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Child and maternal contributions to shared reading: Effects on language and literacy development

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Abstract

Fifty-five children and their mothers were studied longitudinally from 18 to 42 months to determine the effects of home literacy practices, children's interest in reading, and mothers' metalingual utterances during reading on children's expressive and receptive language development, letter knowledge, and knowledge of print concepts. At 27 months, children's interest and the rate of mothers' metalingual utterances during shared reading were assessed observationally, and mothers reported their home literacy practices. Children's language development was assessed at 30 and 42 months, and their letter knowledge and knowledge of print concepts were assessed at 42 months. Children's interest was strongly associated with the rate of mothers' metalingual utterances. Home literacy practices, children's interest, and the rate of mothers' metalingual utterances all predicted expressive language development. Home literacy practices predicted receptive language development, and children's interest predicted letter knowledge. The relative contributions of children and mothers to shared reading are discussed.

Keywords: Shared reading; Language development; Emergent literacy; Children's interest

1. Introduction

Shared book reading is a common event for many young children and their caregivers, and many parents as well as numerous professionals associate shared book reading with favorable child developmental outcomes. Interest in preschool literacy exposure in general, and shared book reading in particular, is understandable as it seemingly provides a rich context for language learning (Ninio & Bruner, 1978). Elements of adult speech generally thought to foster children's linguistic development–such as the frequent use of open-ended questions, the provision of familiar linguistic routines in which children can become progressively more active agents, and the elaboration of the child's current focus (Akhtar, Dunham, & Dunham, 1991; Snow & Goldfield, 1983; Tomasello & Farrar, 1986; Whitehurst et al., 1988)–occur at an accelerated rate during shared reading between young children and their caregivers (Hoff-Ginsberg, 1991; Jones & Adamson, 1987). For these reasons, children's preschool literacy exposure has been explored as a potential source of differences in early language development (Ninio, 1980), with numerous studies reporting positive associations between preschool literacy experience and later language and literacy development (Bus, van IJzendoorn, & Pellegrini, 1995; Scarborough & Dobrich, 1994).

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Despite these intriguing claims, questions remain regarding the paths of association between early shared reading experiences and later language and emergent literacy outcomes. Much of the research has investigated parental and child contributions to reading processes separately and has generally neglected the role of children's interest as dyads co-construct shared reading conversations (Scarborough & Dobrich, 1994).

Parents' contributions to shared reading have been extensively investigated with respect to two complimentary domains: Their establishment of home literacy practices in general and their communicative behavior during shared reading. Home literacy practices typically have been investigated through parent report, and results from these studies indicate that parents who report reading to their children often and at younger ages and who provide a rich range of literacy materials (Payne, Whitehurst, & Angell, 1994) have children with superior expressive and receptive language development (Bus et al., 1995; Sénéchal & LeFevre, 2002) and higher levels of school readiness (Wells, 1985). Concerns have been raised about the validity of parent report of home literacy practices because the high cultural value placed on these activities may prompt parents to inflate estimates, but similar results are found in studies that evaluate home literacy practices by measuring parents' familiarity with children's literature (Fritjers, Barron, & Brunello, 2000) and directly assess the frequency of shared reading (Wells, 1985).

In addition to their home literacy practices, parents differ in how they communicate with their children during shared reading. These differences in communicative patterns also appear related to children's language development. In general caregivers who engage in communicative strategies that direct their child's attention to language itself and that promote children's language use during shared reading foster superior language development (Sénéchal, 1997; Valdez-Menchaca & Whitehurst, 1992; Whitehurst et al., 1988).

In his seminal work, Jakobson (1960; see also Adamson, 1992; Bruner, 1983) argued that there are multiple potential targets of attention embedded within any speech act and characterized speech acts that direct attention to language itself as *metalingual*. In this vein, we consider those types of communicative behaviors that are commonly observed during shared reading such as requests for labels ("What is that?"), prompts to produce language ("Say doggy."), and recasts of the child's language use ("That's right; that is a cat.") as metalingual. Previous studies of early mother–child conversations that used coding schemes based on Jakobson's theory (e.g., Deffebach & Adamson, 1994; Jones & Adamson, 1987) have found a positive association between mothers' use of metalingual utterances, such as the ones noted above, and children's language development. By comparison, *referential* utterances (i.e., utterances that direct attention to objects and events in the immediate context, for example, "Where's the doggy?" "The ball is under the table.") and *social regulative* utterances (i.e., utterances that direct attention to regulation of social actions, for example, "Now, it's your turn.") have not predicted language development (Jones & Adamson, 1987; Whitehurst et al., 1988).

Children's contributions to shared reading processes have not been as extensively explored and consequently their role is not as well understood. The few studies that have investigated children's interest in reading indicate that it is associated with language development (Laakso, Poikkeus, & Lyytinen, 1999), early reading status (Crain-Thoreson & Dale, 1992), and specific emergent literacy knowledge (Frijters et al., 2000; Wells, 1985). Moreover, these effects appear to be relatively enduring such that grade school children's attitudes toward reading are associated with their academic standing (McKenna, Kear, & Ellsworth, 1995) and with their willingness to select challenging reading material (Baker, Mackler, Sonnenschein, & Serpell, 2001). Cumulatively, these studies suggest that children's interest in reading is an important predictor. However, it is not clear how children's interest promotes learning.

One possibility is that children's interest facilitates more active engagement in the reading process and that, in turn, promotes language use and increased skill. However, the literature to date provides mixed support for this proposition. For example, Jones and Adamson (1987) reported a lack of association between children's use of language during shared reading and measures of language skill, and Reese (1995) reported that children who make more spontaneous conversationally relevant verbal contributions during shared reading actually have weaker receptive language development. Subsequently, it seems necessary to evaluate the level of children's interest during shared reading and how it is related to differences in the content of shared reading conversations.

For this study, we observed mothers during shared reading with their 27-month-old toddlers, an age when shared reading is common in most middle-income families (Adams, 1990; Debaryshe, 1993; Heath, 1989) but long before formalized reading instruction has been introduced. Using systematic observation, we derived measures of children's interest and the rate of mothers' metalingual utterances; we also asked mothers about their home literacy practices. Previously, when children were 18 months of age, we assessed their expressive and receptive language skills. As

outcome measures, we collected expressive and receptive language assessments when children were 30 and 42 months of age. We wanted distinct assessments of expressive and receptive language ability because of the differential effects of shared reading on these abilities that have been reported elsewhere in the literature (see Sénéchal, 1997; Whitehurst et al., 1988). Finally, as indices of emergent literacy ability, we assessed the children's letter knowledge and knowledge of print concepts when they were 42 months of age.

We had two aims. The first was to evaluate patterns of concurrent association when infants were 27 months of age. Influenced by findings that maternal reports of home literacy practices and child interest are related (DeBaryshe, 1995; Wells, 1985), we anticipated that home literacy practices would be positively associated with our observations of children's interest. We also expected that when children were more interested in shared reading, mothers would produce metalingual utterances at a greater rate. This stems from the expectation that when children are not particularly interested in reading, a more rudimentary form of interaction may emerge such that utterances focusing on attention-recruitment (e.g., "Look at the kitty"; DeLoache & DeMendoza, 1987; Sénéchal, Cornell, & Broda, 1995) and familiar behavioral routines (i.e., pointing and page turning) may dominate, and subsequently metalingual utterances will be less common. Finally, we anticipated that increased home literacy practices would be associated with a greater rate of mothers' metalingual utterances based on prior reports in the literature that greater frequency of shared reading is positively associated with utterances focused on story content, as opposed to utterances focused on regaining a child's attention (Bus & van IJzendoorn, 1995).

Our second aim was to determine how home literacy practices, children's interest in reading, and the rate of mothers' metalingual utterances during shared reading at 27 months predicted children's expressive and receptive language development at 30 and 42 months and their letter knowledge and knowledge of print concepts at 42 months. First, based on prior reports in the literature that suggest a limited association between home literacy practices and specific early reading skills (Crain-Thoreson & Dale, 1992; Frijters et al., 2000; Sénéchal & LeFevre, 2002), we expected that the effect of home literacy practices on language development would be stronger than its effect on emergent literacy outcomes, but we anticipated that children's interest during shared reading would be predictive of the measures of both language and emergent literacy. Second, we expected the rate of mothers' metalingual utterances to be positively associated with language development. Third, because we anticipated that our 27-month shared reading variables would be positively correlated with one another, we expected the variance in the outcomes that these variables were accounting for would be partially shared, and accordingly we wanted to determine the unique and shared contributions of these variables on expressive and receptive language development, letter knowledge, and knowledge of print concepts.

2. Method

2.1. Participants

The sample for this study consisted of 55 mother–child dyads. Twenty-six of the children were male and 27 were first born (13 males and 14 females); 82% of the children were European-American, 16% were African-American, and one child was of Asian–European American ancestry. The mothers, who were part of an ongoing longitudinal study focused on the development of joint attention in their children from 1 1/2 to 5 1/2 years of age (Adamson, Bakeman, & Deckner, 2004), were unpaid volunteers who had responded to a letter of invitation to participate in research studies in a university developmental psychology program. Their mean age when recruited was 33 years (range = 21–42); all had completed high school and 75% had earned at least a bachelor's degree.

2.2. Procedure

Although shared reading and emergent literacy were not the focus of the primary study, observations and measures related to these processes were incorporated in the data collection protocol when children were on average 18 (range = 17.6–18.7), 27 (range = 26.6–27.6), 30 (range = 29.5–31.6) and 42 (range = 41.5–44.2) months of age so that we could address the aims of the current study, which we planned as a distinct investigation with separate questions from the main study.

At 18 months of age, all of the children were administered assessments of receptive and expressive language development. Prior to the 27-month visit, mothers were asked to bring their child's favorite book to the play session.

Then at the 27-month visit, we provided mothers with three books—*Clifford: Where is the Big Red Dog* by Norman Bridwell (1998); *Mice Squeak We Speak* by Tommy DePaola (1997); and *Biscuit's Picnic* by Alyssa Satin Capucilli (1998). These books were age-appropriate, had strong narrative content and thematic organization, and were likely unknown to the children. We asked mothers to share the books with their child as they normally would. We observed dyads during shared reading in a 4.6 m × 3.1 m playroom that was comfortably furnished with large pillows; all of the dyads were familiar with the setting from previous visits to the lab. Dyads were videotaped from outside the observation room through one-way mirrors using two synchronized cameras. One camera provided a frontal view of the mother and child, and the other camera allowed coders to observe their points to text and pictures in the book. After the dyads finished reading, we asked mothers about their home literacy practices.

At 30 months of age, 53 children returned and were administered expressive and receptive language assessments; one child did not complete the receptive language assessment. At 42 months of age, 48 of the children returned and were administered the same language measures and a set of assessments measuring letter knowledge and knowledge of print concepts; again, one child did not complete the receptive language assessment, and one child did not complete the assessment of print concepts.

2.2.1. Home literacy practices

When children were 27 months of age, mothers completed a modified version of the *Stony Brook Family Reading Survey* (Whitehurst, 1992). This survey covers a range of home literacy practices including the age at which parents began reading with their child, the number of times per day that a caregiver reads to the child, the average duration of shared reading events, the amount of time spent reading to the child in the past week, and parents' material support of reading as assessed through the number of children's books in the house. The original survey included predetermined response options for most questions (Payne et al., 1994). However, the demographic profile for the current study differed from the original one, and the response options seemed potentially inappropriate for our more educated sample. Thus we asked for open-ended quantitative responses, but then coded the responses on a 3-point scale. Descriptive statistics for the raw data and definitions for the recoded values are given in Table 1. A total home literacy practices score was then created by summing the scores for the five recoded items; as each item was scored 0–2, the total score could range from 0 to 10. The alpha coefficient for the five items was .62.

2.2.2. Shared reading

Mothers were told that we wanted to observe how mothers and children structure shared reading. Because young children and caregivers share both new and familiar books and we wanted to observe a range of typical shared reading interactions, we asked mothers to read at least one of the novel books in addition to the favorite book from home. All of the dyads read at least part of two books during shared reading: 44 of the dyads read at least one novel book and the familiar book from home and 11 of the dyads did not read the book from home but chose to read at least two of the novel books. Shared reading episodes began when the experimenter left the room and lasted until the dyad was no longer engaged in the activity and the experimenter returned; average duration was 10 min 17s (range = 5 min 23 s–20 min 35 s). Two separate observational coding systems were employed. One was an evaluation of the child's level of interest during the shared reading interaction and the second systematically identified mothers' production of metalingual utterances.

Table 1
Parent report of specific home literacy practices

Question	Raw data			Recoded values		
	M	*SD*	Range	0	1	2
Began shared reading (in months)	5	6.6	0–24	> 6 months	1–6 months	Before birth
Times per day someone reads to child	2	2.0	Every other day to 11 times a day	< once a day	1–2 times a day	> 2 times a day
Duration of reading event (in min)	21	11.3	5–60	≤ 15 min	15 < 29	> 30
Time spent reading with the child during past week (in min)	232	188	20–840	< 2 h	2–5 h	> 5 h
Number of children's books available in the house	126	238	13–1750	< 50	50–100	> 100

Note. $N = 55$.

2.2.2.1. Child interest. Coders were asked to rate successive 30-s intervals 1–5 for availability, affect, and active participation. The child's availability for shared reading was rated from 1, not available for book reading (child not attending to the reading material for more than half of the interval), to 5, constant availability for book reading (child appears riveted to the book), based largely on the child's proximity to the mother and visual attention to the book. Affect (the child's enjoyment during shared reading) was rated from 1, extremely negative affect (child crying or protesting during part of the interval), to 5, extremely positive affect (child laughing or smiling frequently during the interval), based on facial, vocal, and behavioral cues. Finally, active participation (the child's involvement during shared reading) was rated from 1, no participation (child made no contributions during the interval), to 5, highly frequent participation (child made numerous contributions during the interval, typically more than four verbal comments or more than five physical acts, gestures, or manipulation) as indicated by speech acts such as labeling, by gestures such as pointing to pictures, and by active manipulation of the book such as turning the pages.

Scores for the three scales (the mean rating over intervals) correlated strongly (*r*s = .53, .67. and .68; following Cohen, 1988, we refer to correlations as weak when .10–.30, moderate when .30–.50, and strong when .50 or greater), thus a total child interest score was created by averaging the scores for availability, affect, and active participation. The alpha coefficient was .81.

Two coders were trained to use the three scales of the child interest index until a weighted kappa (Bakeman & Gottman, 1997; Cohen, 1968) of at least .60 was achieved. Kappa is a measure of reliability that corrects for chance agreement, and is preferred over percent agreement for this reason. Weighted kappa, a measure of reliability for scales that are roughly ordinal, as was the case with our measure of child interest, offers the additional benefit of allowing the degree of disagreement (e.g., 1 vs. 2 as opposed to 1 vs. 5) to be considered in reliability estimates (Bakeman, Deckner, & Quera, 2005). One coder coded the entire corpus, and a second coder coded a randomly selected 15% of the corpus for reliability. The pooled weighted kappas were .80, .64, and .72, and correlations between the two coders were .91, .72, and .86, for child availability, affect, and active participation, respectively.

2.2.2.2. Utterances. Coding of utterances was done in two steps. First, transcribers created a transcript of mother and child communication that segmented their speech into utterances. One transcriber created an initial transcript that was then reviewed by a second trained transcriber; disagreements were resolved through consensus. After transcription was completed, coders characterized utterances as follows: First, all utterances were coded as off-task or on-task (i.e., engaged in shared reading). If on-task, mothers' utterances were then coded as reading or discussion. This distinction captured whether the mother was simply reading the text or whether she was departing from it by, for example, asking the child questions about the story. If the utterance was coded as *discussion*, it was then further coded as *non-metalingual* or *metalingual*. Utterances were coded as metalingual if they drew attention to language itself. The specific categories strongly parallel prior coding strategies in the literature (Whitehurst et al., 1988) and included *prompts* (e.g., "What's he doing?" Or, "Say 'apple'."); *responses* (e.g., responding to a request for a label); *recasts*, which included repetitions or expansions of a partner's utterance; *scripting* (the mother reads the text with structured pauses to elicit recitation of memorized language by the child); *vocabulary introduction* (the mother is clearly presenting a new word; e.g., "Colt is the name for a baby horse."); and finally, references to *print elements* in the book. In contrast, utterances were coded as non-metalingual if they included requests for, and production of, referential points (e.g., "Point to the dog."), behavioral directives (e.g., "Turn the page please."), simple descriptions, and Yes/No questions.

Two coders were trained using the coding system for utterances until a Cohen's kappa (Cohen, 1960) of at least .70 was achieved. Here again, one coder coded the entire corpus and a second coder coded a randomly selected 15% of the corpus. All pooled kappas for off-task versus on-task, reading versus discussion, non-metalingual versus metalingual, and the specific categories of the metalingual utterances ranged from .85 to .97.

Three scores related to utterances are emphasized in this report: The rate (per minute) of mothers' utterances coded reading, non-metalingual and metalingual. Coding manuals for rating children's interest and for coding utterances during shared reading are available on request from the authors.

2.2.3. Language development

At 18 months of age children were administered the *Mullen Scales of Early Learning* (Mullen, 1995) a standardized assessment of cognitive development that is normed for use with children aged birth to 68 months. The expressive and receptive language scale scores were used in this report to control for initial language status. Language outcomes, collected when children were 30 and 42 months of age, were the Peabody Picture Vocabulary Test-III (PPVT-III, Dunn

& Dunn, 1997) and the Expressive Vocabulary Test (EVT, Williams, 1997). Both of these instruments were developed for administration with individuals aged 2 1/2 to 90 years. The PPVT-III, a measure of receptive language ability, entails administration of a subset of 204 test items; in the current study children were administered items 1 through 108. The EVT involves labeling items and producing synonyms. There are 190 items in the EVT, but here again, only a subset of items was administered to a particular individual; in this study items 1 through 60 were administered.

2.2.4. Emergent literacy

At 42 months of age children were administered a letter discrimination and a letter naming task (Bialystok, Shenfield, & Codd, 2000) and *Clay's Concepts About Print* (Clay, 1993), assessments commonly viewed as tapping emergent literacy abilities. For the letter discrimination and letter naming task, the child is presented with 10 cue cards each with a series of graphic symbols such as a capital letter, a number, and a punctuation mark, and is asked to identify which of the symbols is a letter and to provide its name (Bialystok et al., 2000). The two scores correlated .78, thus we summed them to form a single score, which can range from 0 to 20, that we called 'letter knowledge'. In *Clay's Concepts About Print*, the test administrator presents the child with a special book that incorporates some errors in print and text orientation. Standard and irregular elements of the book provide the basis for asking a series of 24 questions that tap the child's knowledge of standard print conventions, thus this score can range from 0 to 24.

3. Results

3.1. Home literacy practices, children's interest, and shared reading conversations

When asked about their home literacy practices, more than half of the mothers reported that shared reading was introduced before the child was 6 months old. Mothers also reported reading to their young children an average of two times a day with individual sessions lasting a little over 20 min, and mothers reported reading to their child for almost 4 h during the past week. Finally, the majority of the households in the study had over a hundred children's books (see Table 1). When children were observed during shared reading, their interest averaged 3.0 on a 1–5 scale, which suggests that many of the children appeared at least moderately interested, but as might be expected with children this age, some strayed from the reading task (see Table 2). Mothers averaged over 19 reading related (i.e., on-task) utterances per minute, compared to 7 per minute for their children. About one quarter of mothers' utterances were metalingual, and the rest were equally distributed between reading the text and non-metalingual utterances (see Table 2). The majority of mothers' metalingual utterances were prompts for child language and recasts of child language (*M*s = 39% and 53%, respectively). An analysis of variance revealed that neither sex, nor parity, nor their interaction affected home literacy practices, children's interest, or the rate of mothers' utterances coded as reading, non-metalingual and metalingual.

Home literacy practices were weakly and nonsignificantly associated with children's interest, and there was essentially no association between home literacy practices and the rate of mothers' utterances that were coded as reading and non-metalingual. However, home literacy practices and the rate of mothers' utterances coded as metalingual were significantly associated with one another (albeit at only a weak to moderate level). Children's interest

Table 2
Descriptive statistics for home literacy practices and shared reading variables

Variable	*M*	*SD*	Range	Variable				
				1.	2.	3.	4.	5.
1. Home literacy practices	5.1	2.23	1–10	–				
2. Child interest	3.0	.59	1.7–4.2	.15	–			
3. Mother reading only	7.43	2.96	.66–14.08	−.02	.29*	–		
4. Mother non-metalingual	7.31	3.36	.85–17.49	.00	.38**	−.07	–	
5. Mother metalingual	4.58	3.09	.23–13.92	.29*	.67**	−.24	.42**	–

Note. $N = 55$. Home literacy practices, which can range from 0 to 10, is the sum of five ratings. Child interest, which can range from 1 to 5, is the mean of 3 ratings averaged over time. The next three variables are rates (utterances/min).
$^{*}p < .05$. $^{**}p < .01$.

Table 3
Descriptive statistics for expressive and receptive language and emergent literacy variables

Variable	*N*	*M*	*SD*	Range
Mullen expressive (18 months)	55	50.85	5.15	44–73
Mullen receptive (18 months)	55	52.98	12.15	30–77
EVT (30 months)	53	103.98	11.58	75–129
PPVT-III (30 months)	52	100.58	12.52	70–126
EVT (42 months)	48	112	11.45	77–140
PPVT-III (42 months)	47	109	14.25	73–144
Letter knowledge (42 months)	48	7.60	5.83	0–20
Print concepts (42 months)	47	3.74	2.62	0–13

was moderately associated with the rate of mothers' utterances codes as reading and non-metalingual, whereas it was strongly associated with the rate of mothers' utterances coded as metalingual (see Table 2).

3.2. Predictive relations among shared reading and language and emergent literacy ability

The vast majority of the children scored within the average range (e.g., within one standard deviation from the tests' average standard score of 100) on the assessments of expressive and receptive language at 30 and 42 months of age (see Table 3). One child's score on the assessment of expressive language development at 42 months appeared to be a possible outlier (73). However, preliminary analyses indicated that recoding this value did not alter the pattern of results, and as such the original score was used. With respect to letter knowledge, half of the children scored between 3 and 10 (median = 6) out of a possible 20; with respect to print concepts, half of the children scored between 2 and 5 (median = 3) out of a possible 24. Again, one child had a score for knowledge of print concepts that was a potential outlier (13). However, preliminary analyses suggested that results were essentially the same whether or not this score was reduced, so we proceeded to analyze the data as collected.

In order to determine how early experiences with shared reading predicted subsequent expressive and receptive language development, letter knowledge, and knowledge of print concepts, we adopted two strategies. First we wanted to assess the bivariate association between our 27-month shared reading variables and the outcome variables while controlling for initial differences in ability. Accordingly, we calculated semi-partial correlations between the shared reading variables and the outcome variables using 18-month expressive language ability, 18-month receptive language ability, and a composite 18-month language ability score as covariates in the analyses of expressive, receptive, and emergent literacy abilities, respectively (see Table 4).

Home literacy practices were moderately associated with both expressive and receptive language at 30 and 42 months, but were only weakly and nonsignificantly associated with letter knowledge and knowledge of print concepts. Children's interest was moderately associated with expressive language at 30 months, but by 42 months the association was weak and did not reach a conventional level of statistical significance. Children's interest was only weakly and nonsignificantly associated with receptive language development. Children's interest was moderately associated with letter knowledge, whereas the association with print concepts was weak and nonsignificant, possibly due to the

Table 4
Semi-partial correlations between 27-month shared reading variables and language and emergent literacy variables

27-Month variable	Outcome variable					
	Expressive language		Receptive language		Emergent literacy	
	30 months	42 months	30 months	42 months	Letter knowledge	Print concept
Home literacy	.36**	.34*	.38**	.53**	.10	−.20
Child interest	.40**	.27†	.04	.16	.34**	.19
Rate of mothers' metalingual	.33*	.32*	.15	.24	.20	.04

Note. $N = 53$ for EVT and 52 for PPVT at 30 months, 48 for EVT at 42 months and letter knowledge, 47 for PPVT-III at 42 months and print concepts. The covariates for the analyses of expressive and receptive language development and emergent literacy were 18-month expressive language ability, 18-month receptive language ability, and a composite 18-month language ability score, respectively.
†$p < .10$. *$p < .05$. **$p < .01$.

Table 5
Total and unique variance accounted for by initial expressive language ability and 27-month shared reading variables

	Expressive language	
	30 months	42 months
18-Month expressive language	.02	.09*
Home literacy	.09*	.06*
Child interest	.06*	.01
Rate of mothers' metalingual	.00	.01
Total R^2	.33	.34

Note. $N = 53$ and 48 for EVT at 30 and 42 months, respectively. Values in the first four rows are squared semi-partial correlations.
*$p < .05$. **$p < .01$.

restricted range in performance on the print concepts measure. Mothers' metalingual utterances were moderately associated with children's expressive language development at both 30 and 42 months, and only weakly associated with children's receptive language, letter knowledge, and knowledge of print concepts (see Table 4). As a final note, the rates of mothers' utterances coded as reading or non-metalingual were not associated with any of the outcome measures.

Our second strategy employed a more multivariate approach and allowed us to determine the amount of variance that was unique to the 27-month shared reading variables. However, we only pursued this tact when the first stage of predictive analyses indicated that more than one of the 27-month shared reading variables was associated with the outcome of interest after controlling for initial differences in ability because only then was an expectation of shared variance warranted. Accordingly, we only evaluated patterns of shared and unique variance for expressive language development. To pursue this aim, we performed two simultaneous regressions in which we regressed 18-month expressive language ability and the 27-month shared reading variables on to expressive language development at 30 and 42 months of age to determine the total amount of variance that these variables accounted for and calculated the squared semi-partial correlations to determine the amount of variance in the outcome that was unique to each variable.

Cumulatively, 18-month expressive language ability, home literacy practices, children's interest, and the rate of mothers' metalingual utterances accounted for 33% and 34% of the variance in children's expressive language abilities at 30 and 42 months, respectively. At both age points, the largest portion of variance (i.e., 15% and 18% for 30 and 42 months, respectively) was shared between the variables as opposed to being unique to a specific variable. For expressive language development at 30 months, only 2% of the variance was unique to children's 18-month expressive language abilities, whereas home literacy practices and children's interest accounted uniquely for 9% and 6% of the variance, respectively. The rate of mothers' metalingual utterances uniquely accounted for less than 1% of the variance. At 42 months, 18-month expressive language abilities uniquely accounted for 9% of the variance and home literacy practices uniquely accounted for 6% of the variance, whereas children's interest and the rate of mothers' metalingual utterances only accounted for 1% of the variance (see Table 5).

4. Discussion

This study provides a view of shared reading that draws attention to the intertwined nature of caregivers' and children's efforts. Our findings highlight the utility of parents' general literacy practices and their efforts to guide their child's attention to language through metalingual utterances but also documents that variability in children's interest in shared reading is associated with differences in the conversations that accompany shared reading. Furthermore, these results contribute to a growing body of evidence that children's interest contributes to differences in subsequent language and specific emergent literacy skills.

Many of the patterns observed in the current study echo results from previous studies of shared reading. For instance, shared reading was clearly a highly valued activity among participants in this study. All of the mothers indicated on the home literacy practices questionnaire that shared reading was a common and longstanding practice, and the families appeared interested in creating literacy rich environments for their children as indicated by the large number of children's books available in most of the households. Finally, the general structure of the shared reading event appeared comparable to what has been presented previously in the literature in that mothers were the more active

partner during shared reading (Sénéchal et al., 1995) and the use of prompts and recasts was prevalent (Ninio & Bruner, 1978).

The results from this study support the perspective that parents' literacy efforts are making meaningful and lasting contributions to their children's development. Home literacy practices significantly predicted children's receptive and expressive language development even after controlling for initial language differences and over a 15-month period. Furthermore, mothers' propensity to produce metalingual utterances at 27 months of age was significantly associated with children's expressive language development at 30 and 42 months of age even after controlling for initial differences in language ability.

However, the current study also indicates that children are very active agents in their own development. First, child interest was strongly associated with the rate at which mothers produced metalingual utterances. On the other hand, it was only moderately associated with mothers' reading and non-metalingual utterances. We think this pattern indicates that the spontaneous emergence, and endurance, of certain communicative patterns during shared reading may be as much a result of children's interests as caregivers' efforts. Moreover, the effect of mothers' metalingual utterances on expressive language development was shared with other study variables. Together, we think this pattern of results should temper impulses to advocate that caregivers adopt specific styles of communicative interaction during shared reading without considering children's contributions (Lonigan & Whitehurst, 1998; Whitehurst et al., 1988). We agree with recent admonishments (Zigler & Bishop-Josef, 2004) that highly didactic interactions with very young children are developmentally inappropriate; as Piaget (1962) argued, the work of children at this age is play. Subsequently, we think that literacy efforts that allow children to follow their sense of play will be most successful. In this light, we suspect that the mothers in the current study who successfully used metalingual utterances to guide their child's attention likely had children who were primed for such interactions by their interests, and that intervention efforts incorporating shared reading should look for ways to promote children's interest in addition to modifying caregivers' behavior (Sonnenschein & Munsterman, 2002).

Second, the association between children's interest and letter knowledge demonstrates quite compellingly how early interest can propel children toward proficiency in distinct domains, starting from a very young age (Thomas, 1984). Reading is clearly a multifaceted task and one that requires mastery of disparate skills. Letter knowledge, arguably one of the more analytical skills, is essential to successful reading, but children also need to develop other skills, such as gaining greater insight regarding story agents' motivations and beliefs (MacArthur, Adamson, & Deckner, 2005), in order to engage fully in the reading process. We suspect that just as some children when first learning language may temporarily emphasize referential as opposed to expressive functions of language (Adamson, 1992; Nelson, 1981), there are likely multiple paths to literacy competence. Initial attention to the formal elements is one route, but other routes may be fruitful as well. To this end, we suggest that whereas global measures of child interest in shared reading appear to have impressive predictive utility, future research that takes a more fine-grained approach to evaluating the variety of ways in which children can express their interest during shared reading and how these differences may situate children to learn varying aspects of reading may prove even more profitable.

In conclusion, the current study supports a model of shared reading that highlights both parental and child contributions. Parents' provision of a reading context, by establishing home literacy practices and use of metalingual routines, makes a significant and enduring contribution to language development. Moreover, children are active agents within that context as evidenced by different levels of interest. Furthermore, child differences are associated with the quality of current reading interactions, future language acquisition, and emergent literacy development. Finally, this study highlights the need to better understand how parental and child contributions to shared reading change over the course of the preschool years and how these transitions may be associated with future development.

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