indicated significance for the main effects of age \((F=7.055, \text{df}=1,59, p<.01)\) and type of speaker the children were asked questions about \((F=14.866, \text{df}=1,59, p<.0001)\). No significant interaction effects were obtained for the combination of age and type of speaker.

Since significant main effects were obtained for age and also type of speaker, Scheffé's Post Hoc Method of Multiple Comparisons was used to examine the nature of this significant main effect. Table V provides the results of the significant groups when comparisons were made at the .010 level of significance with a critical value of 2.13. Results revealed that only the mean scores between Groups I and IV, and between Groups II and IV differed significantly from one another.
<table>
<thead>
<tr>
<th>Group(s)</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Individual Cells</strong></td>
<td></td>
</tr>
<tr>
<td>I - (Preschool/Normal Speaker)</td>
<td>24.73</td>
</tr>
<tr>
<td>II - (Preschool/Disfluent Speaker)</td>
<td>22.73</td>
</tr>
<tr>
<td>III - (School-Age/Normal Speaker)</td>
<td>23.67</td>
</tr>
<tr>
<td>IV - (School-Age/Disfluent Speaker)</td>
<td>19.67</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td>I-II - (Preschool Population)</td>
<td>23.73</td>
</tr>
<tr>
<td>III-IV - (School-Age Population)</td>
<td>21.67</td>
</tr>
<tr>
<td><strong>Type of Speaker</strong></td>
<td></td>
</tr>
<tr>
<td>I-III - (Normal Speaker Groups)</td>
<td>24.20</td>
</tr>
<tr>
<td>II-IV - (Disfluent Speaker Groups)</td>
<td>21.20</td>
</tr>
</tbody>
</table>

* The type of speaker which a group was asked questions about is listed in the parenthesis as Normal Speaker or Disfluent Speaker.
### TABLE IV

SUMMARY OF ANALYSIS OF VARIANCE FOR AGE AND TYPE OF SPEAKER ON THE SOCIAL ACCEPTABILITY/ATTITUDE SCALE

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>DF</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>199.067</td>
<td>2</td>
<td>99.533</td>
<td>10.961</td>
<td>0.0001*</td>
</tr>
<tr>
<td>Age</td>
<td>64.067</td>
<td>1</td>
<td>64.067</td>
<td>7.055</td>
<td>0.0100*</td>
</tr>
<tr>
<td>Type of Speaker</td>
<td>135.000</td>
<td>1</td>
<td>135.000</td>
<td>14.866</td>
<td>0.0001*</td>
</tr>
<tr>
<td>2-Way Interactions Age Type of Speaker</td>
<td>15.000</td>
<td>1</td>
<td>15.000</td>
<td>1.652</td>
<td>0.2040*</td>
</tr>
<tr>
<td>Explained</td>
<td>214.067</td>
<td>3</td>
<td>71.356</td>
<td>7.858</td>
<td>0.0001*</td>
</tr>
<tr>
<td>Residual</td>
<td>508.533</td>
<td>56</td>
<td>9.081</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>722.600</td>
<td>59</td>
<td>12.247</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*denotes significant p values

### TABLE V

SHEFFE'S TEST OF POST HOC COMPARISONS - (*)DENOTES PAIRS OF GROUPS SIGNIFICANTLY DIFFERENT AT THE 0.010 LEVEL

<table>
<thead>
<tr>
<th>Mean</th>
<th>** GROUPS</th>
<th>IV</th>
<th>II</th>
<th>III</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>19.6667</td>
<td>IV</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.7333</td>
<td>II</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.6667</td>
<td>III</td>
<td></td>
<td></td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>24.7333</td>
<td>I</td>
<td></td>
<td></td>
<td></td>
<td>*</td>
</tr>
</tbody>
</table>

**GROUP I = Preschool/Normal Speaker  
GROUP II = Preschool/Disfluent  
GROUP III = School-Age/Normal Speaker  
GROUP IV = School-Age/Disfluent Speaker
Analysis of Preference

Hypotheses IV and V were tested by a frequency analysis stated in terms of the percentage of participants who gave to each speaker type (normal speaker, silent, disfluent speaker). The results are summarized in Table VI. An inspection of the table reveals that a higher percentage of the total population gave to Bobby (normal speaker) than to Steve (disfluent speaker). It can also be seen that a higher percentage of school-age children than preschool children gave to Bobby (normal) when given a choice between the normal speaker and disfluent speaker.

Comparison of SAAS Mean Scores to Preference

Hypothesis VI was informally measured by comparing the group mean score on the SAAS to the group percentage who gave to a type of speaker (normal speaker, silent, disfluent speaker). Results are summarized in Table VII. In the preschool population, Group I rated Bobby (normal speaker) on the SAAS with a slightly more positive mean score than Group II rated Steve (the disfluent speaker on the SAAS). However, the difference between the mean scores of these groups was not considered significant in post hoc comparison. The percent of the population in Group I who gave to Bobby (normal speaker) was equaled to the percent of the population in Group II who gave to Steve (disfluent speaker). A comparison shows that the preschool population did not rate Bobby (normal speaker) significantly more
positive than Steve (disfluent speaker), and did not give more frequently to either type of speaker. In examining the school age population, Group III rated Bobby (normal speaker) on the SAAS with a more positive mean score than Group IV rated Steve (disfluent speaker). The difference between these mean scores was considered significant in post hoc comparison. Similarly, the population percentage in Group III who gave to Bobby was higher than the population percentage in Group IV who gave to Steve. It can be seen that the school-age population rated Bobby higher than Steve and gave more often to Bobby than to Steve.

**Descriptive Analysis**

Hypothesis VII was analyzed by describing the most popular reasons the preschool and school-age population offered for choosing a type of speaker. Table VIII contains the five most frequent answers for each population. The reasons are ranked by the number of occurrences in each population. The number of times the reason occurred is given in parentheses. The majority of the reasons for choosing a type of speaker in the school-age population was judged to be more specific than the reasons offered by the preschool population. In addition, a listing of actual comments about the personality or speaking ability are listed in Table IX. The reference to a particular speaker is enclosed in parentheses at the end of the
TABLE VI

FREQUENCY ANALYSIS: PERCENTAGE OF PARTICIPANTS WHO GAVE TO EACH SPEAKER-TYPE BY POPULATION

<table>
<thead>
<tr>
<th>Speaker Population</th>
<th>Total Preschool</th>
<th>Total School-Age</th>
<th>Total Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bobby (normal)</td>
<td>36.7</td>
<td>43.3</td>
<td>40.0</td>
</tr>
<tr>
<td>Steve (disfluent)</td>
<td>36.7</td>
<td>30.0</td>
<td>33.3</td>
</tr>
<tr>
<td>Tommy (silent)</td>
<td>26.7</td>
<td>26.7</td>
<td>26.7</td>
</tr>
</tbody>
</table>

TABLE VII

SUMMARY OF SOCIAL ACCEPTABILITY/ATTITUDE MEAN SCORES VERSUS PREFERENCE FOR SPEAKER BY PERCENT OF POPULATION

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Preschool</th>
<th>School-Age</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Group I Bobby</td>
<td>Group II Steve</td>
</tr>
<tr>
<td></td>
<td>Normal Speaker</td>
<td>Disfluent Speaker</td>
</tr>
<tr>
<td>Mean Score</td>
<td>24.73</td>
<td>22.73</td>
</tr>
<tr>
<td>% of Population</td>
<td>46.7</td>
<td>46.7</td>
</tr>
</tbody>
</table>

* denotes pairs of mean scores which differed significantly from one another in post hoc comparison.
comment. As shown, more references about speaking ability or the personality of a speaker occurred in the school-age population than preschool population.

Post-Experimental Data Analysis

The mean score for each question was calculated and compared for the significant pairs of groups (revealed in the Scheffe's Post Hoc Comparison) to determine the value of a question in influencing differences in scores. As recalled, Groups I (preschool) and IV (school-age) were significantly different. Because the two-way interaction effect for age and type of speaker was not significant in the analysis of variance, the mean scores between these two groups were not compared. However, Groups III (school-age) and IV (school-age) were also determined to be significantly different in the Scheffe' Post Hoc Comparison. To determine the differences in the mean scores on the questions between these two groups is valuable to the hypotheses of this study and to future research. Therefore, the mean score of each question in each group was obtained and compared. The comparisons are contained in Table X. The type of reference (i.e., attitude or social acceptability) of each question is listed in parentheses.
### TABLE VIII

**REASONS FOR CHOICE (RANKED BY OCCURRENCES IN POPULATION)**

<table>
<thead>
<tr>
<th>Preschool Reasons</th>
<th>School-Age Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cause I wanted to (7)</td>
<td>1. References to speaking ability (10)</td>
</tr>
<tr>
<td>2. Cause I don't know (4)</td>
<td>2. References to the speaker being nice (6)</td>
</tr>
<tr>
<td>3. Cause I like him (4)</td>
<td>3. I don't know (6)</td>
</tr>
<tr>
<td>4. Cause (3)</td>
<td>4. References to Tommy's silence (4)</td>
</tr>
<tr>
<td>5. Cause he wanted it (2)</td>
<td>5. References to speaker's other personality traits (2)</td>
</tr>
</tbody>
</table>

### TABLE IX

**REFERENCES TO SPEAKING ABILITY OR PERSONALITY**

<table>
<thead>
<tr>
<th>Preschool</th>
<th>School-age</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. He talked like he was crying. (Steve)</td>
<td>1. Because he talks nice. (Steve)</td>
</tr>
<tr>
<td>2. Cause he was happy. (Steve)</td>
<td>2. He can't a little bit talk good. (Steve)</td>
</tr>
<tr>
<td>3. Because he was the fastest. (Bobby)</td>
<td>3. Because he (Steve) was going fa-fa and Bobby wasn't.</td>
</tr>
<tr>
<td>4. I liked the way he talked. (Bobby)</td>
<td>4. I like the way he talks. (Steve)</td>
</tr>
<tr>
<td></td>
<td>5. His voice sounds handsome. (Bobby)</td>
</tr>
<tr>
<td></td>
<td>6. He talks better. (Bobby)</td>
</tr>
<tr>
<td></td>
<td>7. Because he talks more better. (Bobby)</td>
</tr>
<tr>
<td></td>
<td>8. Because he sounds better. (Bobby)</td>
</tr>
<tr>
<td></td>
<td>9. Because he has nice speech. (Bobby)</td>
</tr>
<tr>
<td></td>
<td>10. Cause he talks good. (Bobby)</td>
</tr>
</tbody>
</table>
In general, it can be seen that the school-age children tended to rate the normal speaker more positively on the attitude questions than the disfluent speaker. The school-age children tended to rate the normal speaker on the attitude questions in the neutral to positive range. However, the general trend for school-age children in rating the disfluent child on the attitude questions was in the negative to neutral range. The only question of attitude which was rated in the neutral to positive range for the disfluent child was, "how much does the speaker want the present?" The attitude question which differed the most in score between the two school-age groups was, "how good does the speaker talk?"

The general trend for the school-age children on the questions of social acceptance was to rate both type of speakers in the neutral to positive range. However, as the level of intimacy increased in the questions, the school-age children tended to rate the disfluent child more neutrally. The opposite occurred for the normal speaker. As the level of intimacy increased in the questions, the school-age children tended to rate the normal speaker more positively.

In comparing the questions of attitude with the questions of social acceptance, school-age children tended to rate the normal speaker in the neutral to positive range for both types of questions. However, the school-age
<table>
<thead>
<tr>
<th>Question</th>
<th>School-Age Group</th>
<th>Mean Score *</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How nice does speaker sound? (attitude)</td>
<td>III (normal speaker)</td>
<td>2.73</td>
</tr>
<tr>
<td></td>
<td>IV (disfluent speaker)</td>
<td>2.26</td>
</tr>
<tr>
<td>2. How happy does speaker sound? (attitude)</td>
<td>III (normal speaker)</td>
<td>2.26</td>
</tr>
<tr>
<td></td>
<td>IV (disfluent speaker)</td>
<td>1.73</td>
</tr>
<tr>
<td>3. How brave does speaker sound? (attitude)</td>
<td>III (normal speaker)</td>
<td>2.53</td>
</tr>
<tr>
<td></td>
<td>IV (disfluent speaker)</td>
<td>1.86</td>
</tr>
<tr>
<td>4. How smart does speaker sound? (attitude)</td>
<td>III (normal speaker)</td>
<td>2.46</td>
</tr>
<tr>
<td></td>
<td>IV (disfluent speaker)</td>
<td>1.93</td>
</tr>
<tr>
<td>5. How good does speaker talk? (attitude)</td>
<td>III (normal speaker)</td>
<td>2.86</td>
</tr>
<tr>
<td></td>
<td>IV (disfluent speaker)</td>
<td>1.60</td>
</tr>
<tr>
<td>6. How much does speaker want the present? (attitude)</td>
<td>III (normal speaker)</td>
<td>2.86</td>
</tr>
<tr>
<td></td>
<td>IV (disfluent speaker)</td>
<td>2.80</td>
</tr>
<tr>
<td>7. How much do you want to share a coke with speaker? (social acceptance)</td>
<td>III (normal speaker)</td>
<td>2.53</td>
</tr>
<tr>
<td></td>
<td>IV (disfluent speaker)</td>
<td>2.63</td>
</tr>
<tr>
<td>8. How much do you want speaker at birthday party? (social acceptance)</td>
<td>III (normal speaker)</td>
<td>2.66</td>
</tr>
<tr>
<td></td>
<td>IV (disfluent speaker)</td>
<td>2.60</td>
</tr>
<tr>
<td>9. How much do you want to play with speaker all year? (social acceptance)</td>
<td>III (normal speaker)</td>
<td>2.7</td>
</tr>
<tr>
<td></td>
<td>IV (disfluent speaker)</td>
<td>2.2</td>
</tr>
</tbody>
</table>

* Mean scores which equal 1 are judged as negative.
* Mean scores which equal 2 are judged as neutral.
* Mean scores which equal 3 are judged as positive.
children tended to rate the disfluent speaker in the negative to neutral range on questions of attitude, and in the neutral to positive range on questions of social acceptance.
The purpose of this study was to examine the effects of age maturation and type of speaker on the attitudes and preferences of normal-speaking children toward a child speaker. The type of speakers which were used in this study were a normal-speaking child and a disfluent child. The Social Acceptability/Attitude Scale (SAAS) was devised to gauge the attitudes toward and social acceptance of these types of speakers. Since the reliability and validity of the SAAS scale had not been measured, it is felt that conclusions from this study should be regarded as directions for future research.

The other limitations of this study should also be examined before conclusions are made. The study's sample size was limited and subjects were only allowed to participate through parent permission. Therefore, inferences and generalizations to all populations cannot be made. Conclusions drawn from this study are therefore valid only for this study's population.

As a result of the two-by-two analysis of variance, it can be inferred that the effects of both age maturation and type of speaker were significant for the study's
population. The following will be a discussion of the relationship of the hypotheses to these effects and conclusions which may be inferred by those relationships. The implications of this study and directions for future research will be discussed in closing comments.

As a function of the variable, type of speaker, it was predicted that a normal-speaking child would be rated higher on the Social Acceptability/Attitude Scale (SAAS) than a disfluent child (Hypothesis I). Results of the SAAS scores collapsed over Groups I and III (children who rated the normal speaker) did show a more positive mean score of 24.2 than the SAAS score of 21.2 collapsed over Groups II and IV (children who rated the disfluent speaker). To locate the presence of the differences, post hoc analyses were performed. Using Scheffe's Method of Post Hoc Comparisons, a significant difference existed between the SAAS scores of school-age children who rated the normal speaker (Group III) and school-age children who rated the disfluent child (Group IV). Group III tended to rate the normal speaker significantly higher than Group IV rated the disfluent speaker. A significant difference did not exist between the SAAS score for preschool children who rated the normal speaker (Group I) and preschool children who rated the disfluent speaker (Group II). Therefore, Hypothesis I only appears to be true for the school-age children. It can be concluded that the type of speaker is only important
for the school-age population of this study. Furthermore, the school-age population in this study does perceive a disfluent child more negatively and with less social acceptance than a normal speaker. A plausible explanation for the result in the preschool population is supported in the Langer (1967) study. Langer concluded that since preschoolers may not have significantly developed their awareness of the different levels of fluency in speech, they would not have an attitude that a disfluent child speaker is any different from a normal speaker. The results of the post hoc comparison in the school-age population are consistent with previous findings (Freeman & Sonnega, 1956; Perrin, 1954; Marge, 1966) which found that speech-disordered children are less socially acceptable than normal-speaking children.

As a function of age maturation, Hypothesis II predicted that a normal-speaking child would receive a more positive rating on the SAAS from school-age children than preschool children. This prediction was not evident in the results. Results of the SAAS scores show that the normal speaker received a more positive mean score of 24.7 from the preschool population (Group I) than the mean score of 23.6 from the school-age population (Group III). If Hypothesis II were true, the school-age population would have rated the normal speaker significantly higher than the preschool population. The reverse of this occurred.
However, if the null hypothesis were true then the mean scores between Groups I (preschool) and III (school-age) would have been statistically significant in the post hoc analysis. Results of the post hoc testing did not indicate a significant difference for this study's population. Therefore, the results in this study cannot be interpreted to either support or reject Hypothesis II.

Hypothesis III was also generated to predict the function of age maturation. It predicted that a disfluent child will receive a more negative rating on the SAAS from school-age children (Group IV) than preschool children (Group II). As expected, the disfluent child did receive a more negative rating of 19.6 from school-age children than the rating of 22.7 from the preschool children. However, when these results were subjected to Scheffe's Test of Post Hoc Comparisons, the scores between the preschool and school-age population were not statistically different. Since no significant difference was found as a function of age, the prediction of Hypothesis III must be rejected for this study.

Hypotheses II and III were specifically generated to support the prediction that as children mature from preschool to school-age, their attitudes toward and social acceptance of a type of speaker will become defined with more agreement between the children's ratings. Although the results in this study of Scheffe's Test of Post Hoc
Comparisons do not support Hypotheses II and III, it is prudent to relate the age factor to the outcome of Hypothesis I before disregarding this prediction. Since preschoolers did not rate a normal speaker significantly different from a disfluent speaker - and the school-age population did - age maturation does seem to have a bearing on the child's opinions about a type of speaker. The age effect appears to be related to the school-age children in this study developing negative attitudes toward and less social acceptance of a disfluent child than a normal-speaking child. The age effect does not appear to be related to any variations between this study's preschool and school-age population in rating either the normal speaker or disfluent speaker.

To further investigate the reactions of preschoolers versus school-age children toward a type of speaker in a giving task, the following predictions were also made. Normal-speaking children will give a present more often to a normal-speaking child than a disfluent child when given a choice (Hypothesis IV). Secondly, school-age children will give the normal-speaking child the present more often than the preschool children (Hypothesis V). As expected, a higher percentage of the normal-speaking children in this study did give their presents to the normal-speaking child than the disfluent child. A higher percentage of this study's school-age population than the preschool population
also gave the present to the normal-speaking child than to the disfluent child.

These results of this study would seem to support Hypotheses IV and V although caution must be taken in interpreting these results without formal statistical analysis for significance. In this study's population of normal-speaking children, it can be inferred that the type of speaker may influence the choice between associating with a disfluent child or a normal-speaking child. These normal-speaking children may associate more often with the normal-speaking child than with the disfluent child. Furthermore, the choice to associate with normal-speaking child appears to be greater for school-age children of the study. These findings are consistent with the Giolasi and Williams study (1958) in which normal-speaking children chose a fluent adult speaker over a disfluent adult speaker. The Giolasi and Williams study (1958) also gave evidence that, as a whole, older children are more likely to be in higher agreement with their choice of the normal speaker than younger children are.

Hypothesis VI was generated to compare the attitudes measured to the preference for a speaker type in each group. There was agreement between the SAAS scores and the percent of the population who gave to each speaker for each group. Preschoolers in this study did not rate the disfluent child significantly different from the normal-
speaking child. This neutrality was also maintained in the percentage of preschooler's who gave to each type of speaker. Conversely, the school-age children in this study not only rated the disfluent child significantly different from the normal-speaking child, but also chose to associate less often with a disfluent child. Concerning the preference for a type of speaker in the preschool population, it is interesting to note that the Recorder of the preschooler's responses felt both preschool groups tended to give the present to the speaker they were asked questions about. Since efforts were made to keep the method of testing reliable, it is plausible that the preschool children in this study were uncertain about their preferences concerning a type of speaker. This can also be seen in the outcome of Hypothesis VII.

Hypothesis VII predicted that school-age children will be more explicit in explaining why they chose a certain speaker than preschool children. In examining a ranking of the reasons given in each population, this hypothesis was supported for this study. As expected, the majority of the reasons for choosing a type of speaker in the school-age population were more specific and referred more often to perceptions about a speaker than in the preschool population. The most frequent reason given in the school-age population referred to the speaking ability of a speaker. This further supports the prediction that
the type of speaker may also have a bearing on a school-age child's actual preference for a child speaker. However, the type of speaker did not seem as important to the preschoolers' actual choice of a speaker. This is consistent with the Giolas and Williams study (1958) which gave evidence that older children are more specific in their reasons for choosing the fluent speaker than younger children.

Based on the results of Hypotheses IV through VII, it can be concluded for this population that as children mature to school-age, they not only develop the attitude that the disfluent child is less socially acceptable than the normal-speaking child, but also react toward the disfluent child with less social acceptance. Furthermore, as seen in Hypothesis VII, the attitudes of school-age children in this study toward a disfluent child seem to affect their association with the disfluent child. Negative attitudes about the disfluent child were frequently cited as reasons for not preferring to associate with that child. It is also interesting to note that several more reasons concerning a speaker's manner of talking occurred in the school-age group. This finding is consistent with both the Langer study (1967) and the Culatta and Sloan study (1977). The Langer study (1967) gave evidence that preschoolers may not have significantly developed an awareness of disfluent speech. On the other
hand, the Culatta and Sloan study (1977) gave evidence that school-age children are aware of the difference between stuttered and fluent speech.

To summarize the conclusions for this study, type of speaker and age maturation are important factors in determining the attitudes and reactions of children toward a disfluent child. It is possible that the children in this study may not develop their attitudes about a type of speaker until they are of school-age. Furthermore, the attitudes that these school-age children develop about a disfluent speaker may be more negative than the school-age children's attitudes about a normal speaker. These negative attitudes toward a disfluent speaker may also have a bearing on the association of these school-age children with a disfluent child. The school-age children in this study may tend to associate less often with the disfluent child due to their negative attitudes about the disfluent child. These plausible conclusions are also evidenced by the comments given by the school-age children as reasons for preferring to associate with a normal-speaking child rather than a disfluent child.

Implications

The conclusions from this study have several implications for speech-language pathologists. An area of constant concern among speech-language pathologists are the
variables which are important in facilitating or impeding the therapy progress of the disfluent child. It has been proposed that if a disfluent child is receiving negative reactions and attitudes from school-age children about their speaking ability or personality, less or slower progress may be made in speech therapy. Furthermore, less or slower carry-over of fluent speech may seem to occur from the structured non-critical therapy situation to the possibly condemning daily living situation.

Therefore, it would seem necessary for the speech-language pathologist to consult and prepare the child stutterer about the negative reactions the child may receive from his/her peers. It would also seem beneficial to begin programs for school-age children which aid them in changing their attitudes towards speech-disordered children. During the course of this study, the author found one school which had a program that helped the children develop accepting attitudes toward a speech-disordered child. These children seemed to rate the disfluent child similar to the normal-speaking child. They also seemed to choose the disfluent child just as often as the normal-speaking child in the giving task. The data from this school was not used in this study due to the possible bias effect the data may have produced on the results. It is also important to remember that at least one study (Crowe and Walton, 1981) suggested that
teachers may tend to enhance negative attitudes toward a disfluent child in the classroom. Therefore, it would also seem beneficial for the speech-language pathologist to counsel teachers as well.

Finally, the results indicated that this study's preschoolers have not significantly developed their attitudes and reactions toward a type of speaker. Although there was a trend to rate the disfluent child more negatively than the normal-speaking child, it was felt by the author that the attitudes of the preschool child are not clearly defined toward either speaker. It is important to remember that the development of stuttering may occur in a child's speech at this age. It is also important to remember that these children may receive negative reactions from their school-age siblings, as shown in this study, and receive negative reactions from their parents (Fowlie and Cooper, 1978). Additionally, the disfluent preschool child may be ignored by other preschoolers due to the disfluent child's inability to communicate (Tremblay and Arnold, 1979). Therefore, it would seem beneficial to the disfluent preschool child for the speech-language pathologist to not only include family counselling in her therapy approach, but to also work with day care centers to begin developing positive attitudes and reactions toward disfluent speakers in their preschoolers. To the author,
it seems easier to develop positive attitudes in a young child, than to change negative attitudes in an older child.

Directions for Future Research

This study examined the effects of age maturation and the type of speaker on the attitudes toward and social acceptance of a child speaker. The Social Acceptability/Attitude Scale (SAAS) was devised to measure these effects. As it has been previously pointed out, all conclusions from this study should be regarded as directions for future research since the SAAS has not been standardized. Furthermore, since there have been very few attempts to measure the attitudes of children in a standardized manner, and this study does indicate that there could be differences in attitudes among school-age children toward a type of speaker, a standardized assessment instrument would seem valuable for future research.

Additionally, the results of the SAAS did indicate that school-age children in this study may have a more negative attitude toward and less social acceptance of a disfluent child than a normal-speaking child. Although some studies (Freeman and Sonnega, 1956; Perrin, 1954; Marge, 1966) do exist, further studies are needed to determine what type of negative attitudes are more prevalent and which social situations are less acceptable. To determine general trends in this area, this study
compared the mean scores for each question on the SAAS between the two school-age groups. Results from the comparison indicate that school-age children in this study rated the disfluent child much lower than the normal-speaking child on attitude questions referring to general attributes of the speaker. Further studies are needed to determine which questions were more significant in determining the outcome of the scores than other questions on the SAAS.

The differences in scores which occurred on social acceptance questions appeared to be related to the level of intimacy of the situation. It appeared that as the level of intimacy increased in the questions, the school-age children in this study tended to rate the disfluent child more neutrally. The reverse trend occurred in the rating of the normal speaker on the questions of social acceptance. One study by Shears and Jensema (1968) indicated that as the level of intimacy increased in the situation, adults were less accepting of speech disordered individuals than normal-speaking individuals. Additional studies seem necessary to explore the significance of this trend among children.

Finally, school-age children in this study tended to rate the disfluent child less positively on the questions of attitude than on the questions of social acceptance. However, no gross differences in rating the normal-speaking
child on the two types of questions were noted. This could be interpreted to mean that even though school-age children may have negative attitudes about a disfluent child's attributes, they would accept the disfluent child in certain situations. Additional studies are needed to examine the relationship between these two factors.
CHAPTER BIBLIOGRAPHY


APPENDIX A

Parent Permission

Clare Wells, a graduate student from North Texas State University is currently studying attitudes and perceptions of children toward other children with speech disorders. Her study will help all speech therapists understand the communication pressures a child with a speech disorder faces. Children who participate in this study will be asked to listen to tapes of a child speaker and give their impressions in a series of questions. They will also be required to give a gift to one of the introduced hypothesized children. The participation of your child in this study would be greatly appreciated. Please read the below agreement, check the appropriate box, and give your signature. If you have any questions, please call Clare Wells at 566-5842.

I, __________________________, have read the above information and

[ ] do not give my permission

[ ] give my permission

for my child, __________________________, to participate in the above stated study.

Signature: __________________________

Date: __________________________

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APPENDIX B

Materials and Questions used in obtaining a speech sample:

Materials:

Cassette tape recorder
Stand-type microphone
TDK blank cassette tapes - D series
Sequence pictures
Action pictures
Spatial pictures
Items from the Developmental Sequences in Language,
(Los Angeles Unified School District, 1972)

Questions:

1. Who do you like to play with at school? at home?
2. What do you play?
3. How do you play it?
4. Where do you like to go with your Mom and Dad?
5. What do you do there?
6. What's your favorite thing to eat?
7. How do you make that?
8. How do you make a peanut butter and jelly sandwich?
9. What's your favorite cartoon or T.V. show?
10. What happened last time you watched it?
APPENDIX C


The article is concerned with the development of attitudes in preschool children toward Black English (BE) speakers and Standard English (SE) speakers. It contends that social awareness of language differences begins between the ages of three and six (Rosenthal, 1973), and that the concept of communicative competence must be expanded to include not only language use, but also social-linguistic perceptions of language variety. This ability appears to manifest itself in the major developmental period of language acquisition. This study classified language awareness into three aspects: discrimination, categorization, and attitude preference. Discrimination is the ability to distinguish between two varieties solely on the basis of linguistic variables. Categorization is the ability to categorize people according to racial stereotypes on basis of type of speech used. Attitude preference is defined as the expression of attitudes and value judgments toward representative speakers of each variety of English (Rosenthal, 1974).

In order to evaluate whether or not a preschool child can
discriminate, categorize, and demonstrate certain attitude
toward linguistic varieties of English, three subtests were
constructed. The independent variables were population
group, age, and sex, which were examined for effect on the
dependent variables of discrimination, categorization, and
attitude preference. In the first task, discrimination,
the results revealed that Population A (upper middle-class
whites) and Population B (lower class same-rural black
children) discriminated between two varieties of the same
language between the ages of four to five and both groups
could tell whether the two varieties were same or
different. In the Task II, children in Populations A and B
could categorize Black English as being spoken by blacks
and Standard English as being spoken by whites. Population
A correctly identified the ethnic group 71% of the time.
Population B correctly identified the ethnic group 78% of
the time.

Task III, the attitude study was done in two parts, a
"Taking" subtest and a "Giving" subtest. In the taking
subtest, a "Kenneth box" and a "Steve box" both had
presents for the children. Kenneth was the Black English
speaker which Steve was the Standard English speaker. The
children were to listen to each box talk about its present
and after answering some questions they could choose from
which magic box to take their present. The presents were
identical boxes of crayons. In the giving subtest, two
pads of paper were given to the children. They were told to keep one for themselves and give one to one box (either Kenneth or Steve) after they listened to both boxes talk about why it wanted the present. Afterwards some attitude questions were asked by the interviewer about the speakers' personality traits. Results of the giving task, taking task, and attitude questions are as follows:

1. Both Populations A and B closely agreed in their socioeconomic evaluation of the two dialects. They associated a higher socioeconomic status with Standard English by generalizing that the Standard English speaker (Steve) had nicer presents. They associated lower socioeconomic status with Black English by generalizing that the Black English speaker (Kenneth) needed the present more.

2. The black children preferred the black speaker; the white children preferred the white speaker.

3. In answering attitude questions, learned stereotyped images were associated with both groups. Pejorative attitudes were expressed toward the Black English speaker frequently by the white children by classifying Black English as talking silly, being harmful, or not having drawing ability.

4. The Standard English speaker was characterized as being more gently, looking better, and being more successful (also having drawing ability).
APPENDIX D

Bobby

Tommy

Steve
APPENDIX E

Social Acceptability/Attitude Scale (SAAS)

Name: ___________ Age: ___ Group: ______ Speaker: B or S

<table>
<thead>
<tr>
<th>Rating Scale</th>
<th>Negative</th>
<th>Neutral</th>
<th>Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Values:</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Responses:</td>
<td>-not very +adj.</td>
<td>-adjective stated</td>
<td>-very +adj.</td>
</tr>
<tr>
<td></td>
<td>-is not +adj.</td>
<td>in question</td>
<td>-real +adj.</td>
</tr>
<tr>
<td></td>
<td>-not very well</td>
<td>-I/he wants</td>
<td>-pretty +adj.</td>
</tr>
<tr>
<td></td>
<td>-very little</td>
<td>-I/he would like</td>
<td>-alot</td>
</tr>
<tr>
<td></td>
<td>-I would not ...</td>
<td></td>
<td>-whole bunch</td>
</tr>
<tr>
<td></td>
<td>-I don't ......</td>
<td></td>
<td>-I/he would</td>
</tr>
<tr>
<td></td>
<td>-opposite of adjective stated in question</td>
<td></td>
<td>really like</td>
</tr>
</tbody>
</table>

Circle the value which corresponds with elicited response.

1. How nice does (name) sound? 1 2 3
2. How happy does (name) sound? 1 2 3
3. How brave does (name) sound? 1 2 3
4. How smart does (name) sound? 1 2 3
5. How good does (name) talk? 1 2 3
6. How much does (name) want your present? 1 2 3
7. How much would you like to share your Coke with (name)? 1 2 3
8. How much would you like (name) to come to your birthday party? 1 2 3
9. How much would you like (name) to play with you all year? 1 2 3

**TOTAL**

*Giving Task*

10. Do you want to give your present to Bobby, Tommy, or Steve?

   Circle one: Bobby Tommy Steve

   Why?

*The giving task is not a part of the SAAS score.*
APPENDIX F

Scripts

Preschool

Normal Speech (Bobby)
Aren't you going to give me the ball? My brother plays ball with me. I can throw real far and he likes to catch it. We would be so happy to have a new ball.

Stuttered Speech (Steve)
Ar-ar-ar-aren't you go-going to give me---e the ba-ba-ball? My---y bro-bro-brother plays ball with me. I--- ca-ca-ca-can throw real far and he li-li-likes to ca-ca-catch it. We---e wou-would be so ha-ha-happy to to have a ne-ne-new ball.

School-Age

Normal Speech (Bobby)
Aren't you going to give me the eraser? I lost my eraser last week. My teacher is really mad now because my homework is so messy. If you give me the eraser, my papers will look so neat.

Stuttered Speech (Steve)
Ar-ar-aren't you-you g-g-going to give me---e the e-eraser? I---I l-l-lost my e-eraser last week. My t-t-teacher i-is real-ly mad now b-b-because my homework is s-s-so---o messy. If you g-g-give me the eraser, my p-p-papers wou-would look so neat.
BIBLIOGRAPHY

Books


Articles


Lloyd, G. W. and Ainsworth, S. The classroom teacher's activities and attitudes relating to speech correction. *Journal of Speech & Hearing Disorders*, 54, 19, 244-249.


Trotter, W. D. and Bergmann, M. T. Stutterers' and nonstutterers' reaction to speech situations. *Journal of Speech and Hearing Disorders,* 1952, 22, 40-45.


Reports


Unpublished Materials


Newspapers