

SPEECH OF MOTHERS ADDRESSED TO
THEIR YOUNG LANGUAGE-LEARNING CHILDREN

by

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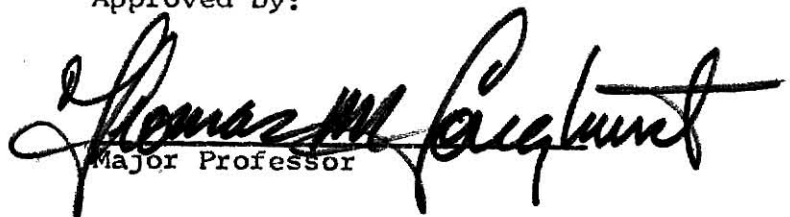
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**THIS BOOK
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NUMEROUS PAGES
WITH MULTIPLE
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**THIS IS THE BEST
IMAGE AVAILABLE.**

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INTRODUCTION

In recent years the study of language acquisition in young children has received a great amount of attention in the literature due to the generative-transformational, linguistic theories of Noam Chomsky (1957, 1965, 1967). (Many researchers (Braine, 1963; Brown and Fraser, 1964; Miller and Ervin, 1964; Bloom, 1970) have been concerned with the study of a child's developing syntax from the appearance of two-word utterance constructions to the development of speech and language in the early school years) (Menyuk, 1964; C. Chomsky, 1969).

The theory that a causal relationship exists between the semantic and syntactic features of an adult's language addressed to a young child and the child's process of language acquisition has been an area of controversy. Many researchers (Chomsky, 1957; McNeill, 1966; Bullowa, cited in Bever et al., 1965) have claimed that adult speech is highly ungrammatical and that as a result, it would be extremely difficult for a child to learn language by simply hearing a model of adult speech. These authors, however, have studied only the speech of adults conversing with adults and have failed to examine the features of adult speech addressed to young children. An exception was the work of Bullowa (cited in Bever et al., 1965) who analyzed six 30-minute tapes of mother-child conversation in which the children ranged from 6 to 30 months of age. Her findings

showed that 258 of 438 utterances were grammatical and that only 46 utterances were simple, declarative sentences.

On the other hand, considerable (data are available to suggest that adult speech is in fact simple and grammatical when addressed to a young child. The results obtained by several researchers (Braine, 1963; Brown and Bellugi, 1964; Brown and Fraser, 1964; Granowsky and Krossner, 1970; Broen, 1972; Cannon, 1972; Riedl, 1972; Snow, 1972; Phillips, 1973) indicated that adults modify their speech when addressing a young child by making it less complex semantically as well as syntactically. In addition, further analysis has indicated that adult language increases in complexity as the child's age increases.

At the present time, there are insufficient data available to describe adequately the linguistic environment of young children in the early stages of language development who are normal or advanced in their language development. It is the purpose of the present study to describe the mother-child interaction environment of young language-learning children who are developing normally or who are advanced in their language development. It is believed that the mothers of such children consciously or unconsciously employ certain strategies to train language skills which have a direct bearing on the subsequent rate of language acquisition in their children. If these strategies can be studied and analyzed, the results might be useful in developing language programs specifically designed to aid the language-delayed child. Mothers, teachers, and clinicians might be trained in the use of such strategies to effect greater changes in the language behavior of their children or students.

METHOD

Subjects

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Thirty-six children, 17 males and 19 females, and their mothers served as subjects. All subjects were middle socioeconomic status, and all were native English-speakers. Twelve children were 11 to 13 months old, 12 were 23 to 25 months old, and 12 were 35 to 37 months of age. These age groups were chosen for study as they represent three distinct levels of language development. No attempt was made to control for sex of the children, the educational backgrounds of the mothers, the ages of the mothers, nor the number and ages of siblings.

All children were judged to be normal or slightly advanced in their language development before they could be included in the study. Language developmental level was determined through the administration of the Receptive-Expressive Emergent Language Inventory (REEL, Bzoch and League, 1971) and through a brief interview with the mother in which she was encouraged to discuss the process of her child's language acquisition. The results of the REEL Inventory for all subjects are summarized in Table 1. Because the REEL Scale extends only to the 36-month level, the experimenter was unable to determine the exact language levels of the three-year-olds. However, through the items on the scale and through the interview with the mother, it was found that all the three-year-olds were at least at the 36-month level or above.

Experimental Facility

All sessions were conducted in a small, quiet room containing

Table 1

Pre-experimental Receptive (RLA), Expressive (ELA), and
Combined (LA) Language Ages from the REEL Test
for the Three Groups of Children

Measure	One-year-olds	Two-year-olds	Three-year-olds
Mean RLA (mos.)	12.6-13.6	26.2-29.0	36.0+
Mean ELA (mos.)	11.3-12.7	23.8-27.1	36.0+
Mean LA (mos.)	12.0-13.2	25.0-28.1	36.0+

a microphone, a table, and two chairs. The experimenter monitored and observed the sessions through a one-way mirror in an adjoining room which contained a high fidelity tape recorder (Ampex, PR-10).

Procedure

Each mother was contacted prior to the session and requested to participate in a study concerning language development in children. She was told that the experimenter was interested in observing and recording the verbal interaction between herself and her child. The experimenter assured the mothers that each tape would be coded to insure that neither her name nor her child's would be associated with the data. However, each mother was asked to sign a release form which would allow any data gleaned from the tape to be presented in scientific publications or professional conferences. The specific details and purposes of the study were not disclosed to the mothers in order that they might perform as naturally as possible during the sessions.

Each mother participated in one session of approximately twenty minutes in length. During one ten-minute segment of the session the mother was assembled with her child, and during one ten-minute segment she was assembled with the adult female experimenter. All the mothers interacted with the same experimenter to provide a constant against which the speech of the mother addressed to her child could be compared. This procedure was employed to help to control for large variability among mothers observed in previous research (Riedl, 1972).

To minimize the possibility of order effects, half the mothers interacted with their child for the first ten-minute segment, and

half interacted with the experimenter during the first ten-minute segment.

Experimental Conditions

Adult-child interaction. Each mother was assembled with her child for approximately ten minutes. Immediately prior to this portion of the session, the mother was given a bag containing several farm animals made by Fischer-Price, Inc. and ten colored blocks. She was then instructed to play with her child just as she would in a similar play situation at home. The experimenter also asked the mother to continue to play with her child until the experimenter indicated that it was time to stop. The purpose of this task was to try and replicate a situation that might occur between a mother and her child in the home.

Adult-adult interaction. Each mother was assembled with the adult experimenter for one of the ten-minute segments of each session. During this time the mother was asked some very general questions concerning her child's language development, her child's likes and dislikes, and possible sources of language stimulation for her child. Meanwhile the child was allowed to remain in the room playing with an assortment of toys.

Protocol Preparation and Segmentation

A typist, trained in protocol preparation, typed verbatim transcripts of the mothers' speech under both experimental conditions from the tape recordings following modified instructions as outlined by Siegel (1967) (Appendix A). Also using Siegel's procedure the experimenter segmented the transcription into utterances using the

perceived pause as the utterance boundary (Appendix B). The utterance was chosen for analysis because it was the belief of the experimenter that a young language-learning child would be most likely to perceive the utterance between two pauses in the flow of speech as a thought unit. Because it was a part of this study to examine the relationship between the child's language level and the adult's length of utterance as addressed to a young child, the pause appeared to be the most logical segmentation cue.

While the experimenter segmented the tapes, she also corrected the errors in the transcript. When the transcript was corrected and segmented, the experimenter retyped the last fifty utterances produced by the mother in both the adult-adult situation and the adult-child situation. Reliability was established by having a graduate student experienced in protocol preparation and segmentation resegment an entire protocol from one twenty-minute session.

Performance Measures

The verbal behavior of the mothers under both the adult-adult and the adult-child experimental conditions was analyzed on two levels; the lexical level and the syntactic level. These measures included: 1) Carroll type-token ratio, 2) percentage of common words used, 3) mean length of utterance, 4) percentage of interrogatives, 5) percentage of interrogatives requiring a yes or no answer, 6) percentage of interrogatives requiring clarification of the addressee's preceding utterances, 7) percentage of interrogatives requiring information from the addressee.

The Carroll type-token ratio was computed to determine the

diversity of the adults' vocabularies. This measure can be computed by dividing the total number of different words in a 50-utterance sample (types) by the square root of twice the total number of words in the sample (tokens) (Carroll, 1964). The formula is expressed, $CTTR = \text{types} / \sqrt{2 \times \text{tokens}}$. CTTR was chosen for use in the study instead of the traditional type-token ratio because CTTR is approximately independent of sample size. The present study used 50 utterances as the basis for sample size rather than total number of words thus making it necessary to control for different numbers of words used by the mothers. The total number of words and the total number of unique words in each sample were counted according to the procedures outlined in Appendices C and D.

2 To compute the percentage of common words used in each sample, the experimenter compared the unique words in each sample with the words appearing on the Thorndike-Lorge list of most frequent 1,000 words (Thorndike and Lorge, 1944). The procedure was chosen as an index of the "everydayness" of the mother's word choice. The percentage of words an adult uses that occur on this list is an indication of the frequency of the words used. The criteria for counting the words appearing on the Thorndike-Lorge list are listed in Appendix E.

3 On the syntactic level the mothers' mean lengths of utterance were computed for each experimental segment. The average utterance length was computed by dividing the total number of words in a 50-utterance sample by 50 (Templin, 1957).

4 The percentage of interrogatives was chosen as an interaction variable between the mother and the child. The use of questioning

behavior is a common strategy employed by mothers as they are speaking to their young children (Bee, Van Egeren, Streissguth, Nyman, and Leckie, 1969; Leach, 1972). However, the type of questioning used by the mothers may be highly important to the child's language enrichment (Riedl, 1972; Leach, 1972). For this reason, three different types of questions used by the mothers were examined. The percentage of questions requiring a simple yes or no answer from the child was computed to measure the questioning behavior demanding a minimal amount of language from the child. The percentage of questions requiring information from the child was used to indicate the questioning behavior demanding more language from the child than a simple yes or no answer. Finally, the percentage of questions asking the child to repeat any previous verbalizations for the purpose of clarification was computed to measure the effectiveness of the verbal communication between the mother and the child. Possibly mothers who used a high percentage of questioning behavior requiring the child to clarify his previous utterances did not communicate particularly effectively with their children. Instructions for classifying utterances as questions and for classifying the questions into the three categories are outlined in Appendices F and G.

Reliability was established on the various linguistic measures by having an experienced graduate student retabulate the results for one protocol.

Statistical Analysis

The data were analyzed in two separate series of one-way

analysis of variance (ANOVA). Each series contained seven ANOVA tests, one for each linguistic measure. In each ANOVA the main effect was treatment. In the first series the treatment assessed was the effect of the constant adult experimenter on the interaction patterns of the three groups of mothers. In the second series the treatment was the effect of the children on their mothers' interaction patterns. Significant F ratios were further analyzed using a least significant difference (LSD) procedure (Fryer, 1966). All means were tested at the .05 level of confidence.

RESULTS

Reliability

A graduate student, experienced in protocol segmentation, resegmented a transcript of one session (one mother-child interaction and one mother-adult interaction) that had been previously segmented by the experimenter. Reliability for the entire session was 95%. The same graduate student recounted the total number of words in the protocol, the number of unique words in the sample, and the number of unique words found on the Thorndike-Lorge list of 1,000 most common words. The percentages of agreement were 96%, 98%, and 94% respectively. The number of questions used by the mother and the classification of those questions into questions requiring information, questions requiring a yes-no answer, and questions requiring clarification from the addressee were also determined by the graduate student. Although no formal percentage of agreement was computed because of the small number of entries in some categories, agreement was very good.

Linguistic Analysis

Mother-adult interaction data. Mean scores for the three groups of mothers on the seven linguistic measures in the mother-adult segment are presented in Table 2. The series of analysis of variance for the mother-adult interaction on the various linguistic measures revealed significant differences among the three groups of mothers only for the CTTR measure (Table 3). Application of LSD showed no significant differences between mothers of one-year-olds and mothers of three-year-olds on this measure. The CTTR of mothers of two-year-olds was lower than that of the other two groups, and this difference was significant.

Originally it was planned to use the mother-adult interaction scores as a control for the mother-child scores. A score representing the difference between these two conditions was to have been computed and difference scores for each group of mothers were to have been compared. This procedure was necessary because it was anticipated that there may have been significant differences among the groups of mothers at the outset. Such differences would have confounded the results obtained during the mother-child interaction. Table 3 demonstrates that this was not the case, except for CTTR. Therefore, it was decided on the basis of the mother-adult analysis that there were essentially no differences among the three groups of mothers, and that it would be possible to analyze the data collected from the mothers interacting with their children independent of the mother-adult data.

Mother-child interaction data. Mean scores for the three groups of mothers on the seven linguistic measures in the mother-

Table 2

Mean Scores on the Seven Linguistic Measures of the Three
Groups of Mothers Interacting with
a Constant Adult Experimenter

	Mothers of 1-year-olds	Mothers of 2-year-olds	Mothers of 3-year-olds
MLU	8.437	7.827	8.582
CTTR	6.446	5.927	6.355
% Common Words	78.892	80.366	78.250
% Yes-No Questions	0.000	0.000	0.000
% Information Questions	0.000	0.000	0.000
% Clarification Questions	0.000	0.000	0.000
% Questions	0.003	0.005	0.000

Table 3

Summary of the Series of Analysis of Variance of the Effects
of Treatment (Mothers Interacting with an Adult) on the
Various Linguistic Measures

Source	Error	Mean Square	F
MLU	2.931	1.926	0.657
CTTR	0.158	0.922	5.828 *
Common Words	0.001	0.001	1.096
Yes-No Questions	0.000	0.000	<1
Information Questions	0.000	0.000	<1
Clarification Questions	0.000	0.000	<1
Total Questions	0.000	0.000	<1

* $p < 0.05$

Note.--Degrees of freedom were 2 and 33 for treatment and error respectively.

child segment are presented in Table 4. A summary of a series of one-way analysis of variance comparing the three groups on the seven measures is presented in Table 5. There were significant differences among the three groups of mothers on the MLU, % yes-no questions, % information questions, and % clarification questions measures.

Further analysis using the LSD procedure revealed the locations of the significant differences (Table 4). Mothers of three-year-olds used higher MLU's when talking to their children than did mothers of one- and two-year-olds. Mothers of one-year-olds used a higher percentage of questions demanding a simple yes or no answer from their child than did the mothers of three-year-olds. The mothers of two-year-olds used a higher mean percentage of yes-no questions than the mothers of the one-year-olds and a lower mean percentage of yes-no questions than the mothers of three-year-olds. However, there was no significant difference between the mean percentage of yes-no questions employed by the mothers of two-year-olds and the mothers in the other two groups.

information The mothers of three-year-olds used a higher percentage of questions demanding information of their children than did the other two groups of mothers, and the mothers of two-year-olds used
quest clarity a higher percentage of questions which required their child to clarify or to repeat previous utterances. The percentage of clarification questions used by all three groups of mothers was quite low in comparison to the other question types, ranging from 1.4% to 6.9% of the total questions asked.

Although the means for CTR and the mean percentages of common

Table 4

Mean Scores and Significant Differences for the Three Groups
of Mothers on the Seven Linguistic Measures While
Interacting with Their Own Children

	Mothers of 1-year-olds	Mothers of 2-year-olds	Mothers of 3-year-olds	LSD
<u>MLU</u>	3.688 ^a	3.845 ^a	4.700 ^b	0.715
CTTR	3.968 ^a	4.263 ^a	4.613 ^a	--
% Common Words	80.195 ^a	84.422 ^a	84.918 ^a	--
% Yes-No Questions	<u>67.705^a</u>	61.306 ^{ab}	47.896 ^b	0.143
% Information Questions	29.979 ^a	31.779 ^a	50.672 ^b	0.148
% Clarification Questions	2.316 ^a	6.916 ^b	1.433 ^a	0.044
% Questions	44.000 ^a	41.167 ^a	41.500 ^a	--

Note.--Row means sharing a common superscript are not significantly different at the .05 level of significance.

Table 5

Summary of the Series of Analysis of Variance of the Effects of
Treatment (Mothers Interacting with their Own One-,
Two-, or Three-year-olds) on the Various
Linguistic Measures

Source	Error	Mean Square	F
MLU	0.775	3.558	4.774*
CTTR	0.423	1.250	2.954
Common Words	0.003	0.008	3.131
Yes-No Questions	0.030	0.123	4.110*
Information Questions	0.032	0.158	4.935*
Clarification Questions	0.003	0.010	3.715*
Total Questions	0.018	0.003	0.156

* $p < 0.05$

Note.--Degrees of freedom were 2 and 33 for treatment and error respectively.

words increased as the age of the child addressed increased, the differences among the means were not statistically significant at the .05 level of confidence.

DISCUSSION

The present experiment revealed that mothers' speech addressed to their own language-learning children did in fact change on the syntactic level as the age of the child addressed increased. These findings support the conclusions of several other researchers (Broen, 1972; Snow, 1972; Phillips, 1973) who conducted similar experiments using children of different age levels than those of the present study. On the syntactic level, the three groups of mothers differed significantly in their respective mean lengths of utterance. The mothers of one-year-olds and mothers of two-year-olds did not differ significantly in their MLU's, but the mothers of three-year-olds employed longer MLU's. Similarly Phillips (1973) computed MLU's of mothers of 8-month-old children, mothers of 18-month-old children, and mothers of 28-month-old children assembled in a free play situation. The MLU's of the first two groups of mothers were not significantly different from one another. However, the mothers of the 28-month-old children used higher MLU's. Although the children in the present study were approximately 12-, 24-, and 36-months old, their mothers followed the same pattern with regards to MLU as did the mothers in Phillip's (1973) study. Phillips (1973) believed that the mothers of the 8-month-olds and the mothers of the 18-month-olds did not have significantly different MLU's because the 8-month-old children responded very little to their mothers'

speech. The mothers seemed to be talking to and for themselves rather than actually communicating with their child. A similar phenomenon occurred in the present experiment with the mothers of one-year-olds. In general, the children had expressive vocabularies of approximately one to five words and therefore, responded very little to their mothers' speech. Although the mothers used varied inflections and onomatopoeia in their speech to their children, many of their utterances were directed more to themselves or possibly for the benefit of the experimenter than toward their child.

Snow (1972) also studied the MLU's of mothers addressing their own children, and found by taping mothers speaking with their own two- and ten-year-old children that the MLU of a mother when addressing her child increased as the age of the child increased. The change in the mothers' MLU's was perhaps more dramatically demonstrated in Snow's (1972) study than in the present experiment because the two-year-olds and the ten-year-olds were quite far apart in age. It is not known what subtle changes occurred in the mothers' speech in the time between the wide age gap.

The present study also clearly indicated that adults used longer MLU's when speaking to another adult than they used in conversing with a young child. This fact has been well established by many other researchers (Granowsky and Krossner, 1970; Broen, 1972; Phillips, 1973).

Another syntactic measure applied to the mothers' speech was the questioning behavior of the mothers toward their own children. It has been suggested by Bee, et al. (1969), Leach (1972), and Riedl (1972) that questioning behavior is an important interaction

variable between a mother and her child during the child's language-learning years, and that it may be conducive to a child's language development. Riedl (1972) found that mothers used a fairly high percentage of questioning behavior when assembled with their children between the ages of three and five years. She found that approximately 40% of the mothers' total utterances were questions, a statistic which closely corresponds to the 41-44% total questions found in the present study. Similarly, Bee et al. (1969) compared the questioning behavior generated by low socioeconomic status (LSES) mothers and middle socioeconomic status (MSES) mothers addressed to their own three- to five-year-olds. (They concluded that the MSES mothers provided a more enriched verbal environment for their children than did the LSES mothers. Among the variables used by the MSES mothers was a higher rate of questioning behavior, specifically questions which tended to provoke thought and verbal replies.)

In addition to the percentage of questions used by the mothers in this study, the types of questions used were also examined. From the total number of questions, the percentage of yes-no questions, the percentage of information questions, and the percentage of clarification questions were computed. The results showed that mothers tended to use progressively lower percentages of yes-no questions as the age of the child increased, while they used a progressively higher percentage of information questions as the age of the child increased. This could have been due to the fact that the mothers raised their expectations of their child as he increased in age. It is also interesting to note that the percentage of yes-no questions was much higher than the percentage of information questions

for the mothers of one-year-olds and the mothers of two-year-olds. However, the mothers of three-year-olds actually employed a higher percentage of information questions than yes-no questions. While the mothers formed more of the simpler yes-no questions very early in the child's language development, they gradually increased their demands on their children as they progressed in their linguistic performance.

The role of the questions requiring clarification or repetition from the child is not yet clearly understood. The present experiment revealed that a very low percentage of clarification questions was being used by all three groups of mothers, the highest percentage occurring among the mothers of two-year-olds. The low percentages could have been an indication that there was effective communication between the mothers and their children. A possible explanation as to why the mothers of two-year-olds generated a higher percentage of clarification questions toward their children than did the other two groups of mothers might be that the one-year-old children were not sufficiently advanced in language development to cause their mothers to fail to understand their verbalizations. The three-year-olds in the study were evidently articulate enough to allow their mothers to comprehend their utterances easily. At the two-year level of language development, it would be understandable that the children may have been a bit more difficult to understand because it was at this level that they were beginning to combine words (McNeill, 1970), and they were not as proficient in their articulation skills as were the three-year-olds.

On the lexical level, no significant differences were found

for the CTR's nor for the percentages of common words used by the mothers of the three groups. These findings did not correspond with the results found by Broen (1972), Snow (1972), and Phillips (1973) who all found that mothers used more diverse vocabularies as the age of the addressees increased. However, age differences between their subjects were generally larger than in the present study. None of the previous studies measured the percentage of common words. Therefore, a comparison with the present study is impossible.

Although the mothers used similar CTR's when addressing their children, they all tended to use higher CTR's when conversing with the experimenter. The percentages of common words used by the mothers in both the mother-child situation and the mother-adult situation were very similar ranging from approximately 79% to 85%.

The results of the present study may prove to be quite valuable in formulating language programs for children who are retarded in their language development. It would be of further help to study the speech characteristics of mothers whose children have not developed language at a normal rate and to compare them with those in the present study. Many language-retarded children have no apparent physiological reasons for their failure to acquire language normally. Studying the verbal environment of such children might reveal certain patterns in a mother's speech which could be corrected or improved, and this intervention might serve to improve the child's language development.

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APPENDIX A

Instructions for Typing Protocols

1. Type only the mother's speech for both the adult-adult interaction and for the adult-child interaction.
2. Do not use capitals (except for proper names or for the pronoun 'I'), commas, question marks, or any other form of punctuation in preparing the transcripts. You will use apostrophes, however, to indicate contractions or possession.
3. Some of the remarks made by the mothers may be completely or partially incomprehensible. If an utterance is either partially or completely incomprehensible, so indicate by typing several dots in the space where the utterance would be located.
4. Interjections such as 'uh' or 'er' should be omitted except when they are used as meaningful words.
5. Include unfinished words only if you are sure what they were meant to be.
6. Type numbers uttered by the speakers as if they were written out.
7. Include repeated words in the transcript.

APPENDIX B

Criteria for Segmentation of Utterances

1. In general, an utterance is a unit of spoken language marked off on both sides by a pause.
2. An utterance is considered when one speaker terminates and the other begins speaking.
3. An utterance may include several grammatical sentences. If one simple remark is immediately followed by another with no pause for breath, they are considered only one utterance.
4. An utterance may be a single word such as 'yes' or 'uh huh' or it may be comprised of many words such as, 'see that bicycle out there that's a big one isn't it.'
5. A single expression of affirmation ('yeah,' 'uh huh'), or of negation ('nope,' 'huh uh'), or of interrogation ('huh,' 'what') may be a complete utterance.
6. Expressions such as 'aw,' 'ahh,' 'hmm,' and 'uh,' when they are not used as either affirmation, negation, interrogation, or exclamation, do not count as utterances and should be omitted from the transcripts.

APPENDIX C

Criteria for Counting Total Number of Words in a Sample

1. Hyphenated words and compound nouns which seem to function as single words are counted as one word.
2. Contractions are counted as one word.
3. Combinations such as 'gonna,' 'wanta,' and 'oughta' are counted as two words ('going to,' 'want to,' 'ought to').
4. When the speaker is counting or spelling, each unit (number or letter) is counted as a separate word.
5. Numbers are counted as if they were written out; for example: 4,688 is counted as seven words; 70 is counted as one word.
6. Expressions of affirmation ('yeah,' 'uh huh,' 'mhm,' 'yep'), of negation ('nope,' 'huh uh,' 'hmmn'), of interrogation ('huh,' 'hmm'), or of exclamation ('mm,' 'hmm,' 'oh,' 'hey,' 'ah,' 'whoops,' 'wow') are counted as one word.
7. All repeated words are counted.
8. Descriptive noises such as 'moo,' 'baa,' or 'bow-wow' are counted as single words.
9. Proper names ('John Brown,' 'Miss Smith') are counted as single words.

APPENDIX D

Criteria for Counting Number of Unique Words in a Sample

Follow the same criteria used for counting the total number of words, with the following additions:

1. Words such as 'em' and 'cause' are counted as their whole counterparts, 'them' and 'because.'
2. Words which end with different inflections (plural, past tense, etc.) are counted as unique words although their root words may be the same.

APPENDIX E

Criteria for Counting the Number of Words Which Appear on
the Thorndike-Lorge List of 1000 Most Common Words

1. If the root of the word appears on the list, variations of it which are inflected for number or tense are counted, unless the variation is an irregular form.
2. Hyphenated words are counted if each part of the word appears on the list.
3. Contractions are counted if both of the words which comprise the contraction appear on the list.

APPENDIX F

Criteria for Classifying Utterances as Questions

1. In normal conversation questions are typically indicated by the use of particular words, or by the way the words are arranged in the utterance, or simply by the inflection.
2. Occasionally an utterance may begin as a question but end as a statement. When this occurs, mark the utterance a question.
3. An utterance that begins as a statement but ends as a question is also marked as a question.

APPENDIX G

Criteria for Classifying Questions as Yes-No,
Clarification, or Information Questions

1. Questions which demand a simple yes or no answer from the addressee should be marked as yes-no questions.
2. Questions which demand repetition or clarification of a previous statement by the addressee should be marked as clarification questions.
3. Questions which require any answer other than a simple yes or no answer and which are not simply a request for clarification of previous statements should be marked as information questions.

SPEECH OF MOTHERS ADDRESSED TO
THEIR YOUNG LANGUAGE-LEARNING CHILDREN

by

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ABSTRACT

The purpose of this study was to examine the characteristics of mothers' speech addressed to their normal one-, two-, and three-year-old children.

Thirty-six children and their mothers served as subjects for the experiment. All the children had to be within a month of their first, second, or third birthday and had to score at the normal level or above on a language test in order to be included in the experiment.

The experimental design consisted of one twenty-minute session comprised of two ten-minute segments. During one segment each mother was assembled with her child. An assortment of toys was provided in the experimental room, and the mother was instructed to interact with her child just as she might at home. During the remaining ten-minute segment the adult experimenter engaged the mother in conversation about the child's language development. Tape recordings were made of each segment.

An experienced typist prepared the protocols for tabulation and the last 50 utterances from each segment were selected for various linguistic analyses.

Analysis of the mother-child interaction data revealed that the three groups of mothers' verbal interactions differed significantly. As the children's ages increased, the speech characteristics of the mothers changed for some of the linguistic

measures. The three groups of mothers differed in their use of MLU, % yes-no questions, % information questions, and % clarification questions.