

Interaction Between Mothers and Preschool Children when Reading a Novel and Familiar Book

Jan Goodsitt and Jayne Grady Raitan

University of Minnesota, U.S.A.

Marion Perlmutter

The University of Michigan, U.S.A.

Interaction between mothers and their 2-, 3½-, and 5-year old children was examined during book reading sessions. Sixteen dyads at each age level read a novel and familiar book. Formal reading and interchange about story content increased with age and book familiarity, while labelling decreased with age and book familiarity. The results highlighted the informal teaching that takes place during early reading activity, and provide evidence that mothers adjust verbal input to their child in accord with the child's general cognitive and linguistic competence.

INTRODUCTION

The past decade of research on cognitive development has illuminated a number of cognitive advances that children achieve during the preschool years. However, few studies have addressed the issue of how cognitive skills are actually acquired. For the school age child, one important catalyst of cognitive and linguistic development is the acquisition of new information and vocabulary through book reading. However, research on children's reading has focused almost exclusively on the teaching of formal reading skills (e.g. phonics) to grade school children. Until recently, little attention has been paid to the joint parent-child reading activity that occurs as early as the first year of life (Bruner, 1984).

Requests for reprints should be sent to Marion Perlmutter, 300 N. Ingalls, Department of Psychology, University of Michigan, Ann Arbor, MI 48109-2007, U.S.A.

This research was supported by NIH (RO1-HDNI 11776) and NIE (3-0032) grants to Marion Perlmutter and a NIHCD (5P01-HD-C05027) Program Project Grant to the Institute of Child Development at the University of Minnesota. The authors would like to thank Doug Behrend for commenting on a draft of the paper.

The few studies in which early parent-child reading has been examined raise a number of interesting questions about the possible social-interactional origins of many of the cognitive and linguistic skills acquired during the preschool years. Bruner (1984), Ninio (1983), and Snow and Goldfield (1983) have stressed that book reading is an especially appropriate context for the acquisition of the first lexicon. In a longitudinal study involving nine 30-minute free play sessions between one mother and her 8- to 18-month-old infant, Ninio and Bruner (1978) found that approximately 76% of the mother's object labelling was in the context of a picture rather than an object. Moreover, these investigators found that virtually all of the mother's utterances during book activity consisted of labelling cycles involving sequences of attention directing, what questions, labelling, and feedback (e.g., Look!; What's that?; Doggie; Yeah). Ninio and Bruner concluded that the caretaker may choose picture books as a primary vehicle for vocabulary teaching because two-dimensional pictures are less graspable and manipulable, and therefore less distracting, than three-dimensional objects. Thus, the child's attention is more likely to be concentrated on the defining features of the labelled object in a picture. Snow and Goldfield (1983) analysed conversations during picture book reading between a child and his mother from the time the child was 2 years 5 months to 3 years 4 months. They found that specific lexical items and constructions used to talk about a picture frequently recurred in subsequent discussions. Moreover, the child was most likely to acquire what he had heard his mother say about a picture if he had repeated it in an earlier discussion. Ninio (1983) explored the content of labelling routines during joint book activity of 20 mother-infant dyads (mean age of children 19 months). Mothers in that study appeared to gear the format of labelling cycles to their child's signals of knowledge or lack of knowledge of a word. Errors or no responses tended to be followed by a correct label of the same referent on its next appearance, whereas correct labels were more likely followed by attempts to elicit the label again.

Although these previous studies have focused primarily on book-reading as a vocabulary teaching device, several recent studies have emphasised the parental role in adjusting cognitive demands during book-reading. Adams and Bullock (1983) reported that while mothers initially labelled pictures to 14-, 26-, and 38-month olds with basic level category names (e.g. doggie), after two weeks of experience with a book they began to use subordinate category names (e.g. collie) and to teach more difficult category concepts. Moreover, these researchers found that with experience, children began to participate more in the reading sessions. DeLoache (1983), who observed mothers reading an ABC book to 12- to 18-month olds, and explaining a complex farm scene from a book to 18- to 38-month olds, found that mothers consistently prompted their children to demons-

trate what they knew or remembered about the pictured material. Most importantly, there was an age related increase in the nature of the memory demands placed on the child. Mothers tended to step up the requirements of questions from the simple recognition of locations of objects (e.g. "Show me the kitty") at one year, to more complex requests for recall and application of knowledge (e.g. "Where is the animal that says oink-oink?") at age three. Furthermore, mothers of the younger children related the book to the child's own past experience more often than did mothers of older children. Wheeler (1983) also observed a change in mothers' book reading speech that suggests that verbal input during dyadic mother child reading tends to be fine-tuned to the child's present verbal abilities. Mother's speech with a 1½-year-old, who was at the one-word stage, focused on single elements of pictures and described more than requested information. A year later, when the child's grammatical skills were more developed, the mother asked more questions and related features of the picture together.

These studies suggest that mothers modulate cognitive and linguistic demands during book-reading activity with the developmental level of their children and that these adjustments may aid cognitive growth. Yet, virtually all of this research has been conducted with children under the age of three, and has focused primarily on individual words. To successfully achieve literacy, the child must eventually not only comprehend the meaning of individual words, but also understand entire sentences, and integrate themes across larger segments. Comprehension of text is facilitated by the ability to synthesise accumulated information and to apply personal experiences and knowledge of the world to the surface structure of sentences (Juel, 1977). Although DeLoache (1983) has reported instances of mothers attempting to relate book content to the child's personal experiences, little is known about the instance or effects of dialogue other than labelling during joint book-reading activity. Because DeLoache (1983) employed different materials for younger and older children (i.e. an alphabet book for the younger children and only a single scene from a book for the older children), it is difficult to interpret her age-related findings.

One purpose of the present study was to examine the interaction between mothers and their 2-, 3½-, and 5-year children during joint reading activity. It was expected that age-related increases in mothers' formal reading of book sentences and child's participation would be observed. In addition, it was expected that cognitive and linguistic development over this age span would result in children's more efficient processing and comprehension of the words and information conveyed in the book, and that this development would be evidenced by a decrease in the amount and a change in the structure of mother's labelling. The age-related decrease in labelling was expected to be accompanied by an

age-related increase in more complex discussion about story content. In particular, it was predicted that with increases in the age of the child there would be more integration of story content across portions of the book (e.g. from the beginning to the middle and end) as well as more relating of book material to general world knowledge and specific experiences of the child.

A second purpose of this study was to examine the effects of a child's familiarity with a book on reading interactions. In everyday reading to children the same book is often re-read many times. The structure and content of mother-child interaction during activity with familiar material is likely to be quite different than with novel material. For example, after a child is acquainted with a book, a mother may be able to concentrate on more subtle and advanced aspects of the book. This change in interaction, which might reflect a sensitivity to the child's grasp of material, could be very important for early learning. Yet, book familiarity has not been considered in previous studies of shared book reading activity. Therefore, in the present study observations of reading were made with a familiar book as well as with a novel book. It was expected that the repeated exposure and experience a child has with a familiar book would aid their memory and understanding of it, and thus would result in increases in their active participation in the reading sessions. In addition, it was expected that with familiar books, mothers would need to aid their child's comprehension less than with a novel book, and therefore they would relate book material to general world knowledge and relevant child experience less with the familiar than the novel book.

METHOD

Subjects

Sixteen 2-year-olds (range = 23–26 months; \bar{x} = 25 months), 16 3½-year olds (range = 40–43 months; \bar{x} = 41 months), 16 5-year-olds (range = 58–62 months; \bar{x} = 59 months), and their mothers participated as dyads in this study. Each age group was composed of eight males and eight females. Two 3½-year-olds were replaced because of previous exposure to the novel book. All subjects were video-recorded at a university laboratory during a 45 minute visit.

Materials

A Day on the Farm, written by Nancy Fielding Hulick and published by Golden Press (1978), was used for the novel book session. Due to the predominance of pictures and the three or fewer lines of text per page, this

book is classified as a picture book by the public library shelving system. None of the children or mothers included in the study had any previous exposure to it.

Mothers were instructed to bring a book from home “that the child liked”, for the familiar book session. According to the public library shelving system, the books brought by mothers were classified under four categories: picture (75%, 56%, and 56% for the 2-, 3½-, and 5-year age groups respectively), instructional (12%, 19%, and 6% for the respective age groups), beginning reader (12%, 0%, and 25% for the respective age groups), and fairy tale (0%, 25%, and 12% for the respective age groups).

Procedure

Upon arrival at the laboratory, each mother was informed of the purposes and procedures of the study while her child was allowed to become accustomed to the testing room. The testing room contained a large arm chair as well as a child-size table and chairs. The visit included two book reading sessions, one with the novel book, and the other with the familiar book. The order of the two sessions was counterbalanced across age and sex of child. Between book sessions children were engaged in puzzle solving activity and/or free play activity. Before each session mothers were encouraged to choose the seating arrangement most like home and to read the book to their child as they would at home. The experimenter then went into an adjacent room where a one-way mirror permitted viewing of the laboratory room, and video-recording commenced. The session was terminated when the mother finished reading the entire book and closed it, when she closed the book after her child had become engaged in off-task activity (e.g. looking out the labroom window), or when the experimenter determined that the child was too distracted to continue after the mother made several unsuccessful attempts to re-engage her child from off-task activity.

Coding

All verbalisations that occurred during each session were transcribed from the videotapes by one coder. Read utterances were noted as was the dyad member (mother or child) who turned each page. The same coder then coded each individual utterance for *speaker* (mother (M) or child (C)) and *task orientation* (read, non-read-on-task, or non-read-off-task). Utterances were only coded as off-task if they did not in any way relate to the book or to the general activity of reading. These utterances commonly referred either to characteristics of the room (e.g. C: “Fix it mommy.” M: “Look, that bike only has one wheel” (referring to a poster in the room), or to the child’s state (e.g. C: “I am hungry, mommy. You should have brought some cookies.” M: “They are out in the car”).

TABLE 1
Definitions and Examples of Content Coding Categories

Labelling

Direct naming or requests for a name of animals, objects, book character, places, or actions depicted in the immediately present book illustrations.

C: Kitty, mommy.	Correct label
M: Right, Kitty.	Imitation
M: Kitty.	Self-repetition
M: And what are these?	Label request
M: What are they?	Label request
C: Earrings.	Incorrect label
M: Apples, I think.	Correct label
M: What's he doing now?	Label request
C: He's feeding a horse.	Correct label
M: He's feeding a horse.	Correct label imitation

Story Content

References to past or future events or illustrations in the book (not immediately present).

M: Because it was so hot, what did they do?
C: I don't know.
M: Did they go for a walk in the forest?
M: What happens next?
C: Drown.

General Word Knowledge

Word definitions and other general world knowledge information.

M: Hay is dried grass.
M: What does a rooster say?
C: Cockledoodledooooo.
M: Why do you think they put holes in the box?
C: So they can breathe.

Specific Child Experiences

Specific child experiences including information assumed to be in the child's episodic memory such as references to his or her past and future likes and dislikes.

C: Yep, but when we went to the other circus a long, long, ways, they had two big, one big box and another box.
M: They did, didn't they?
M: Would you like that some day?
C: I want a horse right now.

Mother and child non-read on-task speech was also coded in terms of five *content categories*: (1) labelling; (2) story content; (3) general world knowledge; (4) specific child experiences; (5) other. Definitions and examples of these categories appear in Table 1. A cycle boundary was coded when there was: (1) a category change (e.g. a switch from labelling to discussion of child experience); (2) a change of topic within the same category (e.g. labelling a pig, then labelling a kitty); (3) a change to off-task conversation.

Twelve percent of the tapes were transcribed and coded by additional coders for the purpose of checking reliability. Reliability for transcription was 92%, for coding of speaker and task orientation it was 94% (range: 90–96%), and for content categories it was 88% (range: 84–97%).

RESULTS

The total number of utterances made by each participant per book included frequency scores for reading, non-read-on-task utterances, and off-task utterances. These scores were converted into percentages for each book session based upon the individual speaker's utterance total for that session. In addition, a percent on-task participation score was calculated for mother and for child by dividing the speaker's read plus non-read on-task utterances for that session by the combined total produced by both speakers. Percentages for content categories were determined by dividing the frequency of a specific category by the individual's summed frequency of all content coding categories (including cycles coded as "other") for a book session.

Each dependent measure was analysed in a 3(age) \times 2(sex) \times 2(speaker) \times 2(familiarity) ANOVA, with speaker and familiarity treated as within subject factors. All *F*s reported are significant at $p < 0.05$. All main effects and interactions not reported failed to reach that level of statistical significance.

Amount of Verbalisation

The mean number of utterances per participant per book is shown in Figure 1. As may be seen, mothers contributed more to the verbal exchange than did children. In addition, there were more utterances with the familiar book than with the novel book.

Participation

Mother and child participation is shown in Figure 2.

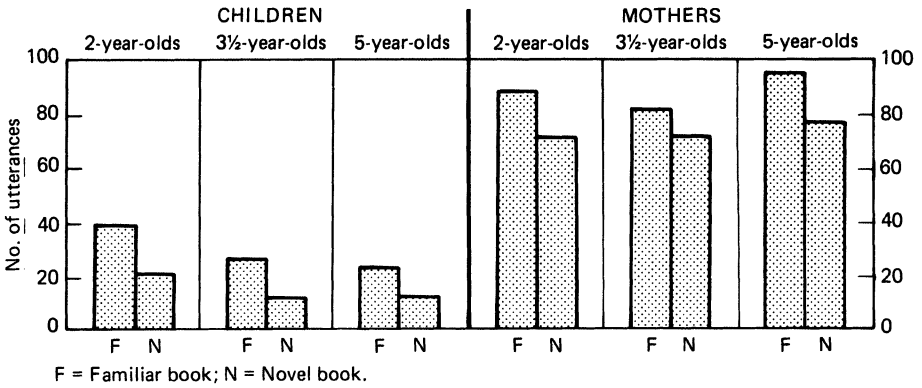


FIG. 1 Mean numbers of utterances for child and mother as a function of child age and book type.

Verbal Participation. Analysis of percentage of on-task verbalisations (top panels Figure 2) revealed a significant speaker effect, $F(1,42) = 404.85$, as well as age \times speaker, $F(2,42) = 6.42$, and familiarity \times speaker, $F(1,42) = 10.08$, $p < 0.01$ interactions. Mothers contributed 80% of the total task relevant verbalisations during reading sessions.

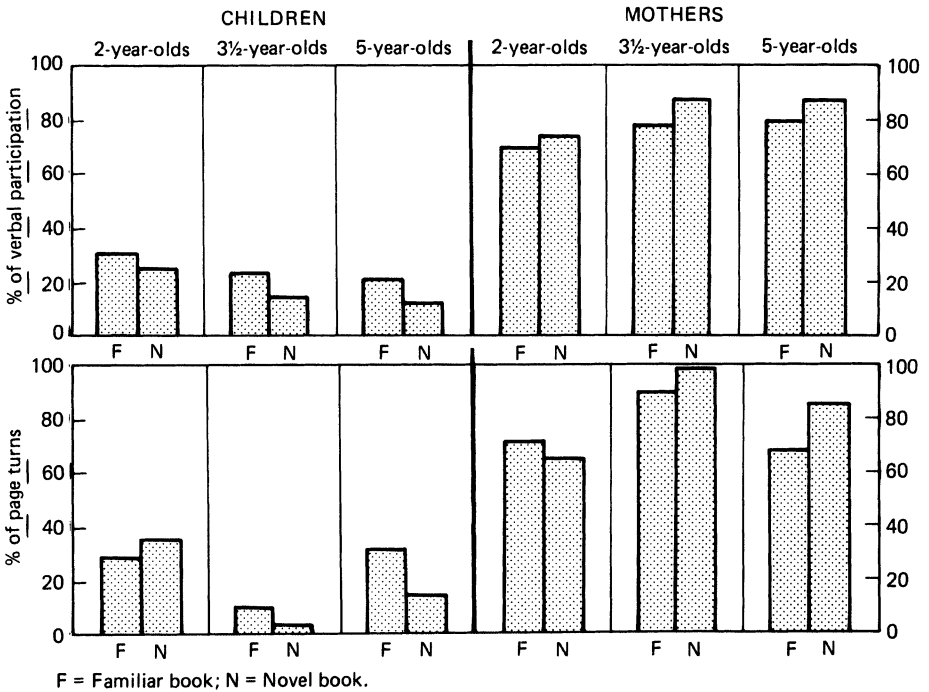


FIG. 2 Participation for child and mother as a function of child age and book type.

Contrary to expectations, children's participation decreased with age from 25% at age 2, to 16% at ages 3½ and 5. Moreover, children of all ages participated more with familiar books and mothers contributed more with unfamiliar books.

Page Turning. Analysis of percentage of page turns (bottom panels, Figure 2) yielded a turner effect, $F(1,42) = 66.07$, and an age \times turner interaction, $F = 3.612$. Overall, mothers took responsibility for turning pages 77% of the time.

Task Orientation

Mother's and child's task orientation is shown in Figure 3.

Read Utterances. Analysis of percentage of read utterances (top panels Figure 3) revealed significant effects for age, $F(2,42) = 23.94$, and speaker, $F(12,42) = 143.26$, as well as significant age \times speaker, $F(2,42) = 10.39$, and familiarity \times speaker, $F(1,42) = 4.23$, interactions. Overall, reading represented 13%, 31%, and 46% of the verbalisations in sessions with 2-, 3½-, and 5-year-olds. Only 6% of the utterances produced by children appeared to be read (or remembered) from a book, compared to 50% of mothers' speech. Mothers' reading increased from only 23% with 2-year-olds, to 60% with 3½-year-olds, and 67% with 5-year-olds, and children's read or remembered utterances increased from 2% for 2- and 3½-year-olds to 12% for 5-year-olds. Although the proportion of reading during the familiar versus novel book session was not statistically significant for mothers or children, opposite patterns were observed. As expected, children read very little, and virtually all of what they appeared to read was with the familiar (8%) rather than novel (2%) book, whereas mothers read more from the novel (53%) than the familiar (47%) book.

Nonread-On-Task-Utterances. Analysis of percentage of nonread-on-task utterances (middle panels Figure 3) yielded significant age, $F(2,42) = 9.85$, and speaker, $F(2,42) = 56.50$, effects, as well as significant age \times speaker, $F(1,42) = 6.31$, and familiarity \times speaker, $F(1,42) = 7.20$, interactions. Whereas there was an age-related increase in read utterances, there was an age-related decrease in other on-task utterances. On-task statements and questions represented 73% of the total utterances produced in 2-year-old sessions, but only 58% and 53% of those produced in the 3½- and 5-year-old sessions. Whereas mothers read significantly more than children, children produced a greater proportion of other on-task utterances (78%) than mothers (45%). During the sessions with 2-year-olds, the majority of utterances produced by both mothers

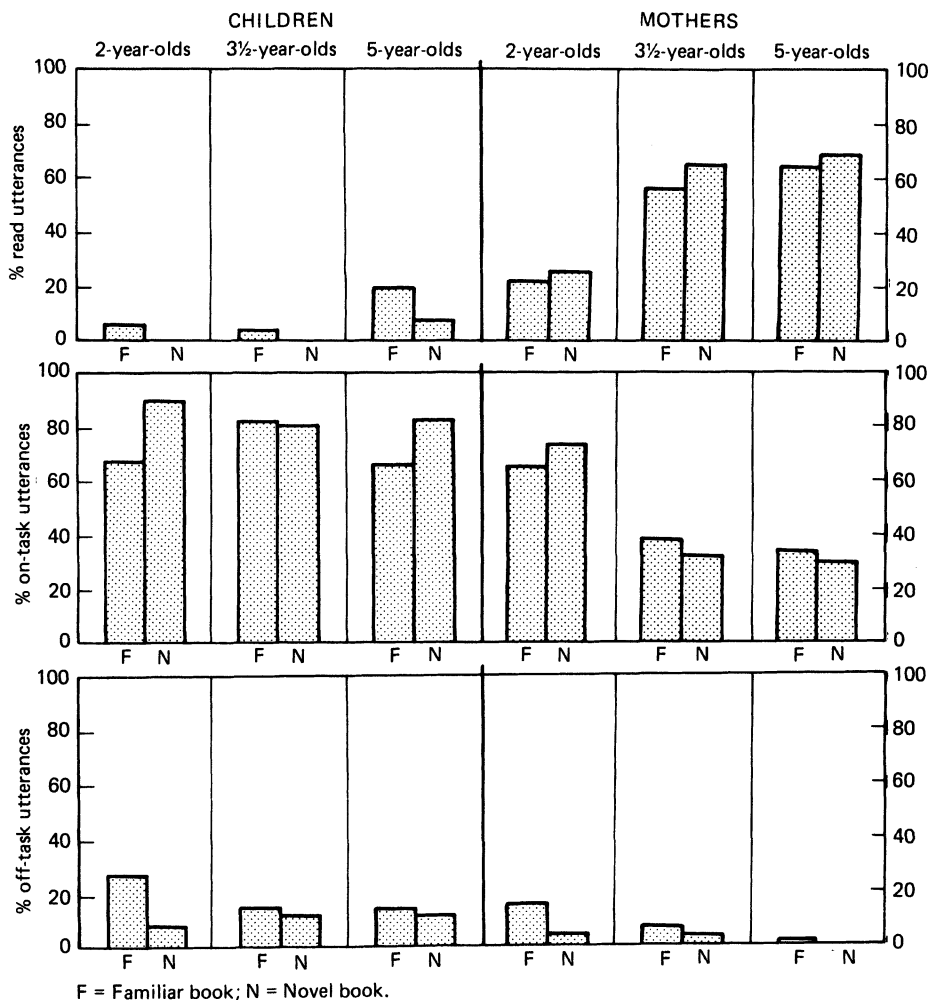


FIG. 3 Task orientation for child and mother as a function of child age and book type.

(68%) and children (79%) were on-task statements and questions. In contrast, with 3½- and 5-year-olds, a majority of mothers' participation was formal reading, with only 35% and 32% of their utterances being nonreading on-task. On the other hand, 3½- and 5-year-olds produced a high proportion of nonread on-task utterances (81% and 84%, respectively).

Off-Task Utterances. Analysis of percentage of off-task utterances (bottom panels Figure 3) revealed significant age, $F(2,42) = 6.57$, speaker, $F(1,42) = 23.76$, and familiarity, $F(1,42) = 7.57$, effects as well as an age

× speaker interaction, $F(2,42) = 3.36$. Whereas off-task utterances accounted for 13% of the verbal interaction during the 2-year-old sessions and 10% during the 3½-year-old sessions, only 2% of the verbalisations during 5-year-old sessions were off-task. Overall children contributed 11% off-task utterances, whereas mothers contributed only 5%. However, 2-year-olds produced approximately the same proportion of off-task utterances as 3½-year-olds (14%), whereas 5-year-olds produced only 2% off-task utterances. Off-task utterances represented 9%, 5%, and 1% of the total utterances for mothers of 2-, 3½-, and 5-year-olds. It is also interesting that off-task utterances were produced more often with the familiar than the novel book (12% vs 5%).

Verbal Content

Verbal content of mother's and child's verbalisations is shown in Figure 4.

Labelling. Analysis of percentage of labelling utterances (top panels Figure 4) revealed significant effects for age, $F(2,42) = 7.33$, familiarity, $F(1,42) = 6.88$, and speaker, $F(1,42) = 5.69$. Over half of the nonreading on-task utterances in the sessions with 2-year-olds involved labelling (53%), whereas labelling episodes represented only 36% and 35% of the on-task speech with 3½- and 5-year-olds. Further, the proportion of labels produced by children (45%) was somewhat greater than that produced by mothers (39%). As expected, labelling occurred more often with the novel book (47%) than the familiar book (37%).

Labelling cycles were examined in a number of additional ways that are summarised in Figure 5. An analysis of the mean length of labelling cycles (top panels Figure 5), yielded significant effects of age, $F(2,42) = 4.98$, speaker, $F(1,42) = 5.44$, and sex, $F(1,42) = 4.13$. The average length of labelling cycles with 2-year-olds was 2.9 utterances, whereas with 3½-year-olds it was 2.1, and with 5-year-olds it was 1.9. In addition, cycles initiated by mothers tended to be longer (2.6) than those initiated by children (2.1).

Analysis of the percentage of mothers' labels that were self-repetitive (lower right panel Figure 5) revealed only a familiarity × sex interaction, $F(2,42) = 14.55$. Mothers tended to repeat their own correct labels more in the novel session (26%) than in the familiar session (18%) with males, but they displayed the opposite pattern with females, repeating themselves more often in the familiar situation (38%) than in the novel situation (13%). Analysis of mother's labels that were imitative of her child (lower left panel Figure 5) revealed a significant age effect, $F(2,42) = 6.28$, but no other main effects or interactions. The tendency for mothers to repeat a

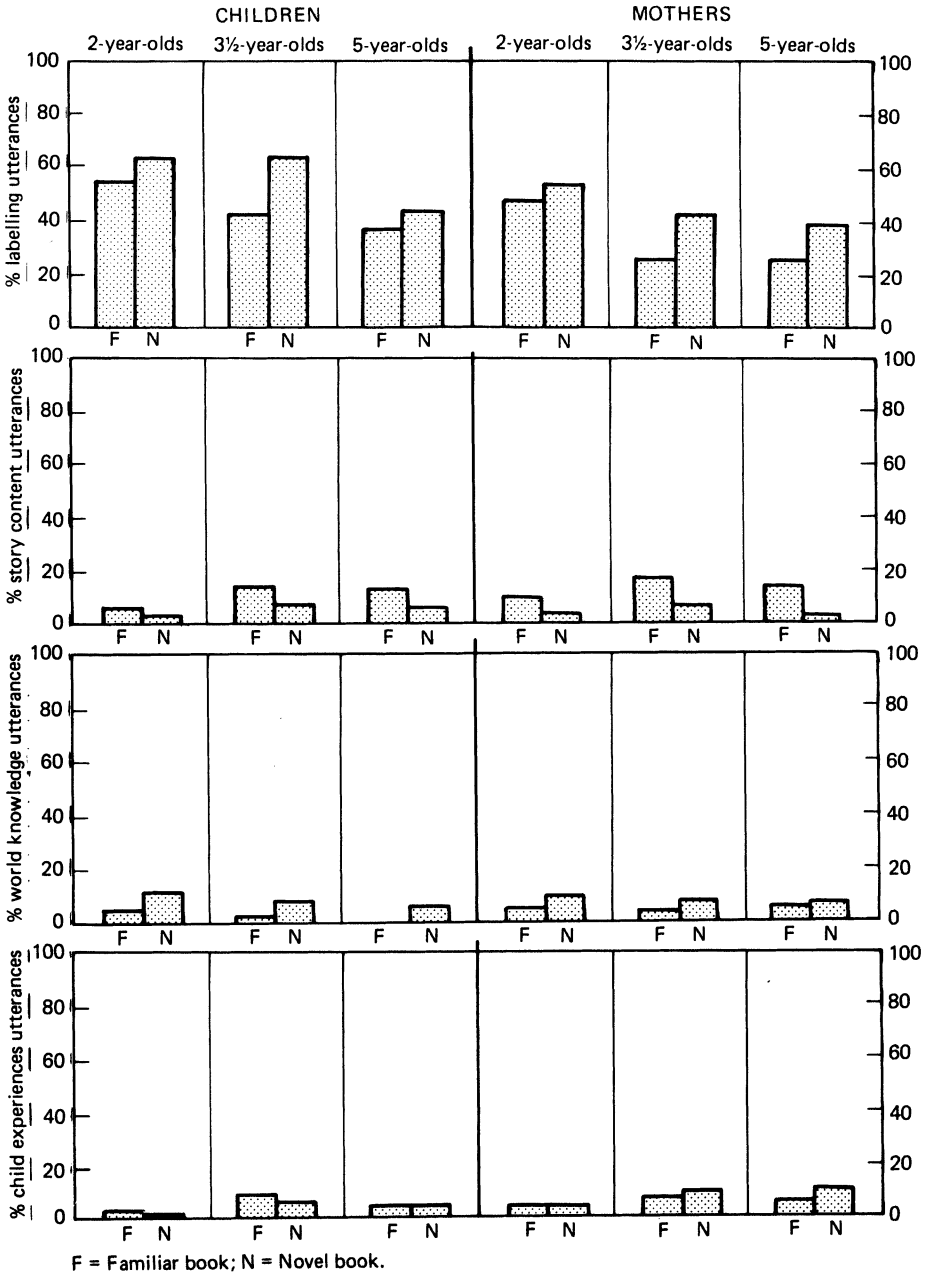


FIG. 4 Verbal content for child and mother as a function of child age and book type.

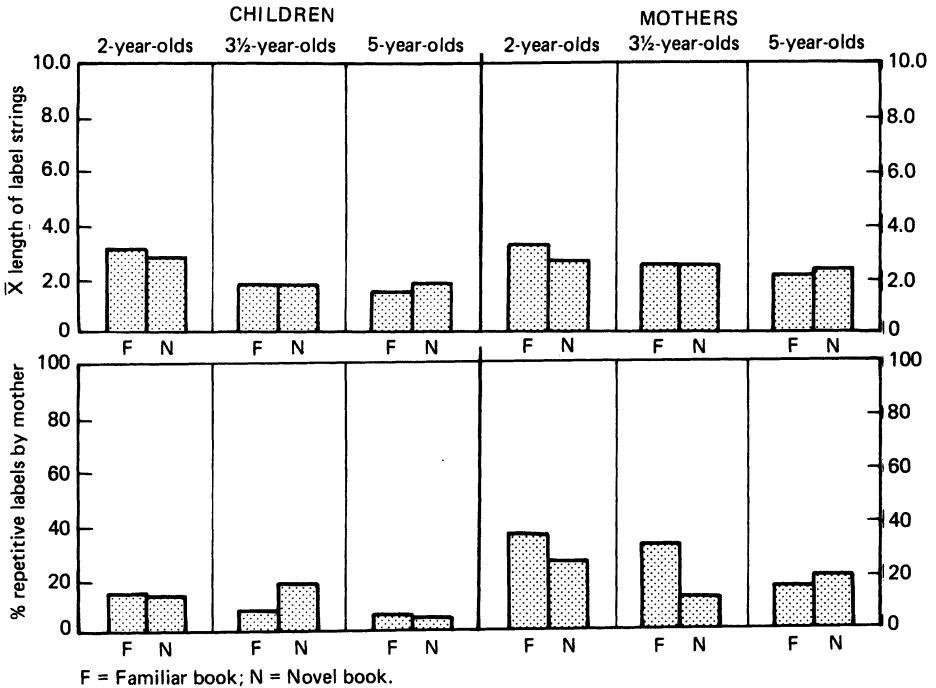


FIG. 5 Labelling for child and mother as a function of child age and book type.

child's production of a correct label decreased with age from 56% with 2-year-olds to 34% with 3½-year-olds, and only 19% with 5-year-olds.

Story Content. Analysis of percentages of utterances that pertained to story content (second row Figure 4) revealed significant sex, $F(1,42) = 7.00$, and familiarity, $F(1,42) = 15.66$, effects. Whereas story related utterances represented 11% of the on-task verbalisations with males, they represented only 5% of those with females. Furthermore, story related utterances represented a greater proportion of the utterances with a familiar book (12%) than with a novel book (4%).

World Knowledge. Analysis of percentages of utterances that related to general world knowledge (third row Figure 4) revealed only a significant effect for familiarity, $F(1,42) = 9.17$. As expected, overall, world knowledge utterances represented a greater proportion of the on-task verbalisations with the novel book (8%) than with the familiar book (4%).

Child Experiences. Analysis of percentages of utterances that related to child experiences (bottom panels Figure 4) yielded a significant sex

effect, $F(1,42) = 4.74$, as well as a significant familiarity \times speaker interaction, $F(1,42) = 6.28$. The proportion of on-task speech relating to specific child experiences was 8% in sessions with females, but only 1% in sessions with males. Children referred to past experience somewhat more with the familiar than novel book, while mothers referred to past experience more with the novel book, although this difference was not statistically significant.

DISCUSSION

The findings of the present study suggest that the activity of joint book reading changes for the child over the preschool years. Consistent with the results of previous studies of early reading interaction (e.g. Ninio & Bruner, 1978), the present results indicate a prevalence of vocabulary teaching during reading activity with 2-year-olds. However, the evidence suggests that the focus of joint book activity changes with the child's growing intellectual abilities. As children's vocabulary, language comprehension, memorial skills, and attention span develop, they become more involved in the task and more attentive. Perhaps in response to such changes in the children's behaviour (e.g. Hayden & Fagan, 1983) mothers concentrate less on specific word teaching and more on relating story content. Such modifications of mothers' input seem to indicate that mothers are sensitive to their child's general cognitive abilities. Similar sensitivity and adjustment has been demonstrated consistently in studies of language acquisition (e.g. Snow & Goldfield, 1983; Newport, Gleitman & Gleitman, 1977).

Labelling activity made up the majority (over half) of the non-read on-task speech with 2-year-olds. However, by age 3½ and 5, the proportion of labelling utterances dropped to just over one-third of the verbal interaction. While labelling continued to represent a substantial percentage of the interchange, its decrease suggests that vocabulary teaching became a less central focus of reading activity between age 2 and 3½. Evidence from language acquisition studies (c.f. Brown, 1973; Maratsos, 1983) indicates that the period between 2 and 3½ is one of rapid linguistic growth, and that the 3½-year-old is quite a competent language user. Thus, the decrease in labelling at age 3½ is not too surprising.

The character of labelling cycles also changed with age. The average number of utterances within labelling cycles decreased between age 2 and 5. This decrease was in part attributable to a decrease in mothers' tendency to imitate the child's correct labels. Newport and her colleagues (Newport, Gleitman & Gleitman, 1979) have suggested that mothers repetition to linguistically naive children is a consequence of the likelihood that the younger listener may not "attend to, comprehend, or obey his or her mother's initial utterance". Hence, these researchers surmised that repeti-

tion does not function to aid acquisition, since if the child fails to attend to the utterance during its first occurrence, a second similar utterance cannot be conceived of as a repetition of previously stored information. Evidence in support of this interpretation would come from a tendency for mothers to repeat their own correct labels. In the present study, there were age-related decreases in imitation, but not in self-repetition. Repetition in speech to the language learning child thus cannot be ruled out as a potential contributing factor to the child's acquisition of vocabulary. Mothers' repetition may serve to support the child's storage of a new vocabulary item. The age related decrease in such repetition suggests that mothers were sensitive to the younger children's greater need for external support.

The decrease in labelling observed from age 2 to 3½ was accompanied by an increase in utterances about events that occurred on previous pages in the book, or that were anticipated to occur on future pages (e.g. "What's gonna happen to baby bear's chair when Goldilocks tries it?"). Whereas book illustrations provided stimulus support for labelling utterances, story-related utterances required more advanced skills, such as recall. Although previous research (c.f. Myers & Perlmutter, 1978; Perlmutter, 1984) indicates that 2-year-olds are capable of recall, it also shows that their recall skills are limited, and that even by ages 3½ and 5 years recall is far from proficient. The paucity of book reading and story utterances with 2-year-olds may be related to mothers' sensitivity to their 2-year-olds' cognitive skills, including their sense of a need to focus on vocabulary acquisition before moving on to more complex levels of story content. The rather small proportions of story utterances observed even at age 3½ and 5 may also suggest that although mothers were attempting to provide their children with a stimulating level of input, they were aware of their still limited cognitive capacity. Evidence consistent with this possibility is the increase in formal reading. This activity comprised less than one-quarter of the verbal interaction with 2-year-olds, but almost two-thirds of the interchange with 3½ and 5 year olds.

Also suggestive of mother's sensitivity to children's cognitive skill level was the finding of a familiarity effect on labelling and story utterances. Labelling occurred less often with a familiar book than with a novel book, while the opposite pattern was observed with story utterances. There are at least two ways in which repeated exposure to the familiar book may have contributed to this change. First, mothers may have perceived vocabulary teaching as less crucial if the child had demonstrated his or her knowledge of the vocabulary on a previous reading of the book. Instead, they motivated their child to keep track of the story by talking about it and asking questions about it. Even with 2-year-olds, more of the story utterances that were produced occurred with the familiar book (10% of mothers' speech) than with the novel book (3%). A second factor that may

have contributed to this finding is that utterances about future story events could not be made with the novel book, since neither the mother nor the child had previous knowledge of it. The results suggest that story-related conversation generally is absent during the initial presentation of a book, even with 5-year-olds. It appears that on first exposure to a book, mothers allow the child the opportunity to practice his or her skill in processing its contents. These results suggest that age-related advances in some aspects of the book-reading task may occur earlier with familiar books.

The results of the page-turning analysis further point to changes in the focus of reading activity with 2- and 3½-year-olds. The responsibility for page turning was shared between mothers and their 2-year-olds, whereas mothers of 3½-year-olds took almost total responsibility for this part of the activity. Two factors may have contributed to this result. First, page turning probably served to keep 2-year-olds involved in the interaction, and motivated them to continue the labelling game, thereby increasing their opportunity for learning and practising labels. Second, since part of what the 2-year-old must learn about book reading are the "rules of the game" (e.g. the words on the page are related to the picture; turn one page at a time), mothers may delegate responsibility for page-turning to the child to allow him or her the opportunity to practice acting on these rules. By age 3½ the child probably knows the rules, and may focus his processing capacity on the story. By age 5, the child's increased processing capacity may allow him or her to keep track of the story as well as to take a more active role in the book-reading task. Since 5-year-olds in the present study could not read yet, their participation was increased by allowing them to take more responsibility for page-turning.

SUMMARY

In summary, the present study has provided evidence of changes in mothers' and children's behaviour during reading activity that is related to both the age of the child and the familiarity of the book. Children appeared more involved in the activity of reading, and in the story content of the book, as they got older. In addition, they demonstrated somewhat more mature behaviour with a familiar than with a novel book. Mothers also showed greater task orientation with older than younger children and appeared to give children more control with a familiar book. In several ways mothers' interaction appeared to be tuned to the cognitive and linguistic level of the child. The results especially highlight the likely importance of early book reading for the child's development of vocabulary and comprehension skills.

REFERENCES

- Adams, A. K. & Bullock, D. (1983). *Anomaly and context effects in maternal labeling of category exemplars*. Paper presented at the biennial meeting of the Society for Research in Child Development. Detroit, MI.
- Brown, R. (1973). *A first language*. Cambridge: Harvard Press.
- Bruner, J. (1984). *Learning to talk*. New York: Basic Books.
- DeLoache, J. (1983). *Joint picture book reading as memory training*. Paper presented at the biennial meeting of the Society for Research in Child Development. Detroit, MI.
- Hayden, H. R. & Fagan, W. F. (1983). Classification strategies in joint book reading. *First Language, 4*, 131–142.
- Juel, C. L. (1977). *An independent-process model of reading for beginning readers*. Unpublished doctoral dissertation, Stanford University.
- Maratsos, M. (1983). Some current issues in the study of the acquisition of grammar. In J. H. Flavell and E. M. Markman (Eds.), *Handbook of Child Psychology*, 4th Ed. New York: Wiley.
- Myers, N. A. & Perlmutter, M. (1978). Memory in the years from two to five. In P. A. Ornstein (Ed.), *Memory development in children*. Hillsdale, N.J.: Lawrence Erlbaum Associates Inc.
- Newport, E., Gleitman, H., & Gleitman, L. (1977). Mother, I'd rather do it myself. Some effects and non-effects of maternal speech style. In C. Snow and C. Ferguson (Eds), *Talking to children*. Cambridge: Cambridge University Press.
- Ninio, A. (1983). Joint book reading as a multiple vocabulary acquisition device. *Developmental Psychology, 19*, 445–451.
- Ninio, A. & Bruner, J. S. (1978). The achievement and antecedents of labelling. *Journal of Child Language, 5*, 1–15.
- Perlmutter, M. (1984). Continuities and discontinuities in early human memory paradigms, processes, and performance. In R. Kail & N. Spear (Eds), *Comparative perspectives in memory development*. Hillsdale, N.J.: Lawrence Erlbaum Associates Inc.
- Snow, C. E. & Goldfield, B. A. (1983). Turn the page please: Situation specific language acquisition. *Journal of Child Language, 10*, 551–569.
- Wheeler, M. P. (1983). Context rated age changes in mothers' speech: Joint book reading. *Journal of Child Language, 10*, 259–263.