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ABSTRACT

A study examined the relations among the diversity of the social groupings in which children participated in home literacy events and the social groupings, oral language, and literacy in first-grade literacy events. Subjects, 35 children in two first-grade classrooms in the same school district in a small city in the southeastern United States, were observed over an entire school year, were audiotaped once a month, and were assessed on a number of social, cognitive, literacy, and receptive vocabulary measures. In one of the two classrooms, information on literacy experiences at home was collected from the children. Results indicated that the diversity of experiences in home literacy events was related to diversity in social groupings in school literacy events. Varied school social groups were contexts in which children generated "literate" oral language: in turn, particular language forms, especially talk about language and talk about mental states, related to measures of reading and writing. Results also indicated an interrelation among measures or oral language, reading, and writing in first grade. (Contains 36 references and five tables of data.) (Author/RS)

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The Nexus of Social and Literacy Experiences at Home and School: Implications for First-Grade Oral Language and Literacy

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Abstract. This study examined the relations among the diversity of the social groupings in which children participated in home literacy events and the social groupings, oral language, and literacy in first-grade literacy events. In this multimethod study of two first-grade classrooms across a whole school year, the diversity of experiences in home literacy events were found to be related to diversity in social groupings in school literacy events. Varied school social groups were contexts in which children generated "literate" oral language; in turn, particular language forms, especially talk about language and talk about mental states, related to measures of reading and writing. Results indicated an interrelation among measures of oral language, reading, and writing in first grade. Results are discussed in terms of diverse social network theory and the influence of cognitive decentering on language and literacy.

The *zeitgeist* in current literary research is to frame cognitive development generally and literacy development specifically in terms of social interaction and corresponding forms of verbal interaction (e.g., Laboratory of Comparative Human Cognition [LCHC], 1983). Some researchers (e.g., Dickinson & Tabors, 1991; Dickinson & Moreton, 1991; Olson, 1977; Pellegrini & Galda, 1993) have defined school-based literacy as it relates to the use of specific language forms. For example, school-based literacy can be defined by the behaviors and language that children display during a literacy event, such as group writing and story reading. In such cases, children typically talk about language (e.g., "The doll can't really read") and mental processes (e.g., "I think this word is hard"). They also talk about physically absent phenomena, often in the context of story reading and story telling, using past and future tense verbs. Further, children typically use these oral language forms when summarizing

stories (hence past tense verbs), predicting story endings (hence future tense verbs), and commenting on words and the reading process itself (hence linguistic and cognitive terms). Using these forms of oral language is considered to be *literate behavior* for preschool and kindergarten children (Dickinson & Moreton, 1991; Dickinson & Tabors, 1991; Pellegrini & Galda, 1991).

Specific verbal interaction patterns and the social contexts in which they occur have been implicated in literacy development. The most frequently described social context is the prototypic mother-child dyad engaged in joint reading and/or social fantasy play (e.g., Bus & vanIJzendoorn, 1988; Dickinson & Tabors, 1991; DeTemple & Beals, 1991; Heath, 1983; Teale, 1986). However, in light of the changing family structure in which working and/or single parents may have less time for such activities (Belsky, Rovine, & Fish, 1989) and thus rely on others for social support, other social configurations may also be important. For example, in many families, children interact frequently with their grandmothers or siblings until their mother comes home from work; in other cases, children may be alone until a caregiver comes home from work (Steinberg, 1986). Thus, the classic mother-child dyad may have been replaced by other social groupings.

Many theorists, from Bernstein (1960) to Piaget (1983), have argued that when children interact in a variety of events they develop the ability to decenter, that is, to reflect on social, cognitive, and linguistic processes. In addition, social network theory (Cochran & Riley, 1988) proposes that the variety of literacy events children experience (i.e., joint book reading, letter writing, reading the comics) and the variety of participants in those events (i.e., mother, father, siblings, and grandparents) should relate to children's social competence and use of literate language at school.

Cognitive decentering, in turn, should relate to the use of literate language and performance in school-based literacy events. This hypothesis is derived from sociological theory (Bernstein, 1960), psychological theory (Bandura, 1986; Piaget, 1983), and linguistic theory (Halliday, 1978), theories which, taken together, suggest that children who interact with a variety of others in a variety of activities, should have more developed schema or concepts in specific areas than children with less diverse experiences. By interacting in more diverse contexts, children view more models of literate behavior and also encounter discrepant information to which they must accommodate.

The Study

The present study examined the linguistic and social factors surrounding literacy events in the homes and classrooms of first-grade children. Our first purpose was to describe the variety of social contexts outside of school in which first-grade children encountered literacy events, with the hypothesis that the variety of experiences at home should relate to children's social groupings in classroom literacy events. Social groupings, in turn, should relate to their ability to decenter (i.e., reflect upon social and cognitive processes as measured by a perspective-taking task) and to use oral language indicative of decentration and school literacy events. These language forms, in turn, should relate to school-based literacy measures.

Rather than looking at all aspects of children's social support systems outside of school, we chose to examine their networks around literacy events, or events and participants related to children's reading and writing. This method was based on the assumption that school-based literacy has specific design features, and in order to understand the ways in which social interaction relates to literacy, we should examine events that most closely resemble those features (LCHC, 1983). Further, we examined the diversity of children's literacy networks because, based on the theories of Bernstein (1960) and Halliday (1978), the variety of experiences and participants is the important feature in determining children's decentering ability and their classroom interactions.

Two sorts of information from children's homes were available. First, parents were interviewed about their children's experiences in different literacy events. This literacy network interview provided retrospective information on the variety of literacy events and participants in children's homes. We also examined the social configurations around a specific home literacy event: books brought home from school by first-grade children. Children in one of our two first-grade classrooms were asked to choose a book and take it home three times a week during the school year. They were asked to read this book with someone else, and then the child, the other participant, or both were to share a response to the book in a literacy journal. This literacy journal thus indicated who the participants were in book reading at home.

Our theoretical and methodological perspective complements rather than replicates the important extant literature, which also uses home diary methods to describe children's reading habits at home (e.g., Anderson, Wilson, & Fielding, 1988; Stanovich, 1993). Those studies describe children's choices of reading materials, the time they spend reading, and how these factors relate to reading achievement. Our work describes the social context of home literacy events and the relations between school-based literacy and the variety of participants in children's home literacy events.

We hypothesized that the diversity of home literacy networks should be correlated with children's competence in school literacy events. Children with diverse networks should be observed in varied social groupings in the classroom; varied groupings in the classroom should, in turn, elicit literate language. In addition, the diversity of children's literacy networks at home should be correlated with their more general decentering or cognitive perspective-taking ability.

Specific to the use of literate language in classroom literacy events, we guessed that children learn and practice such language by participating in varied literacy events with varied participants. To test this hypothesis, we examined the relation between children's social group size (both peers and adults) in school literacy events and their use of this literate register. In keeping with the diversity hypothesis, we expected positive relationships between group size and use of linguistic and cognitive terms, as well as talk about psychologically distant phenomena (i.e., third person pronouns and future and past tense verbs).

Since these oral language forms are related to literacy in kindergarten and preschool (Dickinson & Moreton, 1991; Pellegrini & Galda,

1991), it seems reasonable to ask whether these same forms of oral language still relate to literacy in the first grade. This information would inform us about the degree to which these psycholinguistic processes still underlie literacy in first grade. Such findings would also have pedagogical implications because they would emphasize the importance of providing opportunities for children to talk about language and literacy.

Last, and following up on research in preschoolers' oral language and literacy, is the issue of the empirical relation between reading and writing. In light of the importance of this issue for both theory and practice, it is important to test the results of previous research (Juel, 1988; Pellegrini & Galda, 1991). The empirical relation between the two processes has not been studied extensively, despite the purported interdependence of the two processes in the pedagogical literature.

METHOD

Participants

Two intact first-grade classrooms from different schools in the same school district were used in this study. A total of 35 children (19 boys and 16 girls) volunteered to participate in the study and remained in the classrooms for the whole year. Both schools were in the same public school district in a small city in the southeastern United States and served a culturally diverse population, though the sample was predominantly African American and Caucasian. Both teachers were master teachers: they had each taught more than five years, and each had won teacher-of-the-year awards in their respective schools. Both conducted a literature-based reading program and an active writing program.

Procedures

Classroom Observations

Classroom observations began on the second day of the school year when the university-based researchers visited the classrooms. In one classroom the teacher was a co-researcher; she did not visit the other classroom or conduct formal observations in her own classroom. By the second week, a university-based observer was in each classroom weekly until the winter holiday break and at least every other week until the end of school; two observers alternated between the two classrooms. During this time, the observers took detailed field notes about the literacy events they observed.

Oral Language

All children were audiotaped once a month for the duration of the study. These observations occurred during centers time, a period characterized by free choice and peer interaction around a variety of materials ranging from dress-up clothes, to books, to puzzles, to games.

The oral language audiotaping of children at these times followed focal child sampling and continuous recording rules (Martin & Bateson, 1993). The order of observations was based on a counterbalanced list format. All oral language recording was done by a student teacher or a research assistant, both of whom

had spent more than one month in the classroom before taped observations began. Each child wore a vest with a small portable tape recorder for the duration of the observational period. The observations varied in duration from 3 to 20 minutes. Each child was observed at least nine times during the school year.

Tapes were subsequently coded along two social grouping dimensions: number of children interacting with the focal child and the number of adults present. The focal child's *oral language* was coded along the following features: *verb tense* (e.g., past, future), *third person pronouns* (e.g., he, she), *cognitive terms* (e.g., I *think* it works), and *linguistic terms* (e.g., Can you *read*?). Relative frequency measures were the units of analysis for all samples across the whole school year. A total number of these categories used by each child was calculated.

Psychometric Assessments

All children were assessed on a number of social cognitive, literacy (reading and writing), and receptive vocabulary measures. Measures were administered to children individually three times during the year, with the exception of the Bradley and Bryant measure of phonological awareness, the perspective-taking measure, and the Peabody Picture Vocabulary Test - Revised (PPVT), (Dunn & Dunn, 1981); data from the fall and late spring measures are reported here.

Cognitive perspective-taking. A cognitive perspective-taking task was administered as a measure of cognitive decentering. The task was based on Chandler's (1967) work in which children viewed a series of five cartoons and were rated from 0 to 3 according to the degree to which they could divorce privileged from non-privileged information. The unit of analysis was the mean of each child's five scores. This measure has high psychometric qualities (Enright & Lapsley, 1980).

Literacy measures. The literacy measures included indices of phonological awareness, reading, and writing. The two measures of *phonological awareness* were developed by Bradley and Bryant (1983) and Stahl and Murray (1994). The Bradley and Bryant (1983) measure of phonological awareness was administered at the beginning of the year. This measure has been widely used and cited in the literature on phonological awareness. In this procedure, children are presented with a series of sets of four words. They choose the "odd man out," which either has a different beginning, middle, or end than the others. The unit of analysis was the number correct.

The Stahl and Murray measure assessed children's awareness of sounds in spoken words. In this study, we report on two aspects of awareness: *phonological isolation* and *deletion*. Real-word items were found for each task at each of four levels: analyzing onsets and rhymes, analyzing vowels and codas within rhymes, analyzing phonemes composing blended onsets, and analyzing phonemes composing blends. Phoneme isolation required that a child say the first or last sound of a spoken word; deletion required removing sounds from the beginning or end of words. The 55-item Stahl and Murray measure has high internal consistency, with a Cronbach *alpha* of .93 and concurrent validity. The deletion and isolation scores, respectively, correlated positively and significantly with the widely used Bradley and

Bryant (1983) measure ($r = .75$, $p < .0001$, and $r = .52$, $p < .0001$). The unit of analysis for this measure was the number of correct answers.

Two *measures of reading* were used: Clay's (1985) *Concepts About Print* and Leslie and Caldwell's (1990) *Qualitative Reading Inventory* (QRI). *Concepts About Print* measures children's awareness of the forms and functions of print. The child is presented with a specially constructed book and asked questions about how to read it, such as where one begins on a line and what a period is. The unit of analysis was the number of correct answers. Again, this measure is widely used and has strong psychometric properties. It was administered in the fall and, if appropriate, later in the school year.

The QRI is a commercially published informal reading inventory in which children are presented with a series of graded word lists and decontextualized word passages. QRI word lists were used to find the appropriate instructional levels of passages to be used for oral reading. An instructional level was identified by the child's reading of a passage at 90% accuracy. The QRI has high internal consistency, strong diagnostic properties, as well as construct and content validity. The instructional level was the unit of analysis for this measure.

Two *measures of writing* were administered: a writing fluency measure and a dictation measure, both developed by Clay (1985). In the writing fluency procedure, an experimenter asked children to write as many words as they could in a 10-minute period. The experimenter used standardized prompts, such as asking children to write names and other common words. Children were given credit for the words they wrote and could then read back to the experimenter. The unit of analysis was the number of words that children were given credit for.

In the dictation measure, also developed by Clay, children wrote a sentence from dictation in which they were given credit for each phoneme correctly represented in the sentence. The total number of credited phonemes was the unit of analysis.

Last, children's *receptive vocabulary* was assessed at the beginning of the year with the PPVT (Dunn & Dunn, 1981). Children were presented with a series of plates, each with four pictures. The examiner said a word and the children pointed to the appropriate picture. Standard PPVT scores were the unit of analysis.

Home Information

We collected information on children's literacy experiences at home from children in one of the two classrooms ($N = 17$). The data sources for this group included a literacy network interview, a literacy journal that children took home from school three times a week, and the HOME Inventory (Caldwell & Bradley, 1984).

Literacy networks. The literacy network measure was developed for this project, and it was administered by the classroom teacher when the focal child's caregiver came to school for a conference during the spring of the year. The questionnaire was adapted from the work of Cochran (Cochran & Riley, 1988); it asked

caregivers to identify the activities involving books, paper, and pencils that the focal child engaged in and to specify with whom the child did each. The units of analysis for this measure included the variety of literacy events identified, the variety of participants in each event, and the product of these two terms. To examine the degree to which this was a valid measure of the child's social and physical environment, the literacy event score and the score from the participants in those events were correlated with two indicators of the physical and social environment of the child's home, as measured by the HOME Inventory (Caldwell & Bradley, 1984) Materials and Family subscores. The respective correlations were: $r = .76$ and $r = .64$.

Literacy journals. Children also took home a literacy journal three times weekly. In that journal, the following information was recorded: the title of the book the child had read, the person with whom the child had read the book, and the person who had recorded the information in the journal. There were three possible recorders: target child, helper, or both. There were 14 possible participants or combinations of participants: mother, father, both parents, both parents plus a sibling, grandfather, grandmother, both grandparents, older sibling, younger sibling, both parents plus siblings, male peer, female peer, baby-sitter, or target child. Measures derived from the journals included relative frequency in each category and variety of different categories (i.e., diversity). Information about participants in literacy journal events supplied by the literacy network questionnaire provided a concurrent measure, although both were probably conservative measures of participants. Many children reported writing in their journals in the company of people other than the recorders.

HOME Inventory. Last, the HOME Inventory (Elementary) (Caldwell & Bradley, 1984) was administered when the teacher-researcher visited the homes of children in her classroom at the end of the year. The HOME Inventory (Elementary) is a widely used instrument that measures the following social and physical dimensions of the home environment: emotional and verbal responsiveness, encouragement of maturity, emotional climate, materials and experiences that foster growth, amount of active stimulation, family participation, paternal involvement, and aspects of the physical environment. Subscores and a total score are available. Subscores from the growth-fostering material and experiences and the family participation components were used to establish the concurrent validity of our literacy network interview, as noted previously.

RESULTS

Home Literacy Networks

In this section, we present information about children's literacy experiences at home and at school and the extent to which the two settings are interrelated. First, we describe the literacy networks at home for children in one first-grade classroom, as children's caregivers described them in interviews. We asked caregivers to identify retrospectively the focal child's literacy practices during that year, that is, which activities children engaged in using paper, pencils, and books (literacy events) and

Table 1. Correlations Among Reading Journal Participants Across the Year

	2	3	4	5	6	7
Mother (1)	-.23	-.54*	-.53*	-.94**	-.36	-.58**
Father (2)		.11	.15	.09	.33	.59**
Grandmother (3)			.88**	.35	.01	.54*
Sibling (4)				.36	-.03	.54*
Alone (5)					.19	.24
Mother & Father (6)						.70**
Variety (7)						

$N = 17$; $*p < .05$, $**p < .01$

with whom children participated in these events (diversity of participants). Caregivers reported a mean of 2.2 ($SD = .11$) literacy events, such as name writing and reading books at bedtime, and an average of 1.36 ($SD = .67$) participants in these events, such as mother, grandmother, and siblings. The mean for product measures, an index of social and event diversity was 3.09 ($SD = 2.16$).

In order to examine the relationships among experiences with different people, different literacy events, and children's ability to decenter cognitively, as measured by Chandler's instrument, these variables were intercorrelated. The relation between the variety of literacy events and decentering was significant, $r = .75$, $p < .03$, while the relation between different participants and decentering was not significant, $r = .22$. When the product of participant and events measures was examined, the correlations remained high and significant, $r = .78$, $p < .02$. Thus, diverse literacy networks and cognitive decentering were significantly interrelated.

Home Reading Journals

In looking at the home reading journals for the school year, we found that the responses in journals were written most frequently by children themselves (50.22%), next, by a helper (25.78%), and least frequently by the focal children and a helper together (23.77%). The overwhelming majority of the time, children interacted with their mothers (59.8%). Interactions with other family members included those with fathers (1.47%), mothers and fathers together (2.37%), grandmothers (1%), and siblings (1.56%). In 32% of the cases, children apparently wrote in their journals without assistance. Other categories of participants accounted for less than 1% of interactions.

We then examined the co-occurrence among the participants. To this end, we constructed a correlation matrix containing the seven categories of participants in writing the journal that were most common: the child alone, mother, father, mother and father, grandmother, and sibling. In addition, we added a Variety of Participants measure, which was an index of the diversity of participants who were observed in this event across the whole year. This matrix is displayed in Table 1.

These analyses clearly indicate that the presence of the mother was negatively related to others participating in this literacy event. That is, when mothers were involved in journal writing, they tended to be the primary helpers; when others, such as grandmothers, were involved, other persons were also.

Next, we examined the change in literacy journals during the school year. To this end, the year was divided in half: Time 1 and Time 2. To examine the extent to which helpers and those entering information in the journals changed from Time 1 to Time 2, a repeated measures analysis of variance (ANOVA) was calculated for each of the seven helper measures and for each of the three responder measures; the time factor, at two levels, was a within-subjects variable. None of the analyses revealed a significant effect for time, indicating that both the social configurations of the journal events and the responsibility for making entries were stable across the year.

We then examined the extent to which having a specific helper with the journals at Time 1 predicted children's making the entries themselves at Time 2, the assumption being that making independent entries was an indicator of an independent writer. Thus, correlations between the helpers listed in Table 1 and making entries alone were calculated. Of the seven correlation coefficients calculated, the following were statistically significant: with mother alone ($r = -.54$, $p < .02$), and child alone ($r = .48$, $p < .04$). The variety of helpers variable approached significance ($r = .43$, $p < .08$). Thus, children who made entries themselves at Time 2 also did it at Time 1; those who wrote with mothers as helpers continued to do so at Time 2.

Our variety of helpers measure within the reading journal measure is important because it indicated whether or not children's homes were stimulating places to live, as evidenced by the positive and significant correlation between the variety measure and the total score from the HOME Inventory ($r = .66$, $p < .03$). Having a variety of helpers was also shown to be important for school-based literacy, as evidenced by the significant and positive correlations between the variety measure and the two measures of writing (for the dictation task, $r = .61$, $p < .009$, for the word writing task, $r = .66$, $p < .003$), and for one measure of reading (the QRI, $r = .67$, $p < .002$). Although the correlation with Concepts About Print was positive, it was not significant ($r = .40$, $p < .10$). By comparison, mother as a participant was negatively correlated with the HOME total ($r = -.29$, $p < .4$), Concepts About Print ($r = -.06$, $p < .8$), and the QRI ($r = -.53$, $p < .02$), although only the QRI correlation was statistically significant.

Table 2. Descriptive Statistics for Classroom Interaction Data

	TIME 1		TIME 2			
	M	*SD*	*M*	*SD*	*F**	*p*-Value
Adults	.54	.58	.88	.65	7.48	.01
Peers	1.83	2.07	2.73	1.61	9.98	.003
Tense/Past	.41	.50	.60	.40	2.20	ns
Tense/Future	.0	.01	.14	.20	8.36	.007
Tense/Total	1.87	6.46	3.63	3.83	19.83	.0001
Pron/3rd	.15	.13	.13	.10	4.90	.03
Term/Cog	.22	.31	.14	.16	.94	ns
Term/Ling	.31	.39	.47	.35	3.01	ns
Term/Total	6.54	6.92	15.10	12.87	12.09	.001

*Df = 1, 30

Home Literacy Network — Literacy Journals Connections

The variety of participants in the journal events was related to children's larger literacy network, as measured by the literacy network-interview. Specifically, the correlation between the variety of participants in the journal events was positively and significantly correlated ($r = .58$, $p < .04$) with the literacy network measure of the product of participants and literacy events. The correlations among the variety of participants around the journals, the variety of literacy events reported in the literacy network interviews, and the variety of participants reported in the literacy network interviews, were, respectively, $r = .57$, $p < .05$, and $r = .44$, $p < .15$. Thus, diversity of more general literacy networks, as measured by our interview, was related to diversity of participants in children's literacy journal events.

School Oral Language

In the next series of analyses, we analyzed the data collected in the classroom oral language observations. These included measures of children's oral language production and the number of peers and adults involved in social interaction with the focal children. In these interactions, data from both classrooms were aggregated, rather than being analyzed sepa-

Table 3. Correlations Between Adult/Peer Presence and PT and Oral Language

	1	2	3	4	5	6	7
Adults	-.03	.18	-.25	-.25	.03	.25	.15
Peers	-.01	.34*	.34*	-.1	-.1	.26	.14
PT	.36*	.44**	.05	-.15	.01	.43**	.42**

1 = past tense, 2 = future tense, 3 = 3rd person, 4 = cognitive term, 5 = linguistic term, 6 = sum past + future tense, 7 = sum cog + ling terms. $*p < .05$, $**p < .01$.

rately. In the first series of analyses, we present the extent to which our interaction variables changed as a function of time. Again, time was defined by splitting the school year into two equal parts, Time 1 and Time 2. Data in this series of analyses were analyzed with a repeated measures ANOVA, with time (at two levels) as the within-subjects variable. The means for the measures X time and the p values are presented in Table 2. All means are expressed as relative frequencies. Children's exhibition of most of the interaction measures increased from Time 1 to Time 2. Of the nine ANOVAs calculated, six were statistically significant.

Next, we intercorrelated the measure of cognitive perspective-taking with the number of peers and adults present during focal child samples. Perspective-taking (PT) was significantly and positively correlated with peer presence ($r = .44$, $p < .01$); the relation between PT and adults, though positive, was not significant ($r = .21$).

Perspective-taking status was included as an additional measure of children's ability to decenter cognitively. To this end, we correlated each of the oral language measures with the number of adults and children present in the immediate context of the focal children. These correlations are presented in Table 3. These correlations show that peer presence related to two of the seven measures of children's talking about physically absent phenomena (using past tense and third person pronouns), while adult interaction did not relate to this sort of talk at all. Four measures of oral language (past tense, future tense, the sum of the past and future tense, and the sum of the cognitive and linguistic terms), in turn, correlated significantly and positively with perspective-taking. Thus, these forms of language seem to indicate children's ability to decenter cognitively.

Home Literacy Network — Classroom Social Grouping Connections

We examined the relations between the home-based literacy network measure and the social grouping of children in one of the classrooms. To this end, correlations were calculated between variety of participants and variety

Table 4. Intercorrelations* Among Psychometric Measures of Literacy

	1	2	3	4	5	6	7	8
CAP (1)		.76	.85	.83	.71	.64	.70	.87
PPVT (2)			.63	.70	.65	.68	.65	.71
WordWrit (3)				.84	.65	.62	.73	.82
QRI (4)					.81	.58	.81	.81
B-B (5)						.67	.74	.68
S-M ISOLAT (6)							.52	.62
S-M DEL (7)								.74
DICWRIT (8)								

*All r's are beyond $p < .01$.

of literacy events, as reported in the literacy network interview, with the number of peers and adults that focal children interacted with in the classroom. These correlations were positive (Variety of Events and Number of Adults, $r = .71$, $p < .01$ and number of Peers, $r = .55$, $p < .10$; Participants in Events and Number of Adults, $r = .49$, $p < .10$; Number of Peers, $r = .51$, $p < .10$). The Classroom Literacy Event measure was $r = .61$, $p < .05$ for Number of Adults and $r = .70$, $p < .01$ for Number of Peers. Measures of the home literacy network were related to the number of adults and peers children interacted with in the classroom literacy events. Thus, diversity of home network relates to diversity in school; children with diverse networks at home seem to have correspondingly diverse networks at school.

Psychometric Measures of Literacy

The intercorrelations among psychometric measures of literacy are displayed in Table 4.All measures except those for the Bradley-Bryant and PPVT, which were both given only at the beginning of the year, are aggregates of the measures taken across the year; these measures were aggregated because they were significantly correlated from Time 1 to Time 2. Further, such aggregation maximizes reliability (Rushton, Brainerd, & Pressley, 1983).

This correlation matrix clearly illustrates that the two sets of measures are significantly interrelated. We might say that these measures represent a single factor that could be labeled *school literacy*.

A particularly interesting finding among these correlations is the significant intercor-

Table 5. Correlations Between Decentering and Oral Language and Literacy*

	CAP	PPVT	WWRIT	QRI	DWRIT	B-B	ISOL	DEL
PT	.49**	.63**	.40*	.40*	.38*	.51**	.36*	.43**
Past	.36*	.03	.29	.28	.39*	.27	.18	.11
Future	.04	.21	-.24	-.15	-.14	-.18	.03	-.18
CogT	.42**	.34*	.34*	.32*	.55**	.26	.26	.35*
LngT	.32*	.33*	.17	.22	.43**	.40*	.27	.44**
3rd Person	.32*	-.11	.20	.28	-.01	.33	.14	.20

*r's > .32 have a $p < .05$; **r's > .41 have a $p < .01$

relation between different measures of reading (i.e., Clay's CAP and the QRI) and the measures of writing (i.e., Word Writing and Dictation). To explore these relations between reading and writing further, we calculated partial correlations between the reading and writing measures; PPVT scores were controlled. These partial correlation coefficients were positive (Dictation Writing and Concepts About Print, $r = .74$ and Word Writing, $r = .72$; QRI and Dictation Writing, $r = .71$, and Word Writing, $r = .63$. All correlations were significant at $p < .01$). Thus, our data suggest that school literacy is a unitary construct, at least in terms of our measurement of reading and writing.

Oral Language, Perspective-Taking, and Literacy

In this next series of analyses, we explored the hypothesis that early literacy can be accurately conceptualized as a system of cognitive decentering. To this end, we took oral language measures (i.e., past tense verbs, future-tense verbs, third person pronouns, cognitive terms, and linguistic terms), and Chandler's perspective-taking measure (PT), all of which are indicative of decentering and literate language, and correlated them with psychometric measures of literacy. These correlations are shown in Table 5. The data fit our assumptions that literacy demands both social and cognitive decentering. Specifically, the perspective-taking measure correlated significantly and positively with all measures of literacy. Measures of oral language, such as cognitive and linguistic terms, past tense verbs, and third person pronouns, were consistent positive correlates of literacy. These relations suggest that the ability to decenter and mentally represent other people, other mental states, and past events are important dimensions of literacy. Literacy seems to involve using oral language

terms indicative of social-cognitive decentering.

DISCUSSION

Our aim was to examine the relationships between the diversity of social groupings in which children participated in both home and school literacy events, to determine the degree to which these groupings related to children's literate language in school, and to show how both related to school-based literacy. Our expectations were based on the assumption that the variety of social experiences a child has in a specific context should be related to his or her social-cognitive sophistication in a related context.

As part of this examination, we provide descriptive information about the social grouping of children's home literacy events. Descriptive information is crucial to understanding the importance of home and school connections. Despite the recognized importance of this sort of information, such descriptions have been a long time coming. For example, in 1960, Wright voiced concern that we knew virtually nothing about children outside of school or experimental laboratories. Bronfenbrenner (1979) echoed the same concern almost 20 years later. However, research has provided important descriptive information about the types of books children read at home, how much time they spend reading at home, and how these measures relate to school reading achievement (Anderson et al., 1988; Stanovich, 1993). Our work complements this tradition by describing the social groups that typify children's literacy events at home.

We relied on two sources of data to describe the social participants in children's home literacy events: the home literacy network interview and school-home reading journals. These data sources converged in the information they provided to the extent that the diversity measures in each were positively and significantly correlated. Interestingly, the mother was still the primary person in children's home-based literacy events. When mothers were not available, children interacted around books with grandmothers, siblings, or alone. These groupings remained stable throughout the school year.

Our notion of the importance of varied social groupings in literacy events was supported to the degree that information from the interviews and journals correlated with a global measure of the home environment and with measures of children's school-based literacy. Diverse social groups also related to children's ability to cognitively decenter. The contemporaneous nature of the data, however, precludes our making antecedent-consequence statements. As it stands, this correlation can be interpreted in one of two ways: diverse social groups predict decentering, or decentering predicts children selecting themselves into diverse groups. To clarify this issue, longitudinal research is needed.

The finding that mothers alone as participants around reading journals was *negatively* related to the HOME Inventory Total score and reading measures is particularly interesting. Social network theory would certainly predict these relations; diversity, not restriction, is adaptive. Seen from another perspective, it may be important to examine the nature of

mother-child *relationships*, not simply the frequency with which different types of dyads interact. For example, joint reading between mothers and securely attached children is different in important ways from the interaction observed between mothers and insecurely attached children (Bus & vanIJzendoorn, 1988). Thus, it may be the case that certain types of close relationships, such as mothers and securely attached children or peers who are reciprocal friends, provide a social context in which social cognition and literacy develops (Daiute, Hartup, Shool, & Zajac, 1993). Systematic, longitudinal research to test these theories is clearly needed.

We predicted that diverse social groups in home literacy events should relate to children being observed in diverse social groups in school literacy events. This prediction was supported. But again, interpreting the directionality of effects is not possible. We are not sure of antecedent-consequence relations.

Within classroom literacy events, our prediction that diversity of social groupings should relate to children's use of literate language was only partially supported. We found that the size of the interactional group was positively related to only two out of seven aspects of literate language. While the variety of social group composition may be important for children's oral language production (Bernstein, 1960; Halliday, 1978), researchers should now attend to "close relationships" as well. It may be the case that interactions between children having special relationships (i.e., friendships) are more conducive to literate language than interactions between nonfriends (Daiute et al., 1993). Interaction between children in close relationships, too, should relate to self-reflection and cognitive decentering (Dunn, 1988).

The final connection was between literate language and measures of school-based literacy, which was defined in terms of standard measures of reading and writing. Previous research has implicated children's talk about language and thought processes in the development of preschool literacy (Pellegrini & Galda, 1991; Snow, 1991). The idea motivating that research was that children's ability to talk about language and their ability to talk about thought were indicators of their metalinguistic and metacognitive processes, respectively. Both of these abilities are reliable predictors of primary school children's reading (Adams, 1990). In the present study, children's use of linguistic and cognitive terms was related to one dimension of metalinguistic awareness, phonological awareness, and to measures of reading and writing. Thus, our results support the relations among metalinguistic/metacognitive awareness, oral language, and early literacy; we also described social groupings in which children use these sorts of skills. Again, the contemporaneous nature of the correlations limits directional statements, but children's use of cognitive and linguistic terms clearly has important educational implications for literacy. The more children talk with each other in diverse groups, the more they use language that encodes physically absent phenomena (future tense and third person pronouns). Use of these terms relates positively to literacy.

Last, we address the issue of the relation between reading and writing. Reading and writing were significantly intercorrelated, even

when children's PPVT scores were controlled. This result is not consistent with previous empirical investigations involving both younger children (Pellegrini & Galda, 1991) and children of a similar age (Juel, 1988). The inconsistency may have resulted from differences in the way reading and writing were measured. More likely, the differences were due to the fact that both teachers in our sample were conscious of integrating reading, writing, and oral language. In these two classrooms, these activities always supported and enriched each other. The implication of this finding for education is clear: oral language, reading, and writing should be integrated in classrooms because they are mutually reinforcing, and this integration probably facilitates literacy. The methodological and theoretical implications of this finding are also important. When we try to explain the psychological processes involved in learning and development, we cannot remove the children from the context in which they learn and develop; thus, classroom process variables that include both teachers and children should be integrated into our theories and research designs.

The limitations of this work are quite clear. First, a larger sample would have enabled us to use some sort of path analysis to more explicitly test our model of home-school relations. Second, a longitudinal design would have helped us sort out some of the ambiguity of directionality of relations. Also, longitudinal designs, it seems to us, are necessary to study developmental questions of the sort raised here. Nevertheless, our results suggest that the social and linguistic patterns that were important to literacy development in the preschool and kindergarten years continue to be implicated in first-grade literacy development as well.

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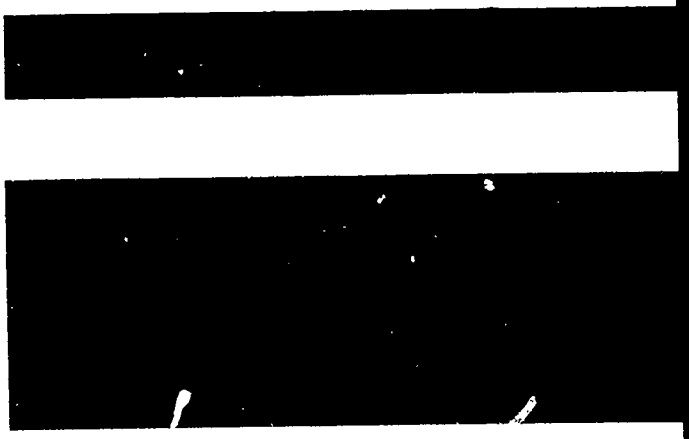

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