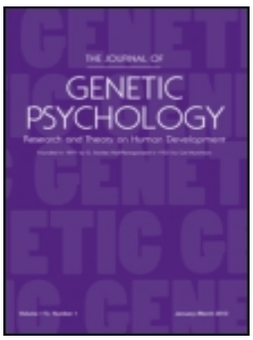

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PARENTAL SPEECH MODIFICATION TO YOUNG CHILDREN* [1]

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SUMMARY

The present study compared the speech of fathers and mothers to their young daughters in the age ranges of 19 to 29 months and 32 to 43 months. Verbatim transcripts of audio tape recordings of the verbal interactions of 20 father-daughter dyads and 20 mother-daughter dyads engaged in free play in the family home revealed the degree of parental speech modification to be a function of the age of the child. Both fathers and mothers adjusted certain aspects of their speech relative to child age and displayed very similar patterns of speech adjustment.

A. INTRODUCTION

A considerable amount of recent research has focused on processes underlying the child's acquisition of language. Only recently, however, have researchers attempted a detailed specification of the nature of the linguistic input to which the young child is typically exposed. It has now been consistently demonstrated that young children hear language samples that are syntactically simple, grammatically well formed, stated in very short utterances, and which use relatively restricted vocabulary (4, 7, 11, 12, 15), a linguistic style sometimes referred to as "motherese."

Though recent studies have shown that adult nonparents (3, 15), fathers (8), and children (1, 13) use a special speech register in addressing young children, the majority of studies of verbal interactions with children have emphasized mother's speech (e.g., 4, 6, 7, 12, 16). There is accumulating evidence that mothers, at least, modify their speech differentially relative to

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certain characteristics, especially age, of the child. Snow (15) reported a positive relationship between the age of the child addressed and the complexity of mother's speech which, to two-year-old children, was found to be cast in shorter utterances, to employ fewer subordinate clauses, to contain fewer pronouns and to be more repetitious than that to 10-year-olds. Similarly, Phillips (12) found that maternal speech to children 18 months old, while not different from speech of children 8 months old, was significantly less complex than speech to children 28 months old. Broen (4) reported similar differences in mothers' speech to children in the age range 18-26 months as compared to children in the age range of 45-94 months.

In view of the growing appreciation of the role of the father in affecting child development (9), it is somewhat surprising that there has been relatively little research concerned with the way in which fathers speak to young children of different ages. Berko-Gleason (2) has speculated that in a variety of ways mothers appear to be more sensitive and better attuned to the child's linguistic state of development than fathers. Golinkoff and Ames (8) and McLaughlin, Schutz, and White (10) each compared the speech of mothers and fathers to children of a single age (19 months and 5 years, respectively). Although the former study found no differences in speech to 19-month-old children, the latter, using a different task, reported some qualitative differences in speech to five-year-old children. The present study sought to extend these results by determining whether fathers demonstrate the same degree of sensitivity as mothers in modifying their speech to young children varying in age across a broader age range than has been previously studied.

B. Method

1. *Subjects*

Twenty young girls along with their mothers and fathers were recruited through several local day care centers serving middle-class families. The children ranged in age from 19 months to 43 months (M = 30.6 months): 10 comprised the younger group, 19-29 months (M = 22.4 months), and 10 the older group, 32-43 months (M = 38.8 months). The children's mean length of utterance, computed on the basis of their speech to both mother and father, ranged from one to 4.3 morphemes (M = 1.76 morphemes and 3.34 morphemes for the younger and older groups, respectively).

2. *Apparatus*

A Sony cassette recorder (model TC-92) and Memorex (MRX_2 Oxide) cassette tapes were used to audio tape all sessions. Three age-appropriate

multipart toys (e.g., *Weebles West*) selected on the basis of pilot testing were used to elicit parent-child interactions.

3. *Procedure*

Each child participated in two separate sessions, one with mother and one with father, occurring within a 10-day interval. Each session lasted approximately 20 minutes. Half of the children within each age range participated in the mother-child session first, and half in the father-child session first. A different toy was used as a basis for verbal interactions in each of the sessions for a given child in order to help maintain the child's interest. Sessions were conducted in the family home at the parents' convenience.

At the beginning of each session, the observer conversed informally with the parent and child. The parents were then given general instructions for engaging their child in play. The instructions were intended to place minimal restrictions upon the nature of the interactions to take place. Parents were encouraged to play with their child as they normally would for about 20 minutes while being tape-recorded.

The toys were placed on the floor, with the tape recorder four to five feet away. The observer then began recording and moved to the edge of the room.

At the end of the second session the parents were informed of the variables which would be considered and any remaining questions which they may have had were answered.

4. *Preparation of Transcripts*

Transcripts of the speech samples gathered during the 20-minute sessions were prepared by either the first author or by an assistant and then rechecked for accuracy by the first author. These consisted of written verbatim accounts of all dialogue between parent and child occurring prior to and including the 160th utterance of the parent. The utterance boundaries were determined on the basis of phonetic cues, with the use of standard punctuation to mark the termination of the utterance. Consistent with Shipley, Smith, and Gleitman (14) and Broen (4), it was found that pauses fell reliably between utterances permitting the segmentation of utterances on the basis of phonetic cues. In the case of unintelligible responses, the transcriber indicated, in brackets, that an unintelligible utterance had occurred and, in the case of doubtful responses, his best estimate of what the response had been. In both cases, which were relatively infrequent, the utterances involved were omitted from the subsequent analyses.

5. *Parental Speech Categories*

The first 40 completely intelligible utterances were eliminated from subsequent analyses to allow for a suitable "warm up" period. The next 100 were scored in terms of the categories below. All analyses were, therefore, based on a total corpus of 4000 parental utterances. Four dependent measures were derived from the data:

1. Mean length of utterance (MLU) in morphemes as described by Brown (5) with the following modifications: First, scoring began with the 41st utterance rather than with the second page of the transcript as recommended by Brown. The rationale was that this procedure would allow for greater consistency in terms of the number of utterances constituting the "warm up" period, since the length of the parents' utterances was expected to vary. Second, only completely intelligible utterances were scored, whereas Brown had advocated including doubtful utterances also. Third, words such as "hm" and "oh" were included in the present analyses, whereas Brown suggested eliminating these "fillers." The rationale for including such words in the present study was that these words are of potential communicative significance. Fourth, whereas Brown had recommended counting catenatives (e.g., wanna, hafta, etc.) as single morphemes for young children, in the present study these were counted as constituent morphemes since the data base was adult speech.

2. Type-token ratio as a measure of vocabulary diversity. This is a ratio of the number of words spelled differently to the total number of words in the sample.

3. The ratio of statements to total number of utterances. Statements included imperatives as well as declaratives.

4. Concreteness rating, defined as the ratio of concrete nouns to total nouns. A concrete noun was operationally defined as one whose referent is potentially discriminable by sight or touch. For example, nouns such as "table" and "house" were scored as concrete, as were proper names and occupations. Words such as "music," "fun," and "time" were not counted as concrete.

All 40 transcripts were scored by the first author in terms of the above variables. In each condition a randomly selected 20% of the transcripts were scored by an independent rater. Pearson Product-moment correlations revealed interrater reliability on all four dependent measures to be in excess of .95.

C. Results

The data were analyzed by means of a 2 (Age of Child) × 2 (Sex of Parent) factorial multivariate analysis of variance (MANOVA). This analysis resulted in a significant effect due to the Age of Child, F (4, 33) = 4.76, $p <$ .005. Neither the Sex of Parent main effect nor the Age of Child × Sex of Parent interaction was significant (Table 1).

Separate 2 (Age of Child) × 2 (Sex of Parent) factorial analyses of variance (ANOVA) were performed for each of the dependent measures.

For MLU a marginally significant effect was found for Age of Child, F (1, 36) = 3.55, $p < .07$. There was, therefore, a trend for the parents of the older children to use longer utterances in speaking to their children (M = 4.63) than for the parents of the younger children (M = 4.15). Neither the Sex of Parent effect nor the Age of Child × Sex of Parent interaction was significant.

The type-token ratio analysis resulted in a significant Age of Child effect, F (1, 36) = 8.08, $p < .01$, indicating that parents of the older children used a more diverse vocabulary in addressing their children (M = .296) than did the parents of the younger children (M = .264). Neither the Sex of Parent factor nor the Age of Child × Sex of Parent interaction yielded significant values.

The results of the ANOVA conducted on the concreteness ratings also resulted in a significant Age of Child effect, F (1, 36) = 6.53, $p < .025$, indicating that the parents of the younger children used a more concrete set

TABLE 1
MEANS AND STANDARD DEVIATIONS OF PARENTAL SPEECH MEASURES BY CHILD AGE AND SEX OF PARENT

	Parental speech measures			
Subjects	Mean length of utterance	Type-token ratio	Concreteness	% of statements
Younger children				
Mothers	3.97 (.558)	.27 (.023)	.93 (.974)	.58 (.196)
Fathers	4.33 (.878)	.25 (.043)	.93 (.983)	.52 (.148)
Older children				
Mothers	4.56 (.014)	.30 (.041)	.86 (.011)	.59 (.126)
Fathers	4.71 (.876)	.29 (.033)	.87 (.066)	.55 (.134)

Note: Numbers in parentheses are standard deviations.

of nouns in addressing their children (M = .930) than did the parents of the older children (M = .964). Significant effects were not found for either the Sex of Parent factor or for the Age of Child × Sex of Parent interaction.

D. Discussion

The present results demonstrate very similar patterns of speech adjustment for fathers and mothers. In fact, the uniformity of fathers' and mothers' speech is quite striking. Thus, both types of parents were found to moderate the concreteness and diversity of their vocabulary relative to the age of the child. Parents of the younger children tended to use shorter utterances and used a significantly more concrete and less diverse vocabulary in interacting with their children than did the parents of the older children. Not only, then, were fathers capable of speaking "motherese," as previously demonstrated, but, more important, they also moderated the degree of speech adjustment, as did mothers, relative to the age of the child. Fathers, therefore, appeared to be as sensitive as mothers to the linguistic needs of the child.

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