First Language, **10** (1990), 87-103. Printed in England

Social sources of narrative skills at home and at school*

CATHERINE E. SNOW, *Harvard University*
DAVID K. DICKINSON, *Clark University*

Research directed in recent years to children's narrative skills has clarified the course of narrative development to a considerable degree. Producing narratives is a language task that has its own demand characteristics and its own developmental course (Nelson 1986, Petersen & McCabe 1983, Wolf in press). Researchers have only begun to explore, however, what the sources of children's narrative skill may be. What cognitive and/or linguistic accomplishments are prerequisite to narrative development, and in what social contexts do children acquire the ability to tell good stories?

These questions become more pressing as evidence mounts that narrative language skills are particularly relevant to children's later school achievements and literacy development (Feagans & Short 1984, Olson 1984, Snow 1983, Wells 1985). In particular, narrative and other monologue tasks emerge as much more closely related to literacy achievement than language measured in conversational tasks. Sulzby (1986), for example, reported better predictions from children's monologue skills than from their language complexity in conversation to later reading scores. Schley, Snow & Dolbear (1989) found no relation whatsoever between measures of children's conversational skill and their reading or school achievement, although the same children's literacy skills were related to other 'decontextualized' oral language tasks (Snow, Cancino, Gonzalez & Schriberg, 1989). Conclusions about the relevance of narrative to literacy achievement are reinforced by findings of social class differences favouring middle-class children in narrative skills (John, Hoerner & Berney 1970, Milgram, Shore & Malasky 1971, Feagans & Farran 1981) but not in conversation (Feagans & Haskins 1986, Wells 1985). The social class differences in narrative skills are typically limited to or much larger for production than for comprehension, though differences on comprehension tasks also have been found (Dickinson & Snow 1987, Feagans 1982, Feagans & Short 1984).

* The authors would like to express their appreciation to the Ford Foundation, which is funding the project reported on here, to Patton Tabors, Stephanie Ross, Petra Nicholson, Diane Beals, and Mary Lou Arnold who helped with data processing and analysis, and to the families and teachers who cooperated in the observations. Address for correspondence: Catherine E. Snow, Graduate School of Education, Harvard University, Cambridge, MA 02138, USA.

0142-7237/90/1002-0087 $2.00

One route along which narrative skills can influence school achievement lies in the reliance on narrative modes of information presentation in classrooms. Children who understand and produce narratives of the type favoured by the teacher will participate more effectively in classroom discourse. Observations of children in school have identified characteristics of narrative skill in children's performance (Gee 1985, 1989, Michaels 1981, Cazden, Michaels & Tabors 1985). Children whose narratives conform to expected forms (e.g., are explicit about time, setting and characters, stick to a single topic) are evaluated by teachers as better students and emerge as more competent writers (Michaels & Cazden 1986, Michaels & Collins 1984).

Although there is a direct and very concrete relation between narrative skills and effective participation in classroom discourse, the nature of the relation between narrative production skills and reading achievement is somewhat more obscure. It has been proposed that good narrators are relying on a variety of skills, such as analysing their own knowledge, monitoring their own verbal productions, taking into account the listener's perspective, and planning (Snow 1983, 1987, in press). These same skills are basic to the performance of many literacy tasks. Narrative has also been identified as one of the two logical systems within which humans make sense of their world (Bruner 1986), thus perhaps suggesting a relation between narrative skills and thinking or problem-solving.

Evidence is also mounting that narrative skills must be conceived of as relatively distinct from other language skills, not just as a later stage in language development. Thus, for example, research with learning disabled children has found special difficulties on tasks requiring recall of narratives (DeHirsch, Jansky & Langford 1966, Graybeal 1981, Sleight & Prinz 1985, Weaver & Dickinson 1982), scripts (Feagans & Short 1984), and construction of complete narratives (Roth & Spekman 1986). Disabled readers show the greatest deficits on measures of intersentential processing (e.g., temporal and causal connectives). The division between narrative and conversational skills is evident in the language development of early hemidecorticates, whose language appears relatively normal in conversation but who exhibit severe problems in producing organized or complete narratives (Brownell, Michel, Powelson & Gardner 1983, Newman, Lovett & Dennis 1986).

An aspect of narrative development which renders it more complex than the development of grammar or vocabulary is the degree to which ideal narrative forms differ across groups. Within culturally diverse language communities, narrative form shows more cultural and socioeconomic class variation than do syntax or morphology (Heath 1983, Schieffelin & Eisenberg 1984). There is also an enormous amount of variability in the amount

of exposure children have to adult-produced narratives; story-telling and book reading, a major source of narrative exposure, are, for example, relatively frequent activities in some families and in some cultures, but quite rare in others (Anderson, Wilson & Fielding 1988, Heath 1983, 1986, Teale 1986). Additionally, opportunities to engage in extended talk about events distant from the immediate setting also vary greatly, both within and across social classes (Heath 1986, Perlmann 1984, Tizard & Hughes 1984).

Many preschool children spend significant amounts of time being cared for in settings other than the home. Opportunities for development of extended discourse skill provided in preschool settings are limited (Dickinson in press, Tizard & Hughes 1984), but there is considerable variability in the amount (Dickinson 1989) and type of exposure (Dickinson & Keebler 1989, Teale & Martinez 1986) to narratives in preschools. Given our lack of knowledge about the effects of amount and type of exposure on narrative language development, we can assume that variation related to preschool experience also may have important effects on narrative language development.

The issue to which this paper is addressed, then, is the nature of the social context within which children learn to produce narratives. Does frequency of exposure to narrative talk have an effect by itself, or must children participate in the collaborative production with adults of narrative forms to develop their own narrative skills? One aspect of this question is whether exposure to narrative-facilitating experiences is more likely to occur at home or in preschool settings. Another aspect is the nature of support being provided for narratives in the home and school and whether the strategies being used in the two settings are equally effective.

A prior step, though, is to determine the situations in which children are exposed to narratives at home and at school. We present analyses below of time allocation during preschool and of the nature of talk during mealtimes at home in an attempt to start to answer this question. A second step is to identify adult strategies which help children to produce longer, more informative, and more effective narratives. We use narratives elicited at preschool by teachers and at home by mothers to explore this question. Finally, we relate these measures to an outcome measure – the amount of information provided by a child (as compared to the amount elicited by the adult) during an elicited narrative at age four and a half.

METHOD

Subjects

Ten families, part of a larger study of the determinants of literacy achievement in low-income children, constituted the sample. The larger study will

include a test battery during kindergarten which will include emergent literacy measures as well as tasks that tap skills involving the production and comprehension of narrative and other monologue forms. The selection criteria for participation in the larger study included the following: (a) the family income qualified the children for participation in Head Start (a preschool programme designed for children whose families fall below the federally established 'poverty line'); (b) parents' education had ended at 12 years (some of the parents had re-entered formal education after a hiatus, typically in vocational programs or community colleges); (c) a child in the family was aged 3;8 to 4;1 at time of selection; (d) the family was English-speaking; and (e) the family agreed to be part of a longitudinal study that involved home visits and observations of the children in their preschool classrooms. Most of the participants were solicited through Head Start centres or other preschools which poor children attended with government subsidies for low-income families.

The ten families reported on here are representative of the larger sample in their demographic characteristics. There were five boys and five girls, six white and four black families, five two-parent and five single-parent families. The number of siblings ranged from zero to two. All the families lived in working class neighbourhoods, in urban or suburban settings.

Procedure

Home data. The homes were visited twice, first when the children were old three-year-olds and again about one year later. During each visit the mother and child engaged in several activities, including a toy-play session, reading a book, and a mother-elicited report. Mothers were asked to get their children to tell the experimenter about some recent interesting event or experience. At the end of the visit a tape recorder was left with the mother, who was asked to record a typical meal time. Home data was transcribed into computer files in CHAT format for analysis by the CLAN software available through the Child Language Data Exchange System (CHILDES; MacWhinney & Snow, 1985). All transcripts were checked at least once for accuracy and correct use of transcription conventions.

During the home visits, the experimenter also administered an interview to the mother, to collect basic demographic information about the family, parental occupations and educational histories, and so on. Several questions were designed to elicit information about the mother's reading habits, about the child's access to literacy activities, about the availability of other adults for the child to interact with, and about outings and activities the child might engage in. Summary data on questions drawn from the interview will be presented below.

Mealtime tapes were submitted to the standard transcription and veri-

fication procedure. For purposes of the present analysis, the narrative sequences during the mealtime talk were identified and extracted from the mealtime files for further analysis (using the CHILDES CLAN program called GEM). The purpose of the analyses was to determine how much mealtime talk occurred, what percentage of it was devoted to narrative talk, how long the average narrative was, whether the child was actively involved in the narrative or not, and within the narrative talk what percentage of talk was by adults and what percentage by children.

Elicited reports were transcribed and verified before being coded to reflect (a) the degree of maternal vs. child involvement in the elicited narrative, and (b) the nature of the maternal strategies used to elicit child contributions to the narrative. An identical coding scheme was applied to the teacher-elicited narratives collected at school.

School data. The children were visited in their schools for one morning each year. During this visit the target child and the head teacher in the classroom each wore a backpack containing a small tape recorder which ran continuously through the morning. Teachers were encouraged to conduct their typical activities. One special request was that the teacher find time to talk with the target child and elicit a report of an activity that had occurred at some place other than at school.

The tapes made of the child's classroom talk were analysed in two steps. Analysis began by cataloguing the general nature of the talk throughout the morning and including information provided by field notes. The tapes were then listened to a second time and coded using a coding scheme designed especially to identify instances of talk about future and past events and topics likely to expand children's world knowledge as well as more mundane topics such as talk related to controlling behaviour. The start time of each new conversational topic was recorded, enabling us to determine the duration of each type of interaction. Teacher elicitations of reports of past activities were noted in the catalogue and these were transcribed into the CHAT format required for analysis using CHILDES. In cases where several elicited reports occurred, we selected the longest for transcription.

Exposure to narrative talk

Home interviews. Four scales were derived from the information available from the home interviews. The first of these, maternal literacy (MatLit), reflected responses to the question 'Do you have any favourite books or authors?' This question, which previous research has shown to relate strongly to other measures of literacy activity (Snow, Barnes, Chandler, Goodman, & Hemphill in press, Stanovich & West in press), was coded as 0 if the respondent claimed not to read books at all, 1 if responses indicated the mother did read but no specific author was mentioned, and 2 if authors

were mentioned by name. The second scale, child literacy (ChLit), reflected child exposure to narratives through book-reading. It was a composite of responses to three questions: what kinds of books does your child like to read? how many books does your child own? how often do you or another adult read to your child at home? An additional 0, 1 or 2 points could be added to this scale depending on whether book-reading was mentioned in response to questions about the activities engaged in during a typical weekday/weekend day.

The child-adult activity scale (ChAdAct) was based on responses to questions about number of adults and children living in the home, number and frequency of adult visitors to the home, the activity the mother would select if she had a free half hour with her child, frequency and types of trips or outings the child was taken on, and the number of different adults mentioned as ever reading to the child. This scale was designed to reflect children's access to talk with adults.

The favourite activity scale (ChFavAct) reflected responses to questions about what the child most liked to do (gross motor play ranked low, puzzles and games ranked somewhat higher, socio-dramatic play ranked high, and reading books ranked highest), and to questions about what activity the mother would engage in with the child if she had a free half-hour (similar coding gave higher scores to activities that involved more adult-child talk, and that involved more literacy).

Since each of these scales had a different range, they were made comparable by dividing individual scores by the group mean. Correlations among the four scales were moderate (e.g., ChAdAct correlated 0.55, 0.67, and 0.62 with ChLit, MatLit, and ChFavAct respectively; these correlations are significant at $p < 0.10$, 0.03, and 0.05 respectively). This pattern of correlations indicates that, while literacy and narrative-promoting activities were generally higher in some homes than in others, there is enough independence among these scales to justify treating them as separate indicators.

Mealtime variables. Table 1 presents data on the amount and kind of talk children heard during a mealtime, and the distribution of that talk over narrative and other kinds of conversation. It was expected that children who heard a relatively large amount of mealtime talk, a relatively high proportion of narrative talk, and who had the opportunity to participate to a greater degree in narrative talk would be better narrators themselves.

As can be seen from Table 1, mealtimes ranged from 3 to almost 50 minutes, and encompassed from 67 to over 800 utterances. They were much less variable, though, in degree of child participation; between 20 and 53% of utterances at the dinner table were produced by the target child (this represents a frequency of between 14 and 338 utterances). Two families did not produce narrative talk at dinner, and in another (Nicole's) the one

TABLE 1. *Scores on narrative talk at the mealtimes*

	length [mins]	total utts	child utts %	total narr utts	child narr utts %	mother narr MLT	child narr MLT
Allison	21.22	439	38.5	146	38.4	5.4	5.3
Tewana	23.10	348	53.2	0	–	–	–
Nicole	29.25	618	52.4	7	71.4	–	10.0
Zenia	47.23	814	41.5	103	40.8	20.0	5.3
Karin	8.20	87	41.4	0	–	–	–
Charles	16.03	414	34.3	38	31.6	5.6	5.6
Gilbert	3.04	67	20.9	9	11.1	24.5	5.0
Ethan	40.52	732	34.0	200	32.0	13.0	6.0
Kurt	24.12	596	26.2	102	17.6	6.1	4.7
Stan	16.23	476	29.4	23	30.4	11.2	5.3

narrative transcribed was essentially an independent production by the child. In other families, though, a considerable percentage of the mealtime talk was collaborative narrative – up to 33%, with a mean over all 10 families of 11.9%. In all the families where narratives occurred, the children participated, producing between 11 and 71% of the narrative utterances. The children's participation was also reflected in the fact that, of the 34 separate narratives identified, only seven were primarily by and for adults. In most cases, the children's narrative turns were about 5 to 6 words in length. The mothers matched this in three cases, and greatly exceeded it in four more.

There is a strong and interpretable set of correlations among the mealtime variables. Length in minutes correlates significantly with total number of utterances ($r = 0.93$, $p < 0.0001$) and number of narrative utterances ($r = 0.62$, $p < 0.05$). Total utterances and narrative utterances correlate moderately ($r = 0.62$, $p < 0.05$), whereas child utterances and child narrative utterances show an almost perfect correlation ($r = 0.97$, $p < 0.0001$). The difference in these last two correlations suggests that the primary option these children had for talking more at mealtimes was narratives, whereas adults had many other ways of talking. This interpretation is supported by the significant correlation of child narrative MLT with percent child utterances ($r = 0.79$, $p < 0.02$) and percent narrative utterances ($r = 0.88$, $p < 0.004$). Adult narrative MLT showed no such relationships.

The value of including both interview and observational variables in describing children's exposure to narratives was confirmed by our finding that the four interview scales showed no above-chance relations to mealtime variables for this group of children.

Teacher interview variables. The variable School Experience reflects

teachers' responses to questions that probe the child's enjoyment and frequency of engagement in activities that require the use of narrative and other forms of elaborated language. Activities probed included: frequency of giving dictations, frequency of engaging in dramatic play and enjoyment of books read in group settings. The first two questions were rated on a three point scale: 0 = never done, 1 = rarely (less than once a week), 2 = often. The book reading question also was rated on a three point scale: 0 = has trouble attending, 1 = average interest, 2 = especially enthusiastic. Responses from these three questions were summed to produce the variable.

The second variable, School Favourite Activity, was based on reports of the child's favourite activity. It was assumed that activities requiring extended language would be most likely to support narrative development. Although some activities (e.g., play with trucks, building with blocks) often include narratives, these were ranked below dramatic play because the latter cannot occur without language. Activities were ranked in the followed order: 0 = running around or outdoor play; 1 = play with puzzles, blocks, art activity, sand/water; 2 = dress-up, make-believe; 3 = listening centre, looking at books.

A third variable, Teacher's Language and Literacy Orientation, combines two scores; a Language and Cognition score that reflected a teacher's orientation toward facilitation of cognitive and language development and a Literacy score, reflecting an orientation toward facilitation of broad literacy-related competencies. These scores were derived from responses to following interview questions: 'What do you typically do during group time?', 'What are the most important functions of preschool?', 'Are there ways that you support oral language development?', and questions about the teacher's favourite books and criteria for selection of them. Teachers received one point for responses reflecting an awareness of the need to foster language and broad literacy (e.g., function of preschool is to support intellectual and language development) and efforts to encourage development of extended language (e.g., writing stories, verbal sharing, listening centre). Additionally, similar to the maternal literacy score, teachers were given points for their ability to name favourite books to read to children and to specify criteria for their selection.

School variables based on teacher interviews are available for all children when they were three and for eight when they were four. The second year one child did not get accepted to Head Start and the second was in a special programme and was only there for a limited amount of time. School Experience and Teacher Language and Literacy Orientation were standardized using the same procedure as was used for variables based on home interviews.

Although one might expect to find a relationship between teachers' reported efforts to support language and cognitive development and children's activities, no such links were found to either School Experience or School Favourite Activity. Likewise, these latter two variables were not related to one another.

School time use. For children's first year in preschool we have three scores reflecting the proportion of children's time spent engaging in different kinds of verbal interaction: CpxLang (Complex Language) combined pretend talk, talk about past and future events, world knowledge talk, and talk about language; NonPres (Non-present talk) included the subset of categories in CpxLang that dealt with past and future events; LitFoc (Literary Focus) combined book reading, book discussion, rhyming, dictation, decoding and talk about print; CxtLang (Contextualized Language) combined talk about personal preferences, skill routines, singing and control talk. Scores were obtained by tallying the times for all codes and dividing by the total time recorded to obtain a proportional score (see Table 2). These figures do not total to 1.0 because considerable amounts of time were coded as silence (i.e. child not talking or being talked to or only interactions lasting less than 5 seconds) or as gross motor activities (e.g., stretching, creative movement). It is important to note that these percentages reflect the amount of time the children were actively engaged in talk in these three categories; thus, they reflect both child preferences and child capabilities and the kinds of activities available in the classroom.

The amount of time coded ranged from a low of 41 minutes to a high of 3 hours and 18 minutes. The shorter observations resulted from the fact that our observations occurred during the late spring and some teachers took

TABLE 2. *Proportion of children's time in preschool involving different uses of language when children were three.*

	CpxLang	Non-present[1]	Lit Foc	CxtLang	Non-language	Total minutes coded
Allison	0.15	0.09	0.11	0.13	0.61	90
Tewana	0.24	0.05	0.02	0.21	0.53	79
Nicole	0.05	0.03	0.17	0.06	0.72	114
Zenia	0.10	0.02	0.18	0.21	0.51	198
Karin	0.11	0.01	0.004	0.26	0.62	41
Charles	0.14	0.06	0.05	0.28	0.53	100
Gilbert	0.26	0.09	0.14	0.21	0.39	83
Ethan	0.54	0.12	0.01	0.16	0.29	110
Kurt	0.21	0.06	0.19	0.14	0.46	47
Stan	0.35	0.28	0.04	0.11	0.50	180

1. A subcategory of CpxLang that includes only non-present talk.

their children outdoors for a large portion of the morning. Classrooms for which we have more data were either those in which the group stayed inside all morning or we returned a second (or third) day because we were not able to observe some critical activities (e.g., book reading).

As anticipated, teacher orientation toward language facilitation was related to children's interactional experiences. There was a strong relationship between Teacher Language and Literacy Orientation at time 1 and CpxLang ($p < 0.02$, $r = 0.70$), as well as to the amount of time spent talking about non-present events ($p = 0.04$, $r = 0.64$). Apparently, teachers who provided stimulating environments encouraged children to engage in more complex language throughout the day. We also found that CpxLang at time 1 and Teacher Orientation at time 2 also were related ($p = 0.02$, $r = 0.80$). These children were with the same teacher both years; therefore the relationship between language experience at time 1 and teacher orientation at time 2 suggests some continuity in child experience across these two years.

Comparison of home and school

One question these data can answer for us is whether children receive significant amounts of exposure to activities presumed to facilitate narrative development at both home and school, and how home and school experiences relate to one another. Perhaps the most striking aspect of the data presented here is the degree of variability of the children's experiences in both locales. At school, for example, the children spent an average of 9% of the observational time in literacy-related talk, 6% of which involved reading or discussing books, but the range was from less than 1% to 19% for total literacy talk and 0 to 18% for book-related talk. Variation was also great for complex talk (mean = 0.22 with a range from 0.05 to 0.54) and for the more restrictive category of non-present talk (mean = 0.08, with a range from 0.01 to 0.28). Similarly, at home children heard from 67 to 814 utterances during a typical dinner (mean = 459), and from 0 to 200 narrative utterances (mean = 62).

One question which arises is whether children in homes which provide higher levels of exposure to narratives and complex language attend schools which provide more exposure as well. We explored correlations between home variables (with some care, since a very large number of correlations was possible on a rather small number of children). The interesting correlations are between ChLit, the interview variable indicating the degree of child interest in and access to literacy activities in the home, and school. ChLit correlated significantly ($p < 0.01$, $r = 0.79$) with the language/literacy orientation of the teacher in year 2, suggesting that parents of more 'literate' children may have selected more language and literacy oriented classrooms for them. ChLit correlated positively with amount of time in complex talk

($p < 0.07$, $r = 0.60$), and negatively with amount of time in contextualized talk ($p < 0.07$, $r = -0.59$) at school during year 1; these correlations suggest that home experiences with books may support development of interests and abilities that lead children to engage in more sophisticated interactions in school.

Elicited reports

For both the home and the school elicited reports, coding was designed to reflect the amount of information provided by the child as a function of the amount of elicitation engaged in by the adult. Thus, we calculated for each child the frequency of total GI's (units of information given), the percentage of those which were spontaneous, and a GI/RI ratio (give information/request information). We also calculated a mean length of turn (MLT) for both adult and child. It was expected that the frequency of GI, the percent spontaneous GI's, the GI/RI ratio, and the child MLT would all correlate and that they would reflect the quality of the child's contribution to the narratives (see Tables 3, 4 and 5 overleaf for scores).

For the home elicited reports at Time 1 we were also particularly interested in the strategies used by the mother to help her child provide a complete narrative. Two categories of maternal talk were coded more specifically:

1. Feedback to child talk and the subset of feedback responses that incorporated a correction.

2. Requests for information were subcategorized as leading, specific, or open. Leading RI's were those that provided much of the information supposedly being requested (Do you wanna tell the lady about going to the beach with Gramma yesterday? Did you go in swimming?). Specific RI's were those which had short, correct answers (What did you have to eat at MacDonald's?). Open RI's gave the child the most responsibility to formulate a response (Tell us about what happened last Saturday.)

It was not surprising that at both Time 1 and Time 2 (more strongly at Time 2) the various child indices showed a pattern of good intercorrelations (e.g., MLT correlated 0.97 with percent spontaneous GI's, 0.62 with total GI's, and 0.99 with GI/RI ratio, which in turn correlated 0.99 with percent spontaneous GI's and 0.65 with total GI's; all these correlations are significant at least at the 5% level). Similarly, in the school, for which only year 1 elicited reports were available, spontaneous giving of information was strongly related to the total amount of information given ($r = 0.82$), and to the GI/RI ratio ($r = 0.69$, $p < 0.04$). Unlike in the home, there was not a relationship between MLT and other variables. Perhaps at Time 2 the school intercorrelations will approximate those found at Time 2 at home.

Factors promoting child narrative skill at home and at school. Another

TABLE 3. *Scores on home elicited report, Time 1*

	Words per turn		Information units			giveinfo/ reqinfo
	mother	child	requested	given		
				spont	total	
Allison	5.0	2.9	7	1	4	0.57
Tewana	6.6	3.3	19	2	19	1.00
Nicole	8.9	5.1	7	2	10	1.43
Zenia	–	–	–	–	–	–
Karin	10.6	2.1	61	5	28	0.46
Charles	11.0	7.3	8	4	9	1.13
Gilbert	8.3	9.7	12	12	17	1.42
Ethan	6.5	4.6	8	3	6	0.75
Kurt	8.5	5.5	18	5	12	0.67
Stan	20.2	2.5	24	0	7	0.29

TABLE 4. *Scores on home elicited report, Time 2*

	Words per turn		Information units			reqinfo/ giveinfo
	mother	child	requested	given		
				spont.	total	
Allison	5.0	9.3	3	5	5	1.67
Tewana	4.3	99.5	3	27	28	9.33
Nicole	8.1	3.0	7	2	5	0.71
Zenia	6.5	5.3	13	4	13	1.00
Karin	19.9	1.9	46	0	24	0.52
Charles	8.5	6.3	13	5	15	1.15
Gilbert	6.1	3.2	13	2	12	0.92
Ethan	12.1	4.4	14	0	8	0.57
Kurt	4.3	2.9	12	0	9	0.75
Stan	13.5	11.5	6	0	2	0.33

TABLE 5. *Time 1 school elicited reports*

	Words per turn		Information units			reqinfo/ giveinfo
	teacher	child	requested	given		
				spont.	total	
Allison	6.1	2.7	10	1	5	0.50
Tewana	4	4	2	0	2	1.00
Nicole	9.6	1.5	8	0	3	0.38
Zenia	7.9	6.7	11	0	7	0.64
Karin	–	–	–	–	–	–
Charles	5.1	5.1	16	6	20	1.25
Gilbert	3.4	3.4	12	3	9	0.75
Ethan	5.2	5.2	7	1	5	0.71
Kurt	2.8	2.8	23	2	16	0.70
Stan	4.8	4.8	5	2	4	0.80

way to compare home and school experiences is to consider the elicited reports produced by the children in the two settings during year 1 of the study. The child MLT during the elicited report was very comparable at home (4.78) and at school (4.02), though the mother MLT (9.5) was almost twice that of the teacher (5.4), as was the number of RI's (18.2 versus 10.4). Mothers were somewhat more successful than teachers in the amount of information they extracted (12.4 GI's at home, 7.9 at school), and they worked slightly less hard for each child GI as well (GI/RI at home was 0.86, at school 0.75). Of course, the mothers typically knew more about the event the child was reporting on, and therefore could ask more pertinent questions. They also had more leisure to pursue the elicited report through to a satisfactory conclusion.

Relationships between adult and child behaviours in elicited reports. Mothers varied enormously in how much effort they put into the task of eliciting a report from their children. Karin's mother, for example, made 61 requests for information, whereas Allison's and Nicole's made only seven each. The mothers varied too in their approach to the task; some decided to elicit a report about an experience they had participated in, whereas others selected an event they had experienced with the child, thus putting themselves in a position more like that of the teacher.

Maternal elicited report measures from Time 1 show strong correlations to maternal elicited report measures at Time 2, indicating considerable stability across the year in adult style. The number of maternal RI's related significantly to child GI's at time 1 ($r = 0.79, p < 0.01$), but not at Time 2. Maternal RI's did not relate to spontaneous GI's at either time. The maternal measures from Time 1 showed only moderate relationships to child narrative performance at Time 2. The strongest relationships were for frequency of RI's ($r = 0.52$ to GI's at time 2), amount of feedback ($r = 0.56$ to GI's at Time 2), and specific RI's ($r = 0.53$ to GI's at Time 2). Given the small sample size, none of these correlations reaches significance.

Teacher efforts to elicit reports also varied dramatically. At the low extreme, one teacher refused to elicit a report because 'she didn't know the child well enough,' and some teachers appeared to elicit reports only from our target child and rarely engaged in such talk with other children. There were also teachers who freely talked about past and future activities with all children. Not surprisingly, we found a large variation in the amount of information children gave, with a mean of 7.8 information units and a range from 2 to 20 information units. This variation most likely reflects the amount of effort teachers put into eliciting information because, when teachers requested more information (RI), children gave more information ($r = 0.86$, $p < 0.01$). Even more interesting was the positive relationship between spontaneous production of information and overall GI ($r = 0.69, p = 0.04$).

This relationship is interesting because it suggests that when teachers reveal interest by requesting information, children are encouraged to continue talking.

Exposure variables related to elicited report. There were no relationships between children's scores on any of the scales derived from the maternal interviews and their performance on elicited reports at time 1 or time 2. Looking at mealtimes, the only relationships found were with percent child utterances ($r = 0.52$ to child MLT in elicited report 2, and 0.54 to GI/RI ratio). These moderate and only marginally significant relationships may indicate that children who have the opportunity to talk more at mealtimes develop some independence as narrators. There were no relationships to child performance in the school elicited report.

School variables reflecting opportunities to engage in activities that require use of extended language might be expected to relate to child narrative skill. Relationships were found between school experiences and school elicited reports, but no links were found to home elicited reports. As would be predicted, we find positive relationships between the frequency with which children were reported to engage in activities involving use of complex language and elicited report performances reflecting child fluency (MLT, $r = 0.64, p < 0.06$; GI/RI, $r = 0.66, p = 0.05$). There also was a weak relationship between the amount of time we observed children to be engaged in literacy-focused experiences (LitFoc) – primarily reading and discussing books – and teacher efforts to elicit narratives from children (RI, $r = 0.58$, $p < 0.09$). Perhaps teachers who more often read and discuss books with children are more likely to also support children's retelling of their own past experiences.

DISCUSSION

The analyses reported here were undertaken in order to describe the amount of exposure preschool-aged children from low-income families have to experiences that might promote their narrative skills. We found enormous variability in both homes and schools in the degree to which children engaged in book-reading, in extended talk with adults about non-here-and-now topics, and in play activities in which language played a central role. At home, these factors showed sensible relationships with one another, but the only predictors of children's narrative skill with their mothers were interactive variables – the amount of information mothers elicited and their strategies for doing so.

The school outcomes indicate that the variability observed in school environments has an effect on the extent to which children are exposed to narrative language and are encouraged to formulate their own experiences

into personal narratives. These experiences appear to affect narrative production to teachers, as we found that children who spent time engaged in literacy-related activities, such as dictations or word games, performed better when asked to recount past experiences. Furthermore, teachers who strove to support children's language and cognitive development evidently also constructed environments that encouraged children to engage in more cognitively demanding interactions. These findings suggest that the large variance found in the school environments related to narrative development may have important effects on later functioning, effects that will become evident as we follow the children into elementary school.

Clearly, the results reported here are only exploratory, given the small sample size. In work currently underway we are continuing with data analysis from an additional 70 children, and with this larger sample we hope to relate predictor to outcome variables using more powerful statistical techniques than simple correlations. Nonetheless, this exploratory analysis has generated a number of conclusions of considerable importance to our understanding of low-income children's development. First, it is crucial in predicting children's performance to include information about their experiences at school as well as at home. Secondly, we cannot assume that narrative performance by preschool children is a stable measure that can be assessed independent of the adult conversational partner; there were no significant relationships between children's narrative performance with mothers versus teachers. Thirdly, even among a relatively homogeneous group of low-income families with low levels of parental education, there is enormous variability in children's access to literacy, to interesting non-contextually tied talk, and to narratives. Exploring this variability and its consequences within low-income populations may give us more insights about the mechanisms by which children become good story-tellers than replicating social-class differences in narrative skills.

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