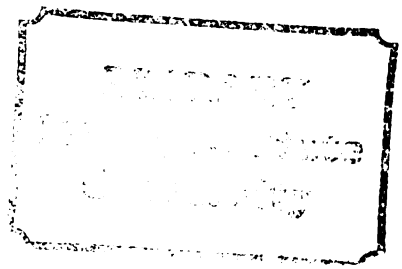

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USE OF FEMALE SEX-MARKED SPEECH AS A FUNCTION OF SUBJECTS' SEX, AGE, EXPERIMENTER SEX, AND SITUATIONAL CONTENT

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Kristine Busk

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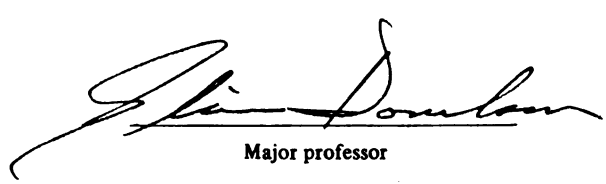

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USE OF FEMALE SEX-MARKED SPEECH AS A FUNCTION OF SUBJECTS' SEX, AGE, EXPERIMENTER SEX, AND SITUATIONAL CONTENT

By

Kristine Busk

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ABSTRACT

USE OF FEMALE SEX-MARKED SPEECH AS A FUNCTION OF SUBJECTS' SEX, AGE, EXPERIMENTER SEX, AND SITUATIONAL CONTENT

By

Kristine Busk

Study addressed three questions regarding sex differences in language: 1) the developmental progression of female sex-marked speech? 2) the developmental progression of loquacity? 3) the relationship between recognition of sex-linked statements and individual language style? Language samples from 48 children were analyzed for frequency of female sex-markers. Results indicated qualifiers and fillers increased with age and were situationally specific. No sex differences in use of female sex-markers were found. Interaction effects indicated sex differences in use of fillers with the male experimenter. Loquacity increased with age for both sexes, however boys' tended to increase at a more rapid rate than girls. Sex differences in loquacity were situationally specific. Children identified sex-linked statements with considerable accuracy, yet there was no regulation of speaking styles as a result of this ability.

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REVIEW OF THE LITERATURE

Sex Differences in Adult Speech

For more than a century scholars have noted differences in male and female speech patterns. Historically, the majority of the research in this area has come from the anthropological tradition, looking at prescriptive sex differences in various tribal languages. However, as early as 1922 the distinguished linguist Otto Jespersen remarked that even in western language, women's speech differed from men's speech along a number of dimensions. Women, Jespersen claimed, showed a tendency to use intensive adverbs, exaggerated stress, and phonetic emphasis more than men. He noted that women have a smaller vocabulary than men, and frequently leave sentences unfinished. Finally, Jespersen hypothesized that due to women's "flighty nature", they speak more readily than men and with less precision of thought.

Two contemporary theorists, Key (1975) and Lakoff (1975), have stimulated research in this area with their discussions on the differences between female and male speech styles. Both theorists emphasize that women's speech is different from men's with women exhibiting a more uncertain and hesitant speech style. For example,

both Lakoff and Key note that women make greater use of tag questions, which are questions at the end of a statement requesting confirmation of the statement. Another pattern of uncertainty in women's speech that Lakoff notes is the use of declarative statements intonated as questions, rather than simple declarative statements. Again, as in tag questions, it is hypothesized that in using this speech style the female is requesting confirmation of her statement. Lakoff also hypothesizes that women's speech is laced with "hedges" of various sorts. These are words that convey the uncertainty of the speaker, or in some way qualify the speaker's remarks. Finally, both Key and Lakoff have noted females' greater use of intensifying adverbs and the differential use of various adjectives by women and men.

The work of both Lakoff and Key has provoked considerable interest in the basic hypothesis that there are differences in the speech styles of females and males. Three major areas of research have emerged. One area is perceptions, or stereotypes, of male and female speech characteristics, generally assessed through paper and pencil tests. A second area of research involves obtaining actual language samples from female and male subjects under a variety of different conditions, and subsequently analyzing the samples for sex differences in linguistic use. The third area of research is concerned with

assessing language samples in order to determine if there are sex differences in conversational interaction or control.

Edelsky (1976a, 1976b) conducted two studies of the first type. In the first study, 122 adults and 122 children were presented with 24 statements which were either female or male as indicated by the literature. Subjects were asked to identify which statements were female, which were male, or which could be either male or female. The results indicated a developmental progression of competence in the ability to recognize a statement as sex-linked. First graders, as a group, identified only two of the 24 statements as sex-linked. Third graders were able to identify 10 of the 24 statements. Interestingly, it was found that the sixth graders were more highly stereotypic in their assignments of gender category than were the adults. The sixth graders identified 14 of the 24 statements as exclusively female or male, with the remaining 10 statements identified as most probably male or female. The adults, on the other hand, only assigned eight of the 24 statements to males or females exclusively. The remaining 16 statements were considered variable, although the majority of the adults assigned them to the proper gender category. Eldesky contends that children's ability to recognize statements as sex-linked is an important aspect of communicative

competence, or "the ability to use language in socially appropriate ways" (p. 47).

In a related study, Edelsky (1976b) presented sex-linked statements to adults and asked them to rate the statements along an adjective scale which was associated with a female and a male pole. Predictably, the results indicated that the sex-linked statements were associated with the female and male traits of the scale.

A similar study by Kramer (1977) attempted to identify particular speech characteristics associated with female and male speech styles. The subjects in this study were 466 students, all of high school and first year university age. Subjects were given an 11-point Likert scale with 51 different speech characteristics, and asked to rate each characteristic in terms of a female or a male pole. Of the 51 traits, 36 significantly differentiated between males and females. Some of the characteristics associated with male speech included items such as demanding voice, dominating speech, use slang, sense of humor, and authoritarian speech, whereas female speech was characterized by such items as gentle speech, gossip, self-revealing speech, talks alot, and polite speech.

Siegler and Siegler (1976) conducted a study which attempted to directly assess stereotypes of male and

female speech in conjunction with Lakoff's hypotheses (1975). Subjects were asked to make decisions concerning the sex of a speaker for three types of statements, tag questions, modified assertions, and strong assertions. The findings provided direct support of the hypotheses, with the strong assertions most often attributed to males, and the tag questions to females. The modified assertions occupied a middle ground, being attributed to both females and males.

These studies taken together indicate that whether or not women and men speak differently, people have clear expectations that differences exist. These expectations are associated with female and male traits concomitant with language use. However, when one looks at the research on sex differences in language use which utilize actual language samples, results indicating sex differences are not as unequivocal.

Two early studies examined specific vocabulary use by women and men. Gleser, Gottschalk, and John (1959) collected five minute speech samples from 90 adult subjects. The words used by the subjects were classified according emotive, cognitive, and perceptive processes. The authors found significant differences in the uses of these categories of words. The females used more words implying feeling and words related to self. The males, on the other hand, used more words referring to time,

space, quantity, and destructive action. It should be noted with this study, however, that the task required of the subjects may have influenced the results. Subjects were asked to report a memorable life experience. It is likely that women and men talked about different types of experiences, resulting in the use of different vocabulary.

Gilley and Summers (1970) looked at the use of hostile verbs in relation to sex differences. Their subjects were 100 undergraduates from introductory psychology classes. The procedure involved presenting each subject with a series of cards showing a pronoun and two verbs. Each verb was either hostile or neutral. The subjects were to make up a sentence using the given pronoun and one of the verbs. The results indicated that the males chose to use the hostile verb as compared to the neutral verb significantly more often than did the females. The authors concluded that men are less inhibited in expressing hostility than women.

A number of recent studies have attempted to find differences in the use of sex-marked speech. A marker, according to linguist Labov (1972), is any word or phrase which identifies an individual as a member of a particular group. Thus, a sex-marker identifies one linguistically as either female or male. For example, a study by Crouch and Dubois (1980) looked at five specific linguistic variables which according to the literature are used

more frequently by women than by men. These variables were tag questions, broken fluency, interjections, garbles, and semantically empty expression. These particular variables were chosen because they have been used to "label women's speech as deviant from males and therefore inferior". The language samples were audiotaped from twelve 50 minute laboratory sessions of a university speech class. When analyzing the data, the authors found no significant differences in the speech of females and males with regard to the five variables.

Bauman (1976) attempted to identify differential use by the sexes of both tag questions, and "qualifying prepatory statements" or preface qualifiers. These are phrases or statements which precede a declarative and qualify its impact, such as "I may be wrong but," or "You may not agree with me but". Bauman collected audiorecordings in four separate settings, a graduate linguistics class, a women's discussion group, an office staff meeting, and a party with both women and men present. Unfortunately, the tape of the party setting was too garbled to be analyzed. In the remaining three settings, however, Bauman reported that there were no differences related to sex with regard to the two language variables analyzed.

A third study which failed to find differences in the use of sex-marked speech was conducted by Silverman and Zimmer (1976). The authors were testing Jespersen's

(1922) hypothesis that women are more fluent than men due to their smaller and more "central" vocabularies. Ten males and 10 females were audiotaped for three minutes while speaking about a memorable life experience. The authors reported that there were no differences in the males' and females' vocabulary use. Also analyzed were four variables used to assess fluency. These variables were filled pauses, repeats, false starts, and unfilled speech. There were no sex differences in any of these fluency measures.

However, in addition to these studies which have been unable to detect differences in sex-marked speech, there are a number of studies which provide support for the basic hypothesis of differences in the use of male and female sex-markers. For example, an informal study by Lapadat and Seesahai (1977) provided mixed support for Lakoff's hypotheses. Taped samples of college students' conversations in dormitory residence halls were collected. Upon analysis of the tapes, it was found that, in support of Lakoff's hypotheses, females used intensifiers, exaggerations, and indirect imperatives more than males. However, contrary to expectations, it was found that males used significantly more tag questions than females.

McMillan, Clifton, McGrath and Gale (1977) found firm support for some of the hypothesized differences in

women's and men's speech styles. This study used same and mixed-sex groups in a problem solving task. The groups were audiotaped and the language analyzed for four linguistic variables, intensifiers, modal constructions, tag questions, and imperative constructions in question form. The results indicated that women use all four of these linguistic variables significantly more than men. Analyzing differences between the same and mixed-sex groups, it was found that men's language did not change as a function of the sex composition of the group. The women's language, on the other hand, showed significant differences between the two group situations. Women in the mixed-sex group used significantly more tag questions, modal constructions, and imperative constructions in question form than did women in the same-sex groups. Interestingly, women in the same-sex groups used significantly more intensifiers than women in the mixed-sex groups. The authors concluded that although there are overall sex differences in language use, these differences are more pronounced in mixed-sex groups.

Hartman (1976) undertook a descriptive study of older adults to directly test various aspects of the Lakoff (1975) hypotheses. The results of this study provided support for Lakoff's hypothesis that women use tag questions more frequently than men. Although the women Hartman interviewed did not use formal tag questions,

they frequently ended sentences with phrases such as "see?", "do you see?" and "you know?". Hartman maintains that these phrases function in the same way as a tag question in that they are a call for validation by the speaker. She also noted that these forms made the speaker sound tentative and unsure of herself.

Finally, Swacker (1975) when having subjects describe a picture, found that females tended to qualify their speech when talking about numbers. For example, where a male would say "There are six books", a female would say "There are about six books", thus qualifying the description.

Thus, it can be seen that a number of studies have produced conflicting results as to the evidence for differences in the use of sex-marked speech. There are likely to be a number of factors influencing the production of sex-marked speech. These factors include not only the sex of the speaker, but also the situation in which the language sample is gathered, the sex composition of the participants, the number of participants involved, the relative status of the participants, and the age of the participants, to name just a few. It is necessary in future research to isolate these factors and their effect on the production of sex-marked speech.

The third major area of research on sex differences in the use of language has analyzed variables which

relate to interactional patterns. These variables include speaking time, interruptions, and topic control. For example, in a study in which male and female college students were asked to describe artistic drawings, Swacker (1975) reported extreme sex differences in speaking time. It was reported that the 17 male subjects spoke, on the average, for 13 minutes, while the 17 female subjects spoke, on the average, for three minutes. However, as the author pointed out, these results are not entirely accurate since three of the male subjects continued speaking through the end of the 30 minute cassette tape. There is no way of knowing how much longer these subjects would have continued talking had the experimental sessions not been ended. Importantly, when these three high scores were eliminated from the analysis, the results were not significantly affected.

A related finding was reported by Eakins and Eakins (1976) concerning the verbal behavior at seven different faculty meetings at a south western university. It was noted that males spoke more per turn, took a greater number of speaking turns, interrupted more frequently, and were interrupted less frequently than females. Similarly, Swacker (1976) when analyzing question-answer sessions at professional meetings, reported that men's questions were, on the average, 52 seconds, while women's questions were, on the average, 23 seconds.

Fishman (1978) reported findings with regard to male control of verbal interaction. Three married couples were audiotaped in their homes for a period ranging from four to 14 days. The tapes were transcribed and analyzed for sex differences in verbal interaction. Several interesting findings were reported. One, women asked questions more frequently than men. The questions were used both as initiators of interaction and as facilitors of male statements. Men, on the other hand, produced twice as many statements as women. Second, men were in control of the topic of conversation, most frequently by failing to respond to female initiated topics. Third, men interrupted women more often than women interrupted men. Fishman concluded that with regard to attempts at conversational interaction "women tried more often and yet succeeded less often than the men. The men tried less often and seldom failed in their attempts" (p. 404).

Zimmerman and West (1975) conducted a study of tape recorded conversations between dyads in informal settings. In these conversations there were 10 female-female pairs, 10 male-male pairs, and 11 mixed-sex pairs. The transcripts of these conversations revealed that for the same-sex dyads, the number of overlaps and interruptions was fairly equally divided between the first and second speaker. However, with the mixed-sex pairs, dramatic differences appeared. Essentially all the

interruptions and overlaps were exhibited by the male speakers. In mixed-sex dyads, males accounted for 98% of the interruptions and 100% of the overlaps. Additionally, both Eakins and Eakins (1976) and McMillan et al. (1977) found that not only did males account for most of the interruptions in an interaction, but that women were more frequently interrupted than other men.

Thus, it is a consistent finding that when women and men interact on a verbal level, men are in control of the situation. Men select the topic of conversation, dominate the speaking times, and frequently interrupt women when they try to speak.

Sex Differences in Children's Speech

Since it appears that there are differences in the use of language by adult speakers, researchers have begun to search for the origins of these differences by turning their interest to children, and sex differences in children's speech. Unfortunately, there is to date very little research on sex differences in children's speech, especially research aimed at specific linguistic variables or interactional patterns which are characteristic of women's and men's speech styles. Early studies conducted on sex differences in children's speech focused on differences in the rate of langugate acquisition. These studies generally indicate that girls' language

acquisition is more rapid than boys'. Girls produce their first phonemes earlier than boys (Harms and Spiker, 1959; Irwin and Chem, 1946), acquire their first words at an earlier age (Morley, 1957), and by approximately two years of age, have a larger vocabulary than boys (Hogan, 1976; Nelson, 1973).

A number of studies have been conducted which measure sex differences in the amount of speech production in infants and young children. For example, Moss (1967) found that three-week-old girls vocalized more to their mothers than did three-week-old-boys. Cherry and Lewis (1976) reported a trend for two-year-old girls in play situations with their mothers to produce more speech than boys. Finally, Brownell and Smith (1973) analyzed the speech of four-year-old children in four conditions, with a teacher and a number of different children in each condition. They found that in all four conditions, the girls produced significantly more speech than the boys.

The greater loquacity of girls as compared to boys, however, is not a consistent finding. Garvey and BenDebba (1974) when pairing children ranging in age from three to five years in same and mixed-sex play dyads, found no sex differences in the amount of speech produced. Sause (1975) reported greater speech by kindergarten boys than kindergarten girls.

It is undoubtedly the case that a number of factors influence the production of speech, thus explaining the conflicting results in the previously mentioned studies. For example, the task involved, the sex of the listener, the age of the speaker, and individual differences are all likely to play an important part in influencing the child's speech production.

There are few studies in the literature which assess sex differences in children's speech with regard to specific male and female speech styles. Two studies have analyzed children's ability to identify statements as sex-linked, that it, as spoken by either a woman or a man. Fillmer and Haswell (1977) presented 28 sex-linked statements to grade school children. Their results indicated that the children were able to identify most of the statements as either female or male. Unfortunately, the results were pooled over all grades making it impossible to ascertain whether or not there was a developmental progression in the accuracy of the children's identifications. The study by Edelsky (1976a) reviewed earlier, however, does provide that information. It is apparent that children's accuracy in this type of task improves with age.

Two studies with children have used a methodology of having prepubertal children audiotaped and asking adults to identify the sex of the child speaker. Edwards

(1977) audiotaped children reading from a prose passage. Adults' accuracy in identifying the sex of the children was approximately 83%. When analyzing the criterion adults were using to make their judgements, Edwards concluded that roughness of speech as opposed to correct pronunciation was the most important factor. Those children with clear, correct pronunciation were judged to be girls, while those children whose speech was more rough were judged to be boys. Meditch (1975) audiotaped 11 children in an interview situation and in individual free play. Adults judging the sex of these children showed an accuracy rate of approximately 80%. Meditch contends that such a high rate of accuracy in identification indicates the children's use of sex-marked speech. However, since she fails to analyze the children's speech for particular sex-marked language patterns, it is impossible to know if the children are using different pitches or intonations, using different styles of interaction, or using different linguistic variables.

In summary, research on sex differences in childrens' speech reveals four distinct findings. One, girls' language apparently develops at a more rapid rate than boys'. Two, girls of young ages may talk more than boys. Three, children show a developmental progression of improved accuracy with age in their ability to identify speech as sex-linked. And finally, adults are able to

be fairly accurate in assigning the correct sex to an unknown child speaker.

Sex Role Development

It is possible that the use of sex-marked speech is related to an individual's sex role orientation, that is, one's adoption of traditional masculine and/or feminine traits and characteristics. For example, a highly feminine person may be more likely to include female sex-markers in their speech, while a highly masculine person would be very careful to avoid female sex-markers.

There are three major theories of how children come to view themselves and to behave in masculine and/or feminine ways. First, are identification theories of sex-role development (Freud, 1933; Kagan, 1964). These theories postulate that children, as the result of various psychological processes, identify with the same-sex parent. As a result of this identification, the child adopts the masculine or feminine characteristics of the parent. A second major theory of sex-role development is based on social learning theory. In accordance with social learning principles, this theory postulates that children imitate or model same-sex individuals, especially the parents. This modeling behavior is then positively reinforced by the model or others, which tends to perpetuate the sex-appropriate behavior.

A third major theory of sex-role development, and the one of interest to this study, is a cognitive-developmental theory of sex-role development (Kohlberg, 1966). This theory postulates three main stages or steps in the acquisition of sex-role identity. The first stage is the emergence of a stable gender identity. This is a gradually occurring process whereby the child learns to identify their own sex, to identify the sex of others, and to know that sex is a stable, unchanging category. This process is usually completed by six or seven years. In the next stage, the child categorizes behaviors and activities according to sex, and imitates those behaviors which are seen as sex-appropriate. For example, girls tend to value and prefer toys labeled as girls' toys while boys' tend to value and prefer toys labeled as for boys (Thompson, 1975). The third step of sex-role development, according to Kohlberg, is an emotional attachment to the same-sex parent. It should be noted that these three steps, while occurring in a linear fashion, may overlap to a large extent.

Statement of the Problem

This study attempts to provide answers to a number of questions with regard to the development of sex-marked speech. First, both Lakoff (1975) and West and Zimmerman (1977) have noted similarities between women's speech

and children's speech. It is reasoned that since the early language environment for most children is largely female, children learn to speak a female language. As children enter elementary school and are exposed to a broader language environment, it is assumed that female sex-markers are dropped from the boys' speech style and strengthened in the speech of girls. This change in speaking styles in the elementary years is hypothesized to account for subsequent sex differences in adult speech patterns (Figure 1).

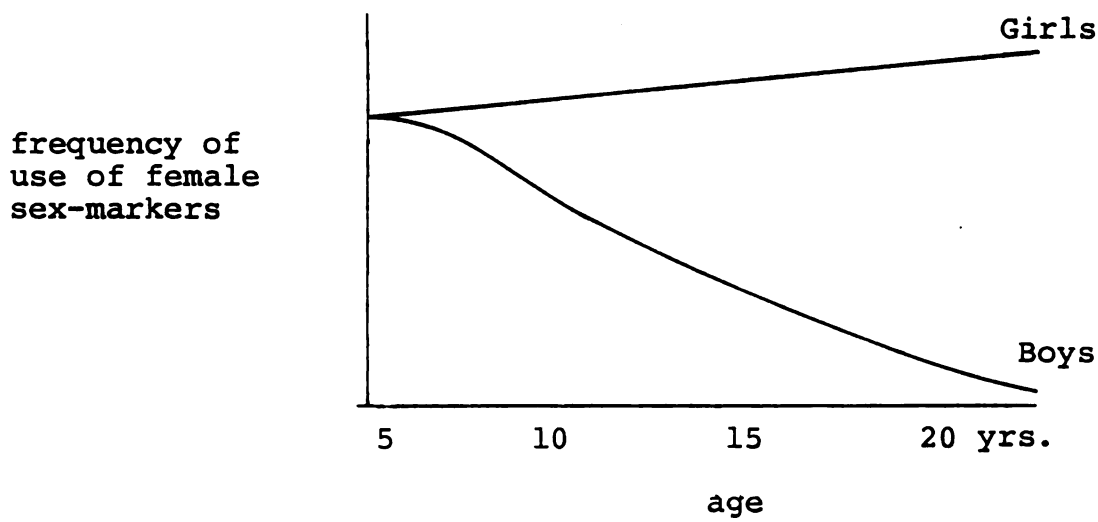


FIGURE 1.--Theoretical developmental progression of the use of sex-marked speech.

This study directly tests this assumption by assessing the use of a number of linguistic variables which are considered by the research literature to be female sex-markers. These variables are divided into three categories. The first category is fillers, which are defined

as words or phrases indicating hesitancy in speech. The second category is qualifiers, which are defined as words or phrases indicating uncertainty in speech. The third category of female sex-markers assessed is female word usage, which is defined in terms of words more likely to be used by females than by males (Appendix A).

Second, as noted earlier, it is evident that adult males tend to speak more than adult females. Yet the research on young children indicates that girls, at least prior to age five, tend to speak more than boys. Thus, the question naturally arises as to when this apparent shift in spontaneous speech production occurs. This study attempts to answer this question by assessing the amount of speech produced by children while doing a description task. Speech production was determined by the number of phrases used. A phrase is defined as a meaningful unit of words separated with a distinct pause by the speaker.

Third, this study examines the relationship between the production of sex-marked speech and its recognition. According to cognitive-developmental theory as children enter the second stage of sex-role development, they categorize the world into male/female spheres, and adopt those behaviors which are appropriate for their sex. Thus, one could predict that as children become aware that certain speech characteristics are associated with

females, that they will either add or delete these characteristics from their speech according to their sex.

Hypotheses

Hypothesis I: Girls will show an increase with age in the spontaneous production of female sex-marked speech and boys will show a decrease with age.

Hypothesis II: By fifth grade there will be significant differences in the production of female sex-marked speech, with girls using more markers than boys.

Hypothesis III: In terms of the amount of speech production, boys will increase with age and girls will decrease with age.

Hypothesis IV: By fifth grade there will be significant differences in the amount of speech production, with boys producing more than girls.

Hypothesis V: All children will improve with age in the ability to recognize statements as sex-linked. For girls, there will be a positive relationship between the recognition of sex-marked speech and its production. For boys, there will be a negative relationship between the recognition of sex-marked speech and its production.

METHODS

Subjects.--Children were recruited for participation in this research from the East Lansing public schools. Permission letters explaining the research project were sent home from school with children in kindergarten, third and fifth grades. Parents were informed that if their child participated, she/he would be asked to complete a questionnaire which included three statements using the word "damn". Parents were allowed to stipulate that their child not be exposed to those statements. Six parents objected to the use of this word and their children completed an alternate questionnaire from which the word "damn" was deleted (Appendix D). Forty-eight children were selected for participation in the research. The children were grouped as follows; eight boys and eight girls from the fifth grade, the third grade, and kindergarten. All children were white, monolingual, native English speakers.

Tasks.--Three tasks were required of each child. Two description tasks were used to obtain an audiotaped language sample for each child. The first description task involved responding to, and describing, a series of

seven artistic drawings by artist M. C. Escher (Appendix B). The drawings were specifically chosen for their richness of detail in order to provide the children with much to talk about. They were carefully screened to avoid overt sexual or violent content. In addition, the pictures were chosen for their ambiguity of content. It was assumed that such ambiguity would elicit female sex-markers in the form of qualified or filled speech. In the second description task, each child described their home. This description task was chosen in order to compensate for any child who may have had difficulties with the picture description task. It was assumed that children who had little to say about the pictures could be drawn out more when talking about their house. Thus, this task was included to insure a sufficiently long langugage sample from each child. Further, it was assumed that since talking about their house was a topic of which most children could be certain, the use of qualified and filled speech would decline in this conversational situation.

Upon completion of the two description tasks, each child responded to a questionnaire designed to assess their knowledge of sex-linked statements (Appendix C). The questionnaire was adapted from that used by Edelsky (1976a). It included 18 statements, ten of which are considered female by the literature, six of which are

male, and two which are netural in language style. The male statements included imperatives and swear words. The female statements included female lexical items, qualified statements, and indirect imperatives. Children were allowed only one of two responses to each statement, female or male. This forced choice was used to prevent a response of "either male or female" from functioning as an "I don't know" response for young children.

The order of these three tasks was fixed. The description tasks preceded the questionnaire because it was believed that the questionnaire would focus the children's attention on differences in male and female language styles. Such a focus could subsequently alter their own speech styles, producing differences that were a function of exposure to the questionnaire rather than other factors.

Procedure.--Each child was seen individually by one of two experimenters. Half the children were seen by a female experimenter, half the children by a male experimenter. Each experimenter saw an equal number of girls and boys from each grade level. Prior to data collection the experimenters were trained in the experimental procedure during practice sessions with preschool children.

The experimental session began with the picture description task. The instructions to the child were as follows:

> Now here is what we are going to do. I am going to show you some pictures. I want you to tell me everything you see in each picture. Okay? Let's start.

After the child completed the picture description task, the following instructions were read:

> Okay, that's enough pictures. You did well on those, thanks. Now, I want you to think about your house, where you live. Get a picture of it in your head. Got it? Okay, tell me all about where you live.

During both the picture description task and the house description task, the experimenters were instructed to carry on a normal conversational pattern with the children. The experimenters were allowed to ask questions of the child and to respond to the child's comments, with the understanding that the child was to do most of the talking. The experimenters were instructed to obtain a language sample of at least 15 minutes and no longer than 30 minutes. Within this time restriction, the amount of speech was up to the child.

Once the language sample was obtained, the child received the following instructions:

> Now I am going to read (show for third and fifth graders) to you some sentences. I want you to try to tell me whether you think a man said this sentence or whether a woman said this sentence. Okay? Let's try a few.

When the child completed the questionnaire, the experimental session ended. Each child was debriefed and escorted back to their classroom.

Transcription.--Each audiotape was transcribed by an undergraduate research assistant. Due to the unavailability of a large number of assistants, double transcriptions were not attempted. However, each transcript was checked twice for accuracy by the primary investigatory prior to coding.

Coding.--Each transcription was coded for the frequency of female sex-marked speech. Eight different variables were coded for (Appendix A). Subsequent to coding the variables were combined to represent three major categories of female sex-markers. Each transcript was double coded by two of four undergraduate research assistants. In addition, the primary investigator coded all transcripts. The assistants' codings were then compared to the primary investigator's to assess reliability. In terms of percent agreement, the overall reliability of all coders was 97%. The data was then averaged across all three codings in order to have a single set of data points for each subject.

RESULTS

Due to the large number of F tests performed, alpha was set at .01. This was to obviate the probability of spuriously significant results. However, due to the exploratory nature of this research topic, results meeting the .05 level of significance will be reported as trends in the data. This is based on the assumption that such additional information will be of interest to other researchers attempting to address similar issues with regard to the development of sex-marked speech.

> Hypothesis I: Girls will show an increase with age in the spontaneous production of female sex-marked speech and boys will show a decrease with age.

To evaluate Hypothesis I, an analysis of variance was conducted with four dependent variables, the overall use of sex-marked speech, and the specific markers, qualifiers, fillers, and female lexicon. Each of these variables was divided by the individual's speech production, as measured by number of phrases, in order to determine it's rate of use. Included in the analysis as independent variables were subjects' grade level, sex, the type of description taks, and experimenters' sex. Hypothesis I was not supported by the data. The analysis produced two

main effects in the overall use of sex-marked speech (Table 1). First, use of female sex-marked speech increased significantly with grade level ($F = 9.357$, $p < .001$). Second, a trend appeared for subjects to use more sex-marked speech with the male experimenter ($F = 4.848$, $p < .031$). There were no interaction effects in the overall use of female sex-markers.

Main effects for the use of fillers (Table 2) indicated subjects used significantly more fillers with the male experimenter ($F = 12.865$, $p < .001$), and in the house description taks ($F = 7.516$, $p < .008$). A trend in the data indicated that use of fillers increased with age ($F = 4.021$, $p < .021$).

Interaction effects indicated that both kindergartners ($F = 7.899$, $p < .009$) and fifth graders ($F = 8.878$, $p < .006$) used significantly more fillers with the male experimenter. The third graders did not change in their use of fillers as a function of the experimenter (Figure 2).

A sex by experimenter interaction revealed that the boys' use of fillers did not change with the experimenter. The girls, however, used significantly more fillers with the male experimenter ($F = 14.719$, $p < .001$) than with the female experimenter. Additionally, with the female experimenter, the girls tended to use fewer fillers than did the boys ($F = 6.402$, $p < .015$) (Figure 3).

TABLE 1.--Use of Female Sex-marked Speech (means).

Grade	K	3	5	
	.18	.26	.30	$p < .001$
Sex	F	M		
	.25	.24		N.S.
Sex of E	F	M		
	.22	.27		$p < .031$
Description	Pic.	House		
	.25	.24		N.S.

TABLE 2.--Use of Fillers (means).

Grade	K	3	5	
	.16	.18	.21	$p < .021$
Sex	F	M		
	.18	.19		N.S.
Sex of E	F	M		
	.15	.21		$p < .001$
Description	Pic.	House		
	.16	.21		$p < .008$

2-way Interactions

	Sex of E			Sex of E			
Grade	F	M		Sex	F	M	
K	.12	.19	$p < .009$	F	.13	.23	$p < .001$
3	.18	.18	N.S.	M	.18	.20	N.S.
5	.16	.27	$p < .006$				

3-way Interactions

	Sex of E Boys			Sex of E Girls			
Grade	F	M		Grade	F	M	
K	.16	.19	N.S.	K	.07	.20	$p < .001$
3	.18	.21	N.S.	3	.18	.15	N.S.
5	.20	.20	N.S.	5	.13	.32	$p < .001$

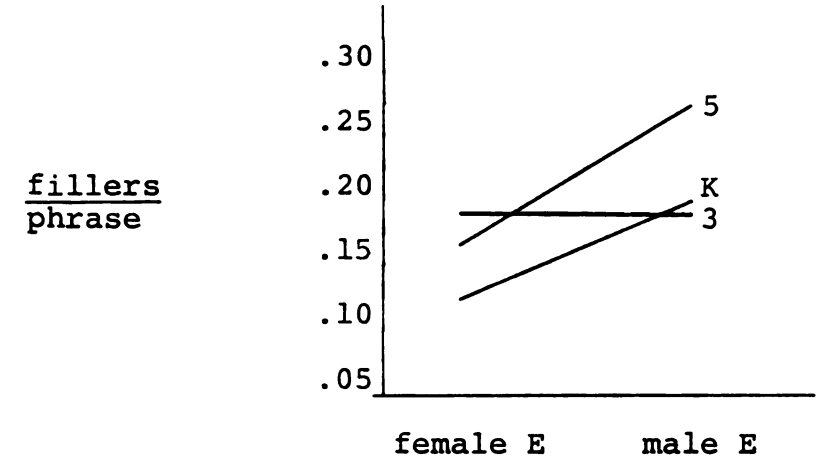


FIGURE 2.--Grade by experimenter interaction, fillers.

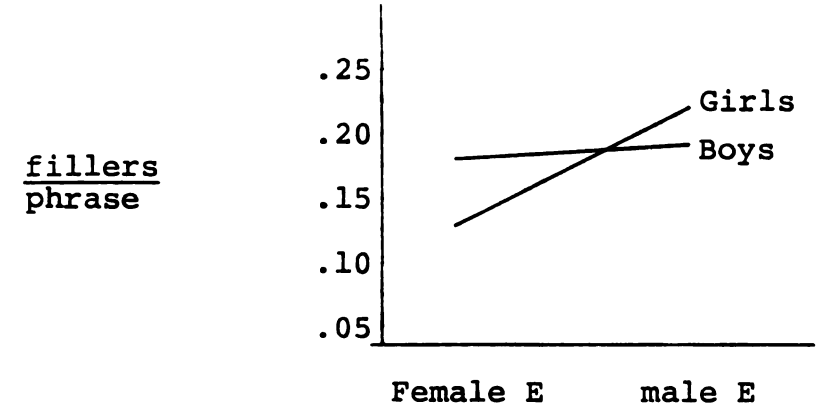
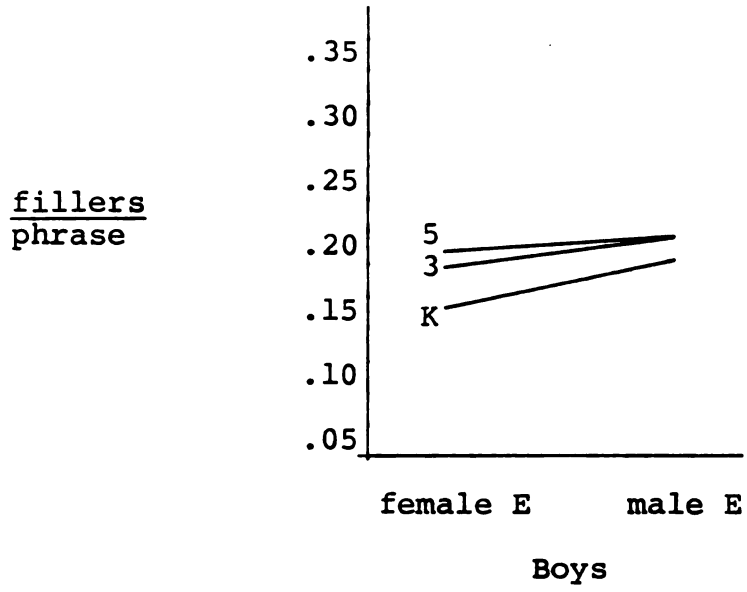


FIGURE 3.--Sex by experimenter interaction, fillers.

A three-way interaction of sex, grade, and experimenter was consistent with the two-way interactions. Both kindergarten girls ($F = 35.903$, $p < .001$) and fifth grade girls ($F = 19.163$, $p < .001$) significantly increased their use of fillers with the male experimenter. Neither the third grade girls nor the boys showed an experimenter effect (Figure 4).

An analysis of variance with qualifiers as a dependent variable produced a significant main effect for grade which indicated that both third graders and fifth graders used qualifiers more than kindergarteners ($F = 15.740$, $p < .001$). A significant main effect for type of description task revealed that qualifiers were used more in describing the pictures ($F = 41.116$, $p < .001$) (Table 3). A two-way interaction of age and task, consistent with the main effects, indicated that the kindergarteners use of qualifiers did not change as a function of the description task. Both the third graders ($F = 9.616$, $p < .004$) and the fifth graders ($F = 36.042$, $p < .001$) used significantly more qualifiers in the picture description task (Figure 5).

Unfortunately, it was not possible to analyze the use of female lexicon because the frequencies of use were too small to be meaningful.



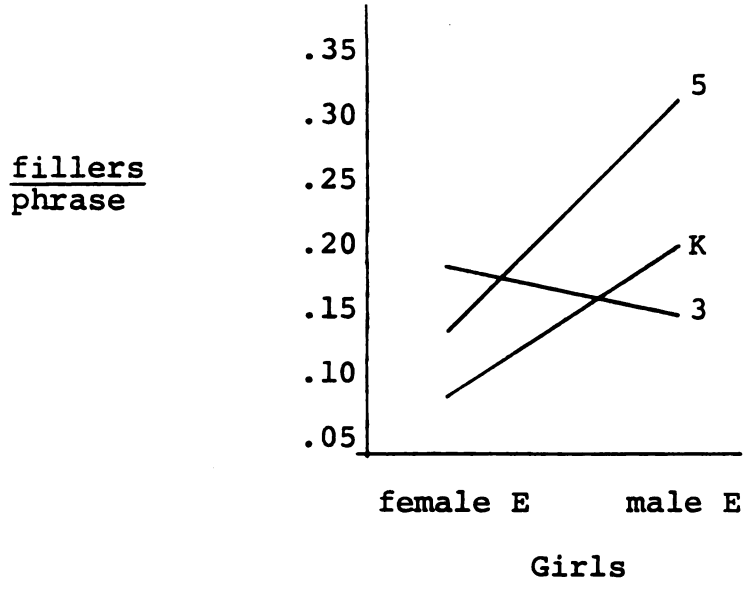


FIGURE 4.--Sex by grade by experimenter interaction, fillers.

TABLE 3.--Use of Qualifiers (means).

Grade	K	3	5	
	.02	.07	.08	$p < .001$
Sex	F	M		
	.06	.05		N.S.
Sex of E	F	M		
	.06	.05		N.S.
Description	Pic.	House		
	.09	.03		$p < .001$

2-way Interaction

Grade	Picture Description	House Description	
K	.03	.01	N.S.
3	.10	.04	$p < .004$
5	.12	.03	$p < .001$

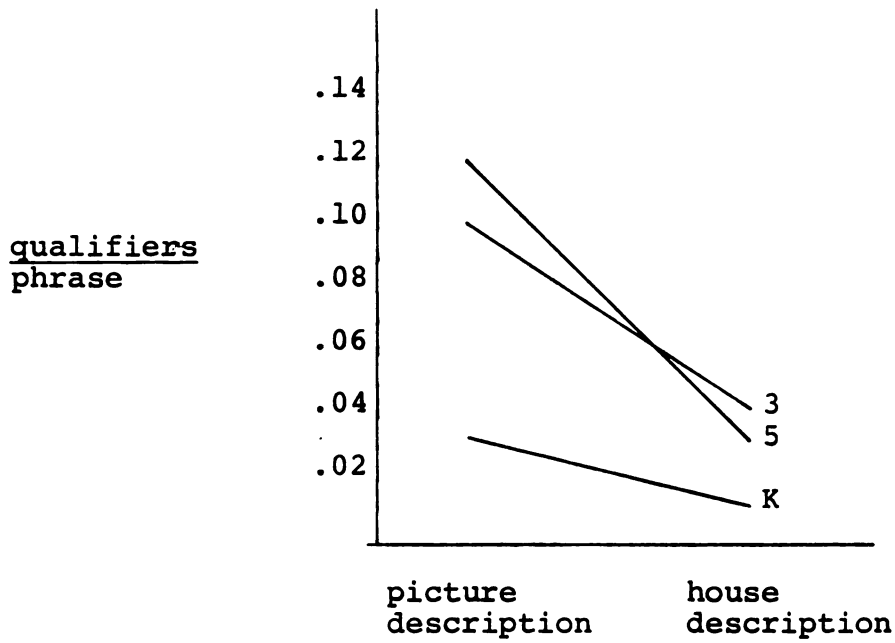


FIGURE 5.--Grade by description task interaction, qualifiers.

Hypothesis II: By fifth grade there will be significant differences in the production of female sex-marked speech, with girls using more markers than boys.

Fifth graders use of sex-marked speech was subjected to analyses of variance with sex-markers as dependent variables, and sex of subject, sex of experimenter, and description task as independent variables. There was no significant main effect indicating sex differences in speech styles (Table 4). There was a trend in the data indicating that the overall use of sex-marked speech increased with the male experimenter ($F = 4.633$, $p < .042$). A sex and experimenter interaction revealed that the boys' use of sex-marked speech did not change as a function of experimenter, while the girls used significantly more sex-marked speech with the male experimenter as compared to the female experimenter ($F = 11.663$, $p < .004$). A further analysis of the means of this interaction found that when the experimenter was male, the girls tended to use more sex-marked speech than the boys ($F = 4.832$, $p < .045$) (Figure 6).

The analysis of the specific categories of sex-marked speech indicated that the effects for the use of fillers mirrored the effects for the overall use of sex-markers (Table 5). Thus, it is reasonable to conclude that the use of fillers accounted for the results seen in looking at the overall use of sex-marked speech. A

TABLE 4.--Use of Female Sex-marked Speech, 5th Graders (means).

Sex	F	M	
	.31	.28	N.S.
Sex of E	F	M	
	.25	.34	$p < .042$
Description	Pic.	House	
	.31	.28	N.S.
	2-Way Interaction Sex of E		
Sex	F	M	
F	.21	.40	$p < .004$
M	.29	.28	N.S.

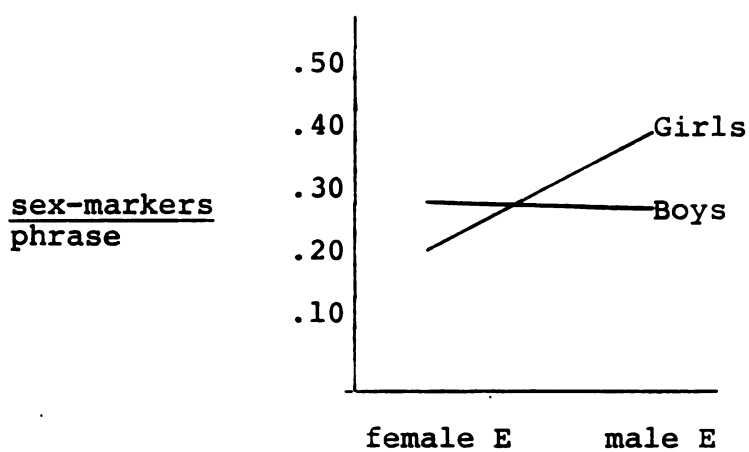


FIGURE 6.--Sex by experimenter interaction, sex-markers.

TABLE 5.--Use of Fillers and Qualifiers, 5th Graders (means).

	Fillers		
Sex	F	M	
	.23	.20	N.S.
Sex of E	F	M	
	.16	.27	$p < .003$
Description	Pic.	House	
	.18	.24	N.S.
	2-Way Interaction Sex of E		
Sex	F	M	
F	.13	.32	$p < .001$
M	.20	.21	N.S.
	Qualifiers		
Sex	F	M	
	.08	.08	N.S.
Sex of E	F	M	
	.08	.07	N.S.
Description	Pic.	House	
	.12	.03	$p < .001$

significant main effect in the use of fillers indicated that the subjects used more fillers with the male experimenter ($F = 10.546$, $p < .003$). The sex and experimenter interaction showed that the boys' use of fillers did not change with experimenters. On the other hand, the girls used significantly more fillers with the male experimenter than with the female experimenter ($F = 19.163$, $p < .001$). Additionally, the analysis indicated that when the experimenter was male, there was a trend for girls to use more fillers than boys ($F = 4.517$, $p < .052$) (Figure 7).

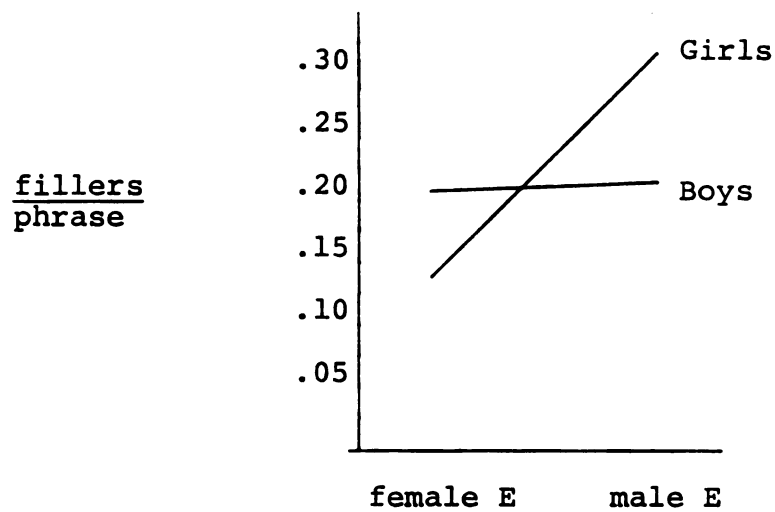


FIGURE 7.--Sex by experimenter interaction, 5th graders use of fillers.

A significant main effect for qualifiers showed that fifth graders used qualified speech more in the picture description task as compared to the house

description task ($F = 35.038$, $p < .001$). There were no interaction effects in the use of qualifiers.

Again, the frequency of female lexicon was too small to permit meaningful analysis.

> Hypothesis III: In terms of the amount of speech production, boys will increase with age and girls will decrease with age.

Using the number of phrases spoken as the indicator of loquacity an analysis of variance revealed a trend in the data toward significant sex differences ($F = 4.765$, $p < .032$). However, the proposed interaction between sex and age was not evidenced. At all three grade levels the boys produced more speech than the girls, while the loquacity of both sexes generally increased with age (Figure 8).

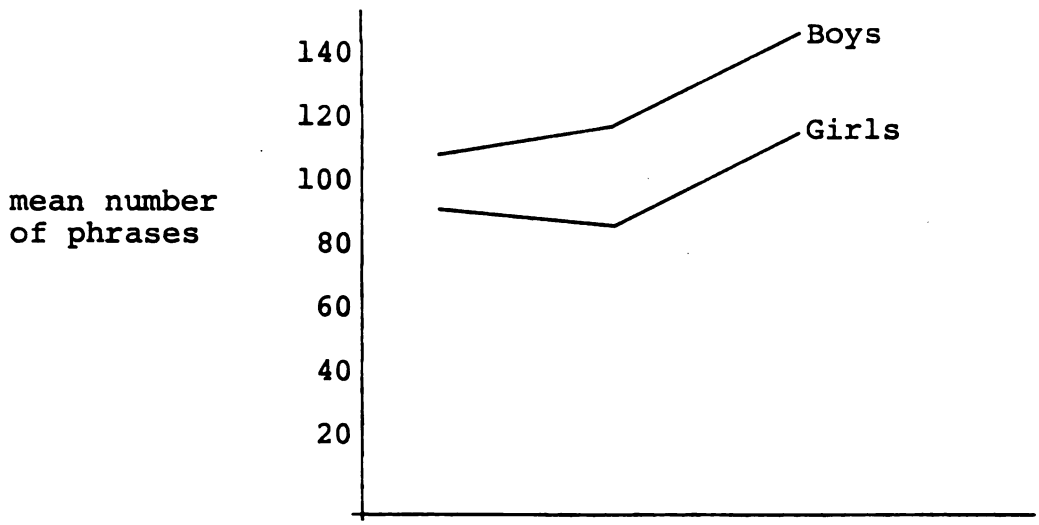


FIGURE 8.--Total speech production by grade.

Due to the experimental procedure which generally allowed for a greater amount of speech in the picture description task, speech production for the two description tasks was separately analyzed. Analysis of the picture description task (Table 6) produced significant main effects for sex ($F = 12.438$, $p < .001$) with boys more loquacious than girls, and for experimenter ($F = 6.734$, $p < .01$) indicating that subjects spoke more with the male experimenter. A trend in the data indicated that firth graders produced more speech than either the third graders or the kindergarteners ($F = 3.521$, $p < .04$).

A grade and experimenter interaction, consistent with the main effects, revealed that fifth graders speech production increased with the male experimenter ($F = 6.717$, $p < .02$). Additionally, when with the male experimenter, fifth graders produced more speech than the younger children ($F = 3.641$, $p < .044$) (Figure 9).

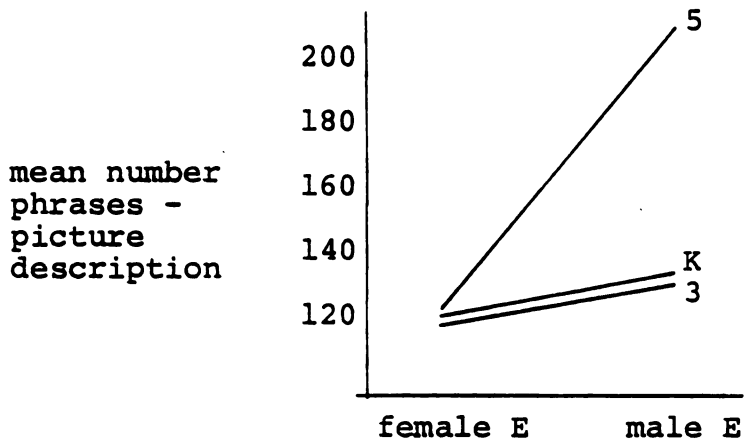


FIGURE 9.--Grade by experimenter interaction, picture description task.

TABLE 6.--Speech Production, Picture Description Task (means).

Grade	K	3	5	
	126.63	125.14	165.63	$p < .04$
Sex	F	M		
	114.21	164.04		$p < .001$
Sex of E	F	M		
	120.79	157.46		$p < .01$

2-way Interaction

Sex of E

Grade	F	M	
K	120.75	132.50	N.S.
3	119.88	130.38	N.S.
5	121.75	209.50	$p < .021$

In the house description task there was a significant main effect for experimenter ($F = 16.057$, $p < .001$) indicating that subjects spoke more with the female experimenter (Table 7). An interaction of sex and experimenter revealed that the boys' loquacity did not change as a function of experimenter, whereas the girls' did. When with the female experimenter as compared to the male, the girls' loquacity increased significantly ($F = 12.309$, $p < .002$). Additionally, when with the male experimenter, the girls produced less speech than the boys ($F = 7.364$, $p < .013$) (Figure 10).

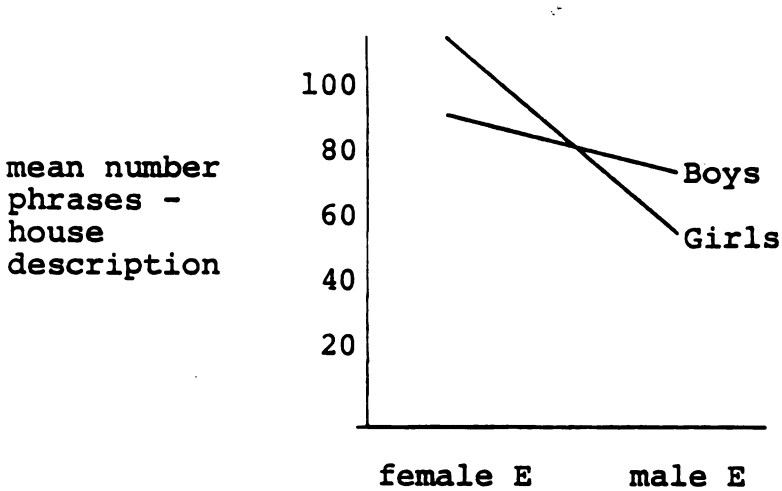


FIGURE 10.--Sex by experimenter interaction, house description task.

Hypothesis IV: By fifth grade there will be significant differences in the amount of speech production, with boys producing more than girls.

To evaluate this hypothesis, an analysis of variance was performed with number of phrases as the dependent

TABLE 7.--Speech Production, House Description Task (means).

Grade	K	3	5	
	72.87	76.56	95.19	N.S.
Sex	F	M		
	80.79	82.29		N.S.
Sex of E	F	M		
	99.00	64.08		$p < .001$

2-way Interaction
Sex of E

Sex	F	M	
F	107.25	54.33	$p < .002$
M	90.75	73.83	N.S.

variable, and sex of subject, sex of experimenter, and description task as independent variables. Main effects for sex of subject and sex of experimenter were non-significant. A significant main effect for description task indicated that subjects were more loquacious in the picture description task ($F = 19.327$, $p < .001$). Due to the experimental procedure, this was an anticipated outcome (Table 8). A sex and description task interaction indicated sex differences in loquacity in the picture description task ($F = 6.712$, $p < .021$), whereas there were no sex differences in the house description task. The interaction further revealed that it was the boys speech production which changed as a function of the situation ($F = 16.504$, $p < .001$), while the girls' speech production remained constant in both description tasks (Figure 11).

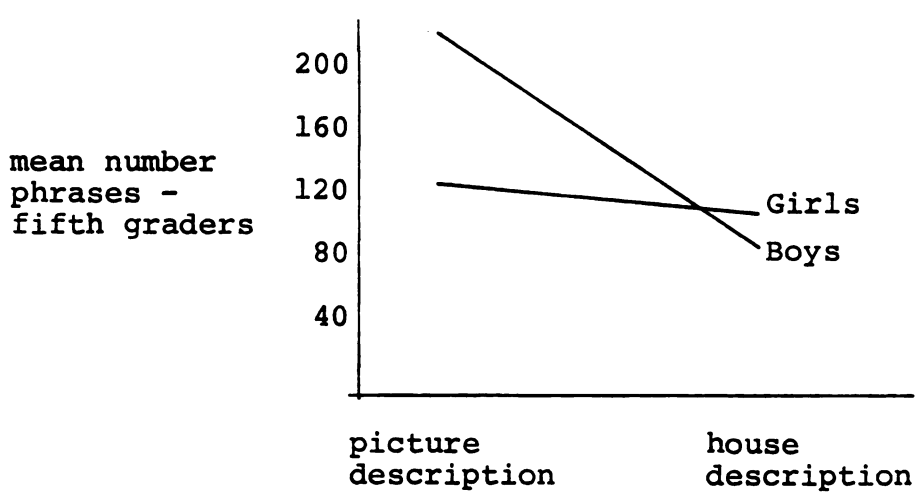


FIGURE 11.--Sex by task interaction, 5th graders.

TABLE 8.--Speech Production, 5th Graders (means).

Sex	F	M	
	115.38	145.44	N.S.
Sex of E	F	M	
	122.38	138.44	N.S.
Description	Pic.	House	
	165.63	95.19	$p < .001$
	2-way Interaction		
	Description		
Sex	Picture	House	
F	122.50	108.35	N.S.
M	208.75	82.15	$p < .001$
	Description		
Sex of E	Picture	House	
F	121.75	123.00	N.S.
M	209.50	67.37	$p < .001$

A description task and experimenter interaction showed that the subjects' speech production was constant with the female experimenter. However, with the male experimenter, the children produced significantly more speech in the picture description task ($F = 22.372$, $p < .001$). When analyzing the two description tasks separately, it was found that subjects spoke more with the male experimenter as compared to the female experimenter in the picture description task ($F = 6.717$, $p < .021$), and less with the male experimenter as compared to the female experimenter in the house description task ($F = 6.806$, $p < .021$) (Figure 12).

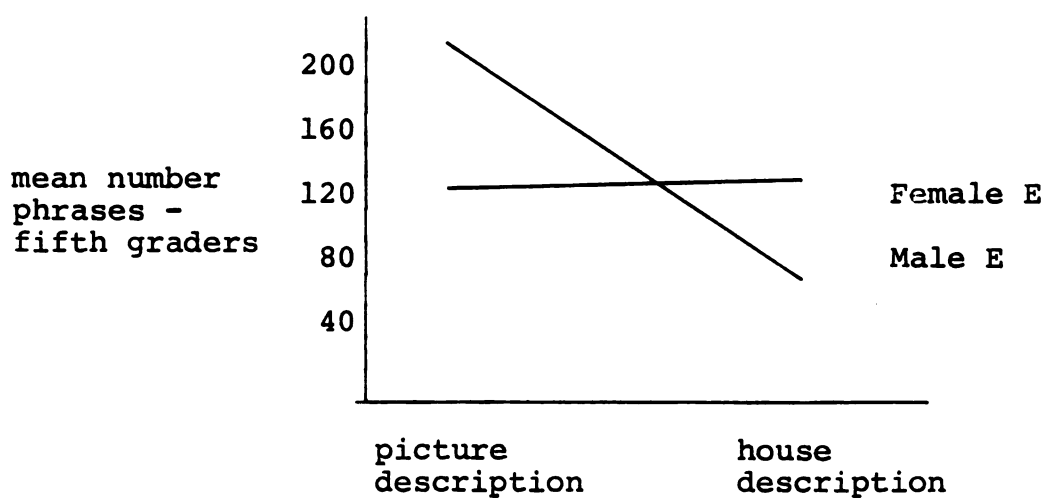


FIGURE 12.--Experimenter by task interaction, 5th graders.

Hypothesis V: All children will improve with age in the ability to recognize statements as sex-linked. For girls, there will be a positive relationship between the recognition of sex-marked speech and its production. For boys, there will be a negative relationship between the recognition of sex-marked speech and its products.

The children's responses on the questionnaire were checked for correctness. A response was considered correct if consistent with the accepted stereotypic view of male and female speech as indicated by the literature. Each child received a questionnaire score representing their percent correct responses. Due to the forced choice format of the questionnaire in which there were only two possible responses, chance was equal to .50. Table 9 summarizes the children's questionnaire scores.

TABLE 9.--Recognition of Sex-linked Statements (percent correct).

	Girls		Boys	
Grade	Mean	S.D.	Mean	S.D.
K	69.33	20.82	58.10	17.72
3	77.39	15.46	86.64	14.69
5	86.62	11.84	89.98	9.43

Clearly, the children's ability to identify sex-linked statements improved with age. Analysis of variance revealed a trend toward increased accuracy for the girls ($F = 3.402$, $p < .052$), while the boys showed a

significant improvement ($F = 9.722$, $p < .001$). At no grade level were there significant sex differences on the questionnaire scores.

To examine the relationship between the production of sex-marked speech and the recognition of sex-linked statements, a Pearson correlation coefficient was calculated relating the questionnaire scores to sex-marked speech. Since both sexes increased with age in the use of sex-marked speech and in the ability to recognize sex-marked speech, positive correlations were found for these variables. For girls, the relationship approached significance ($r = .21$, $p < .066$). For boys, a significant and positive relationship existed between the recognition of sex-marked speech and its production ($r = .38$, $p < .003$).

DISCUSSION

Sex-Marked Speech

Hypotheses I and II were formulated to examine the developmental progression of female sex-marked speech. It is frequently assumed that both boys and girls initially learn to speak with female sex-markers. This assumption is based on the nature of children's early language learning environment which is largely female. In addition, researchers (Lakoff, 1975; West and Zimmerman, 1977) have noted similarities between women's speech and children's speech. It is further assumed that during the elementary school years, boys begin to eliminate female sex-markers from their speech style, while girls maintain these markers (Jespersen, 1922, Lakoff, 1975, Meditch, 1975). This hypothesized developmental pattern assumes an interaction between sex and age which was clearly unsupported by the data. In order to evaluate the use of female sex-marked speech as apparent from the data, each specific category of sex-markers will be discussed.

Qualifiers.--Reviewing, qualifiers are defined as words or phrases which express the speaker's uncertainty. Qualifiers are assumed to be used by a speaker

not confident enough to make a direct statement. Qualifiers are defined by the literature as a female sex-marker.

There were no sex differences in the use of qualified speech. Instead, the two variables most predictive of qualified speech were age and the type of description task. The finding that the frequency of qualifiers was highly dependent upon the type of description task indicates the importance of "setting" or situation for the elicitation of this type of speech style. Since the pictures were specifically chosen to elicit qualifiers, it was not surprising that they did so. What is noteworthy is that both sexes responded equally to the pictures' ambiguity, and qualified their speech accordingly. It is also important to note that not only were there significant differences in the use of qualifiers as a function of the description task, but that this speech style essentially disappeared in the house description task. This dramatically underscores the importance of setting in the use of qualified speech.

Age also influenced the use of qualified speech. Kindergarteners used few qualifiers in their speech in either of the description tasks. The older children, on the other hand, used a significant number of qualifiers in the picture description task. Since qualifiers are defined as reflecting a speaker's uncertainty, one must wonder why this speech style was particularly prevalent

by third grade. There are two possible explanations for this finding.

First, due to the increased amount of time spent in an academic environment, the older children may have interpreted the experimental session as a test. Thus, the children may have believed that they could produce "right" or "wrong" answers to the experimenters' questions. In order to compensate for the possibility of a wrong answer, the children hedged their responses with qualifying statements. From the children's perspective this would have increased the probability of the experimenter, or tester, scoring their responses as correct.

Secondly, it is clear that the pictures used in this description task were ambiguous. As noted, they were specifically chosen for this quality. A well documented change that occurs during the elementary school years is a general decline in children's egocentrism. This is clearly demonstrated by such classic tasks as the Three Mountains Task (Piaget and Inhelder, 1967). It is possible that the children's decreasing egocentrism made it easier for them to perceive the pictures as ambiguous. That is, the younger children were able to view the pictures from only their own idiocyncradic perspective. Older children, observing the ambiguity of the pictures, recognized that they could be seen from multiple perspectives. Thus, rather than one specific description

of each picture, older children qualified their speech by asserting that a picture "could be" seen in a variety of ways.

Fillers.--Fillers are defined as reflecting the speaker's uncertainty. It is believed that when using filled speech, the speaker attempts to maintain a conversational turn while organizing the next statement. That is, filled speech allows the speaker to maintain a speaking turn while not actively contributing to the conversation. Fillers are assumed by the literature to be a female sex-marker.

Fillers, similar to qualifiers, were sensitive to setting in that fillers were used significantly more in the house description task as compared to the picture description task. This was contrary to expectation. It was assumed that the picture description task would elicit this sex-marker. However, this result can be explained as a function of the assumed purpose of filled speech; to maintain the floor while organizing the next sentence. In the house description task, the children were asked to describe from memory. While in the process of searching their memories for recall of their house, children used filled speech to maintain their conversational turn. Thus, this description task elicited a hesitant speech style.

While there were no significant main effects indicating sex differences in the use of fillers, interactional effects indicated that sex differences occurred with the male experimenter. From these results, it is reasonable to assume that the girls were more hesitant with the male experimenter, while the boys were unaffected by experimenter. Two possible explanations can account for this finding.

First, it should be noted that this finding is congruent with research by McMillan et al. (1977) which found that, with the exception of female lexical items, females used more sex-marked speech when in the company of males. McMillan et al. (1977) argue that the presence of a male interactant calls forth sex-role prescriptions resulting in female sex-marked speech. Thus, it is possible that the girls in this study attempted to act more feminine in the presence of the male experimenter by altering their speech styles accordingly.

Alternatively, there is research to indicate that children interact more comfortably with same-sex adults (Conan, Weber, Hoddinott, Klein, 1967). Yet in this sample the boys were equally unhesitant, or comfortable, with both experimenters, whereas only the girls indicated this cross-sex effect. Perhpas this result can best be explained by considering the children's everyday academic environment. In the school setting where most teachers

are female, boys are accustomed to dealing with an opposite-sex adult. Therefore, the female experimenter was not a novelty for them. Girls, on the other hand, do not have as much experience in dealing with an opposite-sex adult in the school setting. For them, interacting with the male experimenter was a novel event, and the strangeness of the situation is likely to have been a major factor eliciting their hesitant speech style.

The three-way interaction of age, sex, and experimenter occurred due to the fact that the third grade girls did not change in their use of fillers as a function of the male experimenter. This finding is anomalous to the arguments above for girls' speech style to change with an adult male. At this point, this anomaly in the data can only be attributed to sampling error. Further research addressing the variable nature of females' speech styles would be helpful in clarifying these results.

Female Lexicon.--Female lexical items are words or phrases which are unambiguously associated with female use. Unfortunately, as noted in the results section, the frequency of occurrence of this type of sex-marker was too small to permit analysis. It is reasonable to hypothesize therefore, that this particular form of sex-marked speech may be situationally specific, just as qualifiers and fillers appear to be. Further this particular

language situation failed, for some reason, to elicit the use of female lexical items. Research focusing on the situational aspects of sex-marked speech is needed in order to determine when female lexical items are most likely to be used. Additionally, the use of female lexical items may interact with age and be used by age groups other than the one sampled.

Fifth Graders Speech.--It was hypothesized that an interaction between age and sex would produce significant sex differences by the fifth grade. This hypothesis was unsupported by the data. The only sex differences apparent in the fifth graders speech lay in the girls greater use of fillers when with the male experimenter. However, since the use of fillers showed no consistent change in use with age, this finding cannot be used to support Hypothesis II. Generally speaking, the fifth graders use of sex-markers was consistent with the entire age sample and thus unremarkable in and of itself.

Thus far, the obtained results have been explained. Yet, as noted, these results are in opposition to the original hypotheses. There are several possible explanations for the lack of sex differences in speech style which were hypothesized to occur by fifth grade. One such explanation is offered by Trugill (1974) who notes, "The larger and more inflexible the differences between social

roles of men and women in a particular community, the larger and more rigid the linguistic behavior differences tend to be" (pp. 94-95). The children in this study may be thought of as occupying very similar social roles within the elementary school setting. From the children's perspective, they may be first and foremost children or students, and only secondarily boys and girls. Thus, the role of child, or the role of student may supercede the child's sex-role perceptions, and create a homogeneous language environment.

A similar argument for the lack of sex differences in speech styles lies in the assumption of most researchers in this field that female sex-marked speech reflects and sustains women's minority status. Girls of this age may not have yet incorporated a view of themselves as occupying a minority status, and thus have no need to communicate as such.

Additionally, the production of sex-marked speech appears to be situationally specific. Certainly, the results of this study support this conclusion. Lakoff (1975) has suggested that an academic setting suppresses differences in sex-marked speech. Several researchers (Bauman, 1976, Crouch and Dubois, 1980, von Raffler-Engel, 1978) collecting language samples in academic environments have been unable to find sex differences in language styles. While these studies have been conducted with

college students, it is possible to extrapolate the results to a younger age group and assume that the academic environment does suppress sex-marked speech. Further research using with-in subject designs and collecting language samples under a variety of settings would help to clarify this issue.

Summary.--It is clear from this research that the production of female sex-marked speech is substantially influenced by variables other than sex. Conversational setting is important in determining use of specific types of sex-markers. While sex may be an important variable in the elicitation of filled speech, it interacts with the sex of the listener. Due to this interaction girls' speech style is more variable than boys.

The findings that the use of both fillers and qualifiers increases with age necessitates new ideas with regard to the developmental pattern of sex-marked speech. Kaplan (1976) speculates that adolescence may be a critical time for sex differences in speech styles to emerge. It is hypothesized that as adolescents explore their new found sexuality and its implications for masculine and feminine behaviors, they may adopt speech styles which they believe to be sex appropriate. Based on this reasoning, and on the results of this study, a new pattern in the development of female sex-marked speech is proposed

in which children's use of sex-markers increase up to the adolescent years and then begins to diverge by sex (Figure 13).

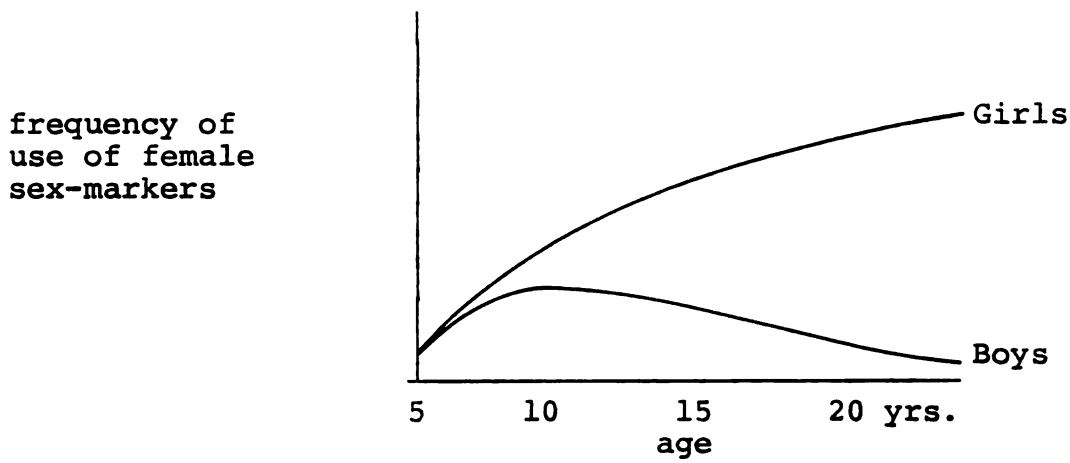


FIGURE 13.--Hypothesized developmental progression of sex-marked speech.

Alternatively, it must be considered that the development of sex-marked speech is too broad a phenomenon of study. Specific linguistic variants may follow different courses of development. For example, children as young as three months of age have been observed to exhibit differences in pitch dependent upon the sex of the listener (Lieberman, 1976). Thus, in attempting to establish when and how children learn sex-marked speech, researchers may have to isolate specific markers for study.

Speech Production

Hypotheses III and IV were formulated to examine the developmental pattern of loquacity. As noted in the

introduction, the research literature indicates that young girls tend to be more loquacious than young boys. Yet the research on adult loquacity indicates that males speak more than females. Unfortunately, there has been no research of the intervening years in order to determine when sex differences in loquacity shift direction. Hypothesis III was an attempt to explain this apparent shift (Figure 14).

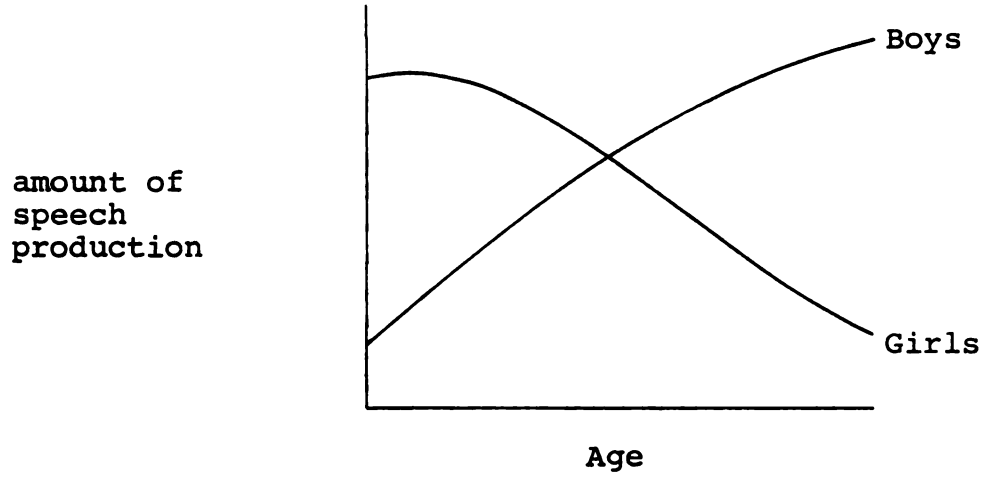


FIGURE 14.--Theoretical developmental progression of sex differences in loquacity.

This developmental pattern was unsupported by the data. Rather than girls' speech production decreasing as expected, both boys' and girls' speech production increased with age. Additionally, at all three grade levels, the boys' speech production exceeded the girls'. The developmental pattern apparent from this data indicates that the boys' speech production increases at a

more rapid rate than the girls'. Although this rate of increase was not sufficient to produce significant sex differences by fifth grade, one could assume that research with older individuals would produce the expected sex differences. Additional data on this particular pattern of loquacity is needed at this point to determine, not only its validity, but when sex differences in loquacity become apparent.

It is important to note that while there were overall sex differences in speech production, these differences were situationally specific. That is, sex differences in loquacity disappeared in the house description task. Numerous researchers (Klein, 1971, cited in Haas, 1979, Kramer, 1974, Sause, 1976) have noted sex differences in conversational content. It is reasonable to assume that loquacity interacts with conversational content in that topics which are of interest to males will induce greater loquacity by males. Conversely, topics of female interest will produce more speech by females. The description tasks used in this study could be construed as reflecting male interest (pictures) and female interest (house) topics. The fact that the boys' speech production was drastically reduced in the house description task indicates that this task was not as interesting for the boys as it was for the girls.

This line of reasoning is further supported by the experimenter effects on loquacity. The children spoke more with the male experimenter in the picture description task and more with the female experimenter in the house description task. These effects may reflect the experimenters' relative interest in the two tasks, and thus their willingness or ability to prolong the topic of conversation.

Fifth graders speech.--Contraty to expectations, there were no overall sex differences in loquacity by fifth grade. However, the sex and description task interaction indicated that with the picture description task boys were significantly more loquacious than girls. This finding underscores the importance of topic in influencing speech production.

The description task and experimenter interaction is consistent with this discussion. With the female experimenter, the children produced essentially the same amount of speech in both the picture description task and the house description task. However, with the male experimenter, the children's loquacity changed as a function of the description task. This again reflects the male's relative level of comfort with the two description tasks.

Recognition of Sex-marked Speech

Hypothesis V was partially supported in that children's ability to identify sex-linked statements improved with age. However, due to the finding that children's use of sex-marked speech also increased with age, there were positive relationships for both boys and girls. This was contrary to expectations. Due to this finding it is unreasonable to assume that children recognize speech as sex-linked and thus, subsequently alter their language behavior. There are two possible explanations for the lack of support for this hypothesized relationship. First, as the experimental instruction emphasized, the children were asked to identify statements as indicative of a man or woman speaker. As noted earlier, it is possible that grade school children perceive sex-marked speech as appropriate to adult status, but unnecessary for use by children. Thus, while children are aware of the linguistic differences between the sexes, the individual adoption of these linguistic styles is postponed until later ages when they are thought of as more appropriate.

Secondly, while children were able to accurately identify statements as sex-linked, it is possible that their judgements were based on criteria other than sex-markers. The linquistic components of sex-marked speech may comprise a variable too subtle for children to

identify. Edelsky (1976a) noted that often as not, children judged statements as sex-linked on the basis of content rather than on the basis of sex-markers. While the statements chosen for this study were carefully balanced in an attempt to avoid content bias, it is possible that such a bias entered into the children's judgements. In order to evaluate the presence of such a bias in the future, it would be necessary to interview subjects upon completion of the questionnaire to ascertain the reasoning behind their judgements.

Finally, it is important to note a serious methodological flaw in the assessment of stereotypic knowledge of language characteristics and subsequent individual regulation of language. As indicated by the variety of characteristics of male and female speech, sex-marked speech is not a unitary concept. Indeed, there are many separate and distinct components of sex-marked speech. The questionnaire used in this study was adapted from that used by Edelsky (1976a). The aspects of sex-marked speech assessed in this questionnaire included intensifiers, female adjectives, qualifying words, preface qualifications, tag questions, direct commands versus polite commands, and swear words. However, of the eight different sex-markers on the questionnaire, only five were included in the analysis of the children's speech. There were no

statements on the questionnaire reflecting fillers, one of the major categories of sex-markers assessed in subjects' speech samples. Thus, while the questionnaire and the speech analysis overlapped in some specific sex-markers, there was by no means a perfect overlap. It would seem necessary that any future attempts to relate the knowledge of sex-marked speech and its subsequent use must carefully assess the exact same sex-markers.

Conclusion

"Linguistic imbalances are worthy of study because they bring into sharper focus real-world imbalances" (Lakoff, 1975, p. 43). In the study of women's speech this viewpoint has dominated researchers' perspectives. Women's speech has been conceived of as deviant, inferior, and superfluous as compared to men's. While this may be a viable perspective on sex differences in speech styles, a developmental study of sex-marked speech can offer alternative interpretations of the use of female sex-markers. As an example, the use of qualified speech as revealing the ability to consider another's perspective is indicated from this study. This is distinctly different from viewing qualifiers as reflecting a speaker's uncertainty. As McMillan et al. (1977) suggest, it is possible to interpret many female sex-markers as indicative of a woman's sensitivity to the listener, rather

than of her own insecurities. It is clear that the developmental study of sex-marked speech can lend valuable understanding as to the meaning of sex-marked speech.

As the research literature in this area accumulates, it becomes increasingly clear that both speech production and use of sex-markers are influenced by, and interact with, variables other than gender. In this study, the most potent of these variables is setting. Since this variable has yet to be examined in other research designs, more data are needed to clarify its importance.

An additional variable which should be of interest to researchers in this area is an individual's sex-role orientation. Intuitively, it is reasonable to assume that what has been called male and female speech in the literature, should be called masculine and feminine speech. Indeed, two studies have noted a lack of female sex-markers in the language of female professionals (Busk, 1982; Hartman, 1976). It is possible to speculate that such professionals may have an androgynous or a masculine sex-role orientation which would influence their language styles, and thus, the use of female sex-markers.

If such a link between sex-role orientation and speech styles were to be established, speech style could be used as a sensitive indicator of an individual's sex-role orientation. It is reasonable to hypothesize than

an individual experiences minor fluctuations in sex-role orientation as a function of situation. Some situations, for example, interacting with an opposite-sex individual, may elicit greater feelings of masculinity or femininity. Such minor fluctuations in sex-role orientation cannot be readily assessed in the usual paper and pencil test (Bem, 1974). The study of speech styles, however, can offer important insight for understanding individual self-concept. Further, such a link between sex-role orientation and speech styles could become a valuable tool in the investigation of children's concepts of masculinity and femininity.

This study has been exploratory in nature, attempting to delineate developmental sequences in the use of sex-marked speech. The data have suggested sequences contrary to expectations. Further research with similar developmental perspectives is necessary to clearly and unambiguously establish a developmental model of the nature of sex-marked speech.

APPENDICES

APPENDIX A

APPENDIX A

Variable List

1. Fillers - words or sounds indicating hesitancy in speech: a way to maintain the conversational floor; "uhm, umm, well"

2. Qualifiers - words or phrases indicating uncertainty in speech;
   a. qualifying words - "sort of, kind of, maybe" "It's kind of cold today."

   b. declarative questions - declarative statements intonated as a question; "It's cold today?"

   c. preface qualifications - word or phrase prior to a declarative which qualifies the declarative; "I'm not sure but,..."

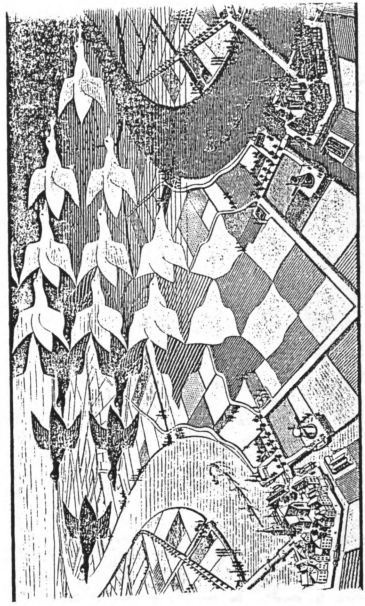
   d. formal tags - question at the end of a declarative which is a request for confirmation; "It's cold today, isn't it?"

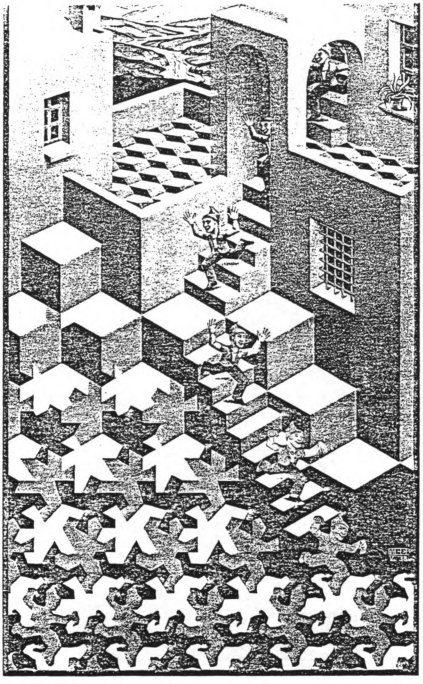
   e. informal tags - question at the end of a declarative which is a request for confirmation but which does not have the verb form of the formal tag; "It's cold today, right?"

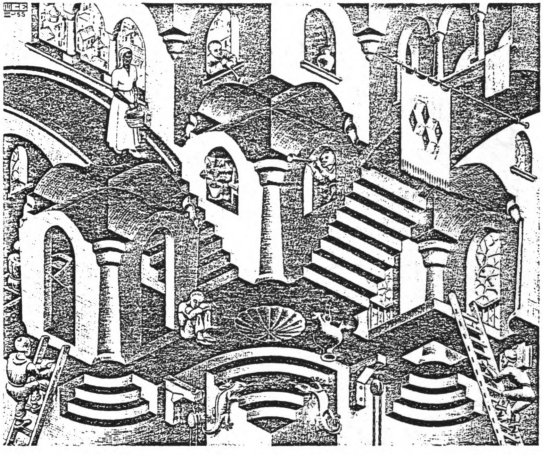
3. Female lexicon - words or phrases associated with female use;
   a. intensifiers - intensifying adverbs; "so, very, quite, such" "It's so cold today."

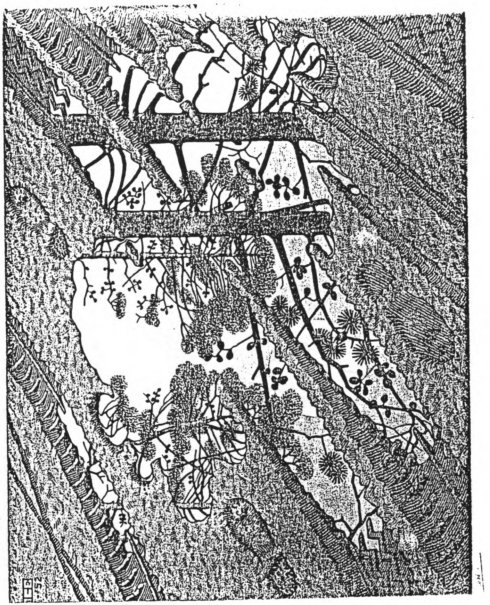
   b. female lexicon - any word or phrase which is generally accepted by the culture as more likely to be used by women than men. For this category, all five coders had to independently agree on each word for it to be defined as female lexicon; "divine, adorable, my goodness, oh dear"

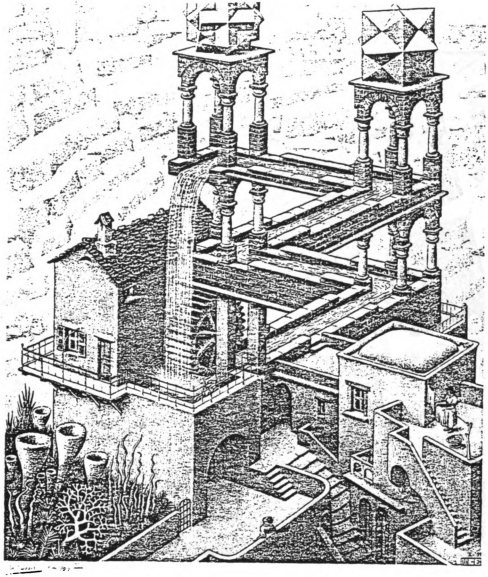
APPENDIX B

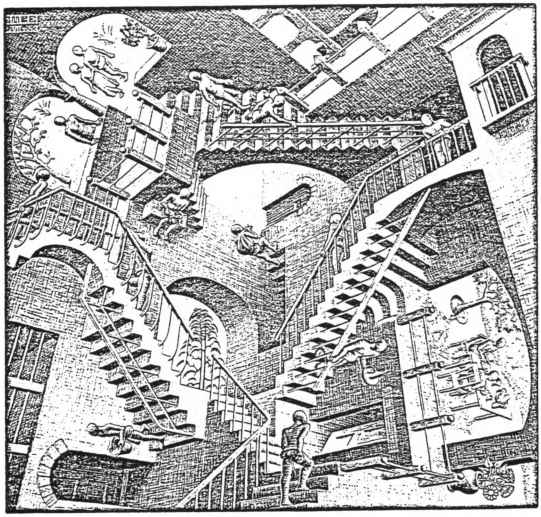












APPENDIX C

APPENDIX C

Girl_____ Boy_____ Kdgn_____ 3rd_____

5th_____

_____ 1. That's an adorable story.

_____ 2. Damn it, the TV set broke.

_____ 3. That show was great, wasn't it?

_____ 4. I was so tired.

_____ 5. Get me that pencil.

_____ 6. Oh dear, I lost my keys.

_____ 7. I'm not sure but I think they did the right thing.

_____ 8. I'll be damned, there's the President.

_____ 9. It's a little bit cold today.

_____ 10. Won't you please get me that pencil?

_____ 11. Close the door.

_____ 12. What a divine house.

_____ 13. That's a great story.

_____ 14. Will you please close the door?

_____ 15. Damn, I lost my keys.

_____ 16. I was quite surprised.

_____ 17. That's a nice picture.

_____ 18. I was tired.

APPENDIX D

APPENDIX D

Girl_____ Boy_____ Kdgn_____ 3rd_____

5th_____

_____ 1. That's an adorable story.

_____ 2. The TV set broke.

_____ 3. That show was great, wasn't it?

_____ 4. I was so tired.

_____ 5. Get me that pencil.

_____ 6. Oh dear, I lost my keys.

_____ 7. I'm not sure but I think they did the right thing.

_____ 8. There's the President.

_____ 9. It's a little bit cold today.

_____ 10. Won't you please get me that pencil?

_____ 11. Close the door.

_____ 12. What a divine house.

_____ 13. That's a great story.

_____ 14. Will you please close the door?

_____ 15. I lost my keys.

_____ 16. I was quite surprised.

_____ 17. That's a nice picture.

_____ 18. I was tired.

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