Relations Between Children's Literacy Diets and Genre Development: You Write What You Read

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Abstract

The purpose of this study was to investigate young children's developing understanding and use of three particular school-based genres (stories, information reports, and poems) in relation to their situated experiences with these genres at home and in school. Fifty-four kindergarten, first-grade, and second-grade children composed original texts representing each of these genres. Children were also interviewed about why their texts represented certain genres and where they typically learned about different genres. Contextual data were collected to document the reading and writing children did at home and at school, as well as the metadiscourse used by their teachers to discuss different genres. All children's compositions were coded for a variety of textural and structural features that tend to distinguish among the three focal genres. Texts and interviews were then analyzed using both qualitative and quantitative analysis techniques. Contextual data were analyzed quantitatively. Analyses demonstrated that children possessed considerably more knowledge about narrative genres than informational and poetic genres. Analyses also revealed that children were exposed to narrative discourse and metadiscourse far more than to other kinds of discourse and metadiscourse, suggesting a strong relationship between children's literacy diets and their genre knowledge. Directions for future research and implications for pedagogy are discussed.

The term genre is used informally to refer to different ways of organizing communicative activity, whether the semiotic medium of expression is oral text, written text, graphic art, film, video, or some other medium (Bakhtin, 1986; Gee, 1990; Hicks, 1990). For example, I once overheard a group of students in a local café characterize the film *Paris Is Burning* as a poststructuralist satirical film noir. While it might be difficult achieving consensus about such a characterization, most people would agree that this utterance presents a nice example of the genre (fication) of everyday discourse or perhaps more precisely, contemporary chic urban café discourse. Most would also agree that it is commonplace in both everyday (and professional) life to engage in similar discourse practices wherein a certain poem is discussed as Beat ("Howl"), a song is referred to as an

example of the Blues ("Come on in My Kitchen"), or a painting is talked about as Cubist ("Guernica").

Indeed, competent speakers and writers both produce and consume forms of discourse (*genres*) that adhere to cultural conventions, that are appropriate for particular social and cultural occasions, and that accomplish specific communicative goals. Genres function as cultural frames for virtually all communicative activity. They consist of relatively stable constellations of sentence-level and text-level features. Systems of genres develop within specific communities of practice (Lave & Wenger, 1991), disciplines (Bazerman, 1988), and other social formations, some of which are organized quite formally and others that are quite self-organizing. These systems index the ways in which social formations have narrowed an infinite number of discourse possibilities into a relatively small set of fairly conventionalized and durable codifications (e.g., Bakhtin, 1986; Bakhtin & Medvedev, 1985; Bizzell, 1982; Bourdieu, 1990; Faigley & Hansen, 1985; Miller, 1984). These codifications function indexically, pointing toward the particular contexts in which particular meanings are constructed and particular functions performed (Silverstein, 1985). In this regard, Nystrand (1986) has shown quite convincingly that genres are one of the primary tools by which readers and writers narrow the range of possible meanings and functions of texts (i.e., contextualize such texts).

Genres are also dynamic and flexible cultural frames. They evolve and expand over time. Faced with new communicative goals and purposes, both individuals and collectives adapt available linguistic and cultural resources to accomplish spe-

cific rather than broad communicative goals and purposes (Bakhtin, 1986; Bazerman, 1988; Yates & Orlikowski, 1992). New or renewed genres often result from this process. Importantly, new genres reflect changes in real social life, which often lead to changes in cultural world views. Thus the relationship between the social and cultural fabric of a group is a recursive one wherein "genre appraises reality and reality clarifies genre" (Bakhtin & Medvedev, 1985, p. 136). This dialectic provides group members with both predictable expectations for particular genres as well as room for creativity in their production and reception.

Knowledge of genres is critical for the development of communicative competence, which involves the packaging of messages in fairly specific and predictable ways within particular communicative domains. Gaining knowledge of many genres and the typified rhetorical situations that constitute and are constituted by these genres is a primary developmental task for children as they learn how to write, and it becomes ever more important as children move through the educational system (e.g., Berkenkotter & Huckin, 1993; Chapman, 1994; Kamberelis, 1993, 1995). Different genres make their own demands on children with respect to their formal structures, their ordering of thematic material, their conception of the nature and status of knowledge, their rhetorical functions, their social contexts, and the ideologies that inform them. These demands exert effects not only on the structures of whole texts but also on the structures and textures of sub-sentential units, sentences, and sentential combinations. Coming to understand all of these dimensions of

genre knowledge and the co-constitutive relations among these dimensions is central to the process of learning to write generatively and effectively.

Although genre learning and use occasionally occur as rule-governed activity, they usually occur implicitly as a function of discourse socialization and practice within particular collectives or disciplinary communities. Like many complex and recondite cultural forms and practices, genres become part of one's durable set of dispositions toward everyday language use and text production. Viewed in this way, learning is located somewhere between the individual and the collective as motivated semiotic practices-in-use. This kind of learning has been emphasized under the rubrics of "situated cognition" (Brown, Collins, & Duguid, 1989; Greeno, 1989), "situated learning" (Lave & Wenger, 1991; Rogoff, 1990), and "socially distributed cognition" (Hutchins, 1995). Within these rubrics, knowledge is integrally linked to the ongoing pragmatic activity of communities. Learning genres or other cultural forms occurs continually "with each new occasion of use because new situations, negotiations, and activities inevitably recast [them] in a new, more densely textured form" (Brown et al., 1989, p. 33). Rather than being explicitly taught the practices of a collective or disciplinary community, new members participate in apprenticeships, "picking up" the requisite knowledge and practices for full membership as they go along.

As legitimate but somewhat peripheral participants within ongoing communities of practice, individuals construct texts that seem to have the general shape and flavor of the texts which they perceive to be common currency within

these communities. They do this by borrowing from and building upon prior texts, text fragments, and textualizing habits or conventions at various levels of discourse organization—lexicon, register, grammatical phrasing, discourse units, thematic content, customary tropes, and the like. They also do this in the context of their continued participation in the many local discursive and material activities that occur within the community of practice. Over time, their texts come to more closely approximate the kinds of texts that are valuable and valued within the collective or discipline.

Purpose of the Study

The purpose of this study was to investigate young children's developing understanding and use of three particular school-based genres (stories, information reports, and poems) in relation to their situated experiences with these genres at home and in school. There are several important reasons for studying children's developing understanding and use of different genres. From a scientific point of view, this is a promising new research frontier in the field of literacy. From a more practical point of view, the extent to which children can vary their presentational styles by drawing upon genre knowledge has important consequences for their success with language and literacy tasks. Even more important is the fact that genre-specific communicative competence is necessary for children's long-term success as they progress through the grades (Dyson 1989; Heath, 1983; Kamberelis, 1995; Luke, 1995) and move into the work place (Coupland, 1984; Fairclough, 1992; Swales, 1990). Greater understanding of genre learning and

development should help us to design classroom activities that enhance the communicative competence of all children, thus increasing their levels of school success and prospects for career success.

Relevant Empirical Research

Over fifteen years ago, Gundlach (1981) suggested that focusing on discourse level dimensions of children's writing such as genre would disclose "both interesting common lines of development and information about differences among children and their growth as writers" (p. 140). Surprisingly, only a handful of researchers responded to his call. Moreover, many who did respond embedded questions about genre development and learning within more global research foci (e.g., Dyson, 1989, 1993, 1995; Gundlach, McLane, Stott, & McNamee, 1985; Harste, Woodward, & Burke, 1984; King & Rentel, 1981). Dyson (1989), for example, explored genre as a secondary concern while attempting to construct a model of the relationships among drawing, writing, and social interaction in the lives of young writers. And Harste et al. (1984) noted some of the different genres enacted by children in the context of constructing an encompassing psychosocial theory of writing development.

Several researchers have addressed the issue of genre development more directly. In a set of children's book reenactment studies, for example, Pappas (1991, 1993) investigated the textural and structural variation within narrative and expository texts produced by 20 kindergartners. She found that these children showed an increasing sensitivity to the textural and structural characteristics of

both kinds of texts across successive reenactments of the same book. For example, most kindergartners consistently sustained the cohesion of their narrative reenactments with co-referential ties. Although less consistently, most children used co-classification ties to sustain cohesion in their information book reenactments. Most children used the past tense when reenacting narratives and the present tense when reenacting information books. Children also included certain unusual lexical items and syntactic structures from the specific books that they reenacted. Finally, children's "pretend readings" of both kinds of books more closely approximated the actual books with each successive reenactment.

In a cleverly designed quasi-reenactment study, Hicks (1990) investigated the ability of kindergarten through second-grade children to reconstruct—in three different genres—a film they had seen. Immediately after viewing a shortened version of the silent film, *The Red Balloon*, they were asked to recount the film's contents in both the on-line narration genre and the news report genre. An hour later, these children were asked to recount the film as a story.

Among other things, Hicks found that the appropriate use of tense marking increased as a function of age, with older children using past tense (or the historical present) more often in their news reports and stories and present tense more often in their on-line narrations. This effect, however, was related to interactions among grade, task, and task order. Younger children tended to use the past tense inappropriately in their on-line narrations only when the on-line narrations were performed after the news reports. This finding suggests that there was a

strong carry-over effect from the news reporting task to the on-line narration task for younger children but not older children.

Employing primarily text production tasks rather than text reenactment tasks, a few researchers have investigated the genre-specific dimensions of children's writing even more directly. Although typically associated with the "modes of discourse" epoch of literacy studies, probably one of the earliest and most widely cited studies of children's developing understanding and use of discourse genres was conducted by Britton and his colleagues. Britton (1970) and Britton, Burgess, Martin, McLeod, and Rosen (1975) proposed three basic rhetorical functions (or generic types): expressive, transactional, and poetic. In addition to these three basic functions, they proposed a number of sub-functions, many of which correspond with the genre categories set forth by literary theorists (e.g., chronicles, biographies, narratives).

In a pioneering and comprehensive set of experimental studies on structural dimensions of different genres, Langer (1985, 1986, 1992) explored the extent to which children and adolescents differentiated between story and report, and how their knowledge of these differences was used in both their writing and reading comprehension. Among other things, she reported that older children possessed more working knowledge of genre conventions and distinctions than younger children. However, genre differences were greater than grade-level differences in almost all analyses performed, suggesting that even the youngest children in the study had relatively stable concepts of the two different genres. Analyses of several macro-level rhetorical structures

(title, main idea, sequence structure) of children's written texts revealed significant differences as a function of genre but not for grade. However, analyses of more micro-level rhetorical structures (e.g., temporal and logical sequences, descriptions, evaluations, explanations) yielded differences as a function of genre and also a genre-by-grade interaction, which was accounted for by increased sophistication of the structure of reports but not stories across grades.

Several important and related differences emerged from analyses of children's retellings of texts that they had read. As with the writing task, there were differences as a function of genre in the use of macro-level rhetorical structures. There were also differences by grade for stories only, largely because stories tended to be organized according to macro-level structures while reports tended to be organized according to more micro-level structures. Children's ability to provide the gist of texts differed as a function of genre and there was a genre-by-grade interaction. All children, but especially the younger ones, were more likely to recall the original gist of stories than they were able to recall the gist of reports. Older children tended to provide the original gist of both stories and reports quite well.

Martin and his colleagues (e.g., Martin, 1984; Martin & Rothery, 1981) conducted a set of descriptive studies of the writing of kindergarten through sixth-grade children in Australia. According to the findings from these studies, the predominant genres used by younger children were *picture descriptions* (e.g., This is a tadpole almost lost its tail.) and *observations/comments* (e.g., The Park.

One Sunday Morning I went to play football and we had to play Woodlands. …).

By the time children were in the second and third grades, the predominant genre for all children was *recounting of personal experience*, usually without any sort of crisis or extraordinary occurrence (e.g., Our trip to Liverpool Library. We went to Liverpool Library very happily. We walked there. We sat down and listened to Miss Matthews. Then, after she had finished we filled in a few questions about where things are in the library. …).

Recounting remained the predominant genre throughout the elementary school years. However, more complex narratives with problem/resolution structures became more common in the later elementary years. In addition, expository genres like the *report* appeared in increasing numbers as children moved through elementary school (e.g., Birds. Birds live up in a tree. If they don't eat they die. Redbirds blackbirds any coloured birds Dark birds light birds. Some birds are small and others are big.).

Although on a much smaller scale, Kroll (1990) conducted a study that was somewhat similar in design and scope to those of Martin and Rothery (1981), following 17 children over a 5-year period from kindergarten through fourth grade. I review only findings from the first 3 years. Kroll reported, among other things, that most kindergartners' writing consisted of labels or one-sentence descriptions that accompanied drawings. When kindergarten children did write stories, their content was often borrowed from the culture they were concerned with, that of fantasy and the characters the media invented for them. Some children copied basal phrases or wrote basal-like texts.

In first grade, the children began producing many more narrative texts. Most of these were personal narratives. As the year progressed, these personal narratives became longer and more elaborate, but seldom did they accord very well with typical story grammars. In the later part of the school year, first graders began to expand their topics and genre repertoires. In addition to personal narratives, they began to attempt to write fictional pieces. They also began to use the genre markers and conventions of stories more competently. In addition, a few children began writing proto-expository pieces including interviews with one another, lists of favorite things, and informational texts.

In second grade, many children began producing stories that began with the introduction of a main character and with the introduction of that character's problem. This beginning was followed by a number of incidents that, while coherent within themselves, were connected only minimally. The endings of these stories, when the stories were completed, tended to be contracted into a few sentences where the final problem was solved with little elaboration or complexity. Although narrative was the dominant genre used by second graders, many children did experiment with different expository forms as well (e.g., commercials, recipes, interviews, poems).

In a descriptive study conducted in a first-grade classroom, Sowers (1985) found that two genres predominated in children's writing—the past-event personal narrative and a truncated informational text that Sowers called an *all about book* (e.g., Alligators eat people. Alligators live in the water and on land. Alligators sleep with their mouths open. …). At the beginning of the school year, children wrote about twice as many *all about books* as they wrote stories. Toward the end of the year, however, the stories produced by the children outnumbered the *all about books* by about three to one.

In perhaps the most extensive descriptive study of structural aspects of children's non-narrative written texts, Newkirk (1987, 1989) examined 100 texts composed by first-grade, second-grade, and third-grade children. These texts were a subset from a larger sample of both narrative and non-narrative texts produced by the children. Using a structural analysis scheme similar to Langer's (1986), Newkirk (1989) identified eight distinct types of non-narrative texts produced by these children: *labels*, *basic lists*, *attribute series*, *reason lists*, *couplets*, *hierarchical attribute series*, *unordered paragraphs*, and *ordered paragraphs*. These eight types are ordered hierarchically (more or less) from least to most complex. A label is a one-word, a one-sentence, or a multi-sentence description of a picture. A basic list has a series of names, dates, facts, etc., usually not in sentence form. An attribute series is a set of one-clause statements that typically outlines facts and feelings about a topic. A reason list has a series of statements that provide reasons for a proposition or a way of doing something. A couplet is a proto-informational text consisting of one or more two-clause units. These might include identification + information, question + answer, statement + reason, or statement + example. A hierarchical attribute series is a series of statements organized into categories, which are not necessarily ordered in any specific or logical way. An unordered paragraph includes three or more clausal statements that are coherently connected. Finally, an ordered paragraph has a series of clausal statements that require a specific order to be meaningful and coherent because the information contained in the paragraph is organized logically.

Newkirk's (1989) analyses of children's non-narrative writing revealed some interesting differences. The predominant forms used by first graders were the label (41%), the attribute series (21%), the couplet (18%), and the unordered paragraph (15%). The forms used most often by second graders were the unordered paragraph (32%), the attribute series (26%), the couplet (19%), and the label (10%). The predominant forms used by third graders were the unordered paragraph (29%), the ordered paragraph (20%), the hierarchical attribute series (14%), the couplet (11%), and the reason list (11%). Newkirk noted that his data suggested an emerging hierarchical organization both within and across paragraphs.

In a longitudinal study with a quasi-experimental design, Zecker (1996) investigated how kindergarten and first-grade children wrote in three different genres (story, personal letter to a friend, and grocery list) at three different times during the school year (autumn, winter, spring). Descriptive statistical comparisons were conducted to investigate the extent to which children's texts adhered to the conventions for content and form typical of each of the three genres under study.

Zecker found, among other things, that both kindergartners and first graders demonstrated a considerable amount of knowledge about all three text types and the substantive and structural differences among them. There was a steady increase

across the year in the number of kindergartners' stories judged to have a fundamentally narrative structure (58% in the autumn; 70% in the winter; 85% in the spring). In contrast, first graders' stories did not demonstrate this linear trend toward increasingly well-formed narrative structures across time (55% in the autumn; 75% in the winter; 50% in the spring), which Zecker attributed to the fact that children had been reading and studying *all about books* in the spring.

Kindergartners also showed a steady increase in the extent to which their personal letters embodied the content and structural characteristics typical of personal letters (68% in the autumn; 80% in the winter; 85% in the spring). Nearly all first graders at all three times during the school year produced personal letters that adhered both in form and content to typical personal letters (95% in the autumn; 100% in the winter; 100% in the spring).

Most kindergartners at all three times during the school year produced well-formed grocery lists, which were defined as inventories or series of semantically organized items related to the procurement of the ingredients to some recipe (95% in the autumn; 100% in the winter; 100% in the spring). Results were almost identical for first-grade children (100% in the autumn; 100% in the winter; 100% in the spring). However, compared to kindergartners, many more first-grade children provided Prefaces to their lists (e.g., "To make a good fruit salad you need" or "What I would buy for a ham sandwich"). More first-grade children also appended Afterwards to their grocery lists (e.g., "That's what I would put in my sandwich").

Deploying naturalistic research methods and a multiple case-study design, Chapman (1994, 1995) examined the writing of six children of varying ability levels over the course of their entire first-grade year. Using the analytic schemes developed by Langer (1986, 1992) and Newkirk (1989), Chapman reported the use by these children of 15 distinct genres: basic records, expanded records, basic record series, expanded record series, recounts, narratives, labels, lists, attribute series, couplets, hierarchical attribute series, word play, notes/letters, written dialogues, and picture dialogues replete with sound effects. Only eight of these genres showed up during the first third of the school year, with the other seven being added during the second two thirds. Chapman also reported that children produced mostly single-word and single-clause texts early in the school year. Most of these short texts were either labels or basic records. As the year progressed, however, both the length and structural complexity of children's texts increased. Additionally, Chapman noted that only the more middle-ability and advanced-ability children produced well-formed narratives, and that these narratives were typically produced late in the school year. Summarizing these findings, although all children showed development both in the number of genres enacted and the relative sophistication of their texts, their progress was irregular and uneven. Moreover, Chapman noted that some of this "bumpiness" seemed to be related to children's differential exposure to the set of textual resources of the classroom and children's specific socialization experiences within particular literacy events (e.g., sharing time, author's circle).

Although anecdotes abound (e.g., Bauman, 1982; Brady & Eckhardt, 1975; Chukovsky, 1968; Labov, 1972), very little systematic research has been conducted on children's poetic language development, especially with respect to their poetic writing. In reviewing the literature, I found only two systematic studies of children's poetry development. One focused on children's production of poetic language in the oral mode. The other focused on children's concepts for poetry.

Combining observational and experimental methods, Dowker (1989) documented the presence of the rhyme and alliteration in the oral poems produced by 133 two-year-old through six-year-old British children from diverse social, cultural, and economic backgrounds. Fifty-eight percent of these children produced at least one poem (defined as a text with an obvious rhythmical structure). Fifty percent of children under age 3;6, and 67% of children over that age produced poems. Most children produced only one or two poems. A few children were incredibly prolific and produced dozens of poems. Rhyme occurred in 41% of the poems. Alliteration occurred in 24% of the poems. There were no significant differences as a function of age. Dowker's work suggests that children's poetic sensibilities develop long before they go to school, where it may be cultivated, ignored, or stifled.

In an interesting intervention study, Ford (1987) investigated the concepts of poetry held by 340 kindergarten through third-grade children. The intervention consisted of having teachers read and discuss poems with children on a daily basis for four weeks. Pre-test results showed that the primary defining features of poetry held by children were rhyme, text length, and thematic content. Only 39% of children defined poetry as language containing poetic devices, and rhyme was virtually the only device mentioned. Older children mentioned rhyme as part of their definitions significantly more often than younger children. Third-grade was a watershed in this regard. Compared to pre-test results, a significantly larger number of children defined poetic texts according to rhyme on the post-test. Some children also mentioned other poetic devices. This difference was more pronounced for older children than for younger children. Again, third grade was a developmental watershed.

This focused review of research on the development of children's genre knowledge and its application to writing suggests that these processes are complex, emergent, and not particularly well understood. The present study is important because it builds upon and extends previous research in several ways. First, it is unique in its systematic investigation of three key school-based genres: stories, science reports, and poems. Second, in comparison with more naturalistic studies (e.g., Kroll, 1990; Newkirk, 1989), my quasi-experimental research design allowed a more systematic investigation of children's developing competence with narrative and informational genres. I created situations for children that allowed them to demonstrate skills that they might not have revealed if I simply waited for them to occur spontaneously. Moreover, my tasks were relatively standardized to allow for comparisons along the same dimensions for all children. Third, in comparison with highly scaffolded reenactment studies (e.g., Hicks, 1990; Pappas, 1991, 1993), my quasi-experimental design allowed me to document children's understanding and use of different genres in writing situations that

are more typical of school—ones in which children are asked to produce "their own" texts. Fourth, this is the first study of which I am aware to investigate systematically (and not just anecdotally) children's knowledge and use of poetic writing. Finally, this study explored the possible relations between children's literacy diets and their working knowledge of different genres more systematically than virtually all previous studies of children's genre development (e.g., Chapman, 1994, 1995; Kroll, 1990; Newkirk, 1989; Zecker, 1996).

Method

Setting and Participants

This study was conducted in one intact classroom at each of three grade levels (kindergarten, first, and second grade) in one school. Both the first-grade and the second-grade programs met for the entire school day. The kindergarten program occupied the morning only. Approximately 80% of the children from each classroom participated in the study: 16 kindergarten children (9 boys, 7 girls; mean age = 5;8), 20 first-grade children (9 boys, 11 girls; mean age = 6;9), and 18 second-grade children (8 boys, 10 girls; mean age = 7;7). Four children did not participate because their parents either failed to return permission slips or declined to allow their children to participate in the study. I excluded from the sample all children who were either nonnative speakers of English or recipients of Title I services.

All three classrooms were racially/culturally and socially/economically diverse and reflected the population of the community at large. Fifty-nine per-

cent of the children in the study were Caucasian; 28% of the children were African American; 13% of the children were Asian or Asian American. About half of the children were from working-class families; the other half were from middle-class families. These distributions were quite similar across classrooms and closely mirrored those of the school population as a whole.

Although obviously not clones of one another, all three of the teachers in the study exhibited many similarities. All were advocates of a "whole language" approach to language arts instruction. All were actively involved in writing the "new" elementary language arts curricula and assessment protocol for the district. All three teachers organized their instruction according to an integrated language arts model (Pappas, Kiefer, & Levstik, 1995), which involves incorporating reading and writing activities into instruction related to all (or most) of the content areas according to themes that change every month or so. Active engagement with trade books was the staple of reading instruction in all classrooms. Children in all classrooms also engaged in some kind of writing activity nearly every day. Much of this writing was self-selected. When writing activities were assigned, these activities remained relatively open-ended. Included in the writing activities of each classroom was journal writing, which occurred almost every day. All forms of writing (e.g., drawing, scribble, non-phonetic letter strings, invented spelling, conventional spelling) were honored and accepted in all three classrooms. However, except to add illustrations to their otherwise phonetic-based texts, first-grade and second-grade children seldom composed with anything but

invented spelling and conventional spelling.

Despite the fact that all three teachers shared many theoretical views and everyday classroom practices, certain literacy activities were relatively unique to each of the classrooms, especially with respect to "skills" instruction. In large part, these differences related to the fact that the teachers taught at different grade levels. The district curricula, although more developmental than normative in character, did specify different outcome goals for different grades.

In the kindergarten classroom, phonics was taught quite regularly but indirectly in the context of songs, games, and storybook reading. Children also talked about the content and themes of some of the books read during language arts instruction. On a rotating basis, three children per day made presentations to their classmates in a "sharing time" activity. On several occasions during the year, all children composed their own *books* based on the content and styles of published books that they had read in the context of shared reading activities. These compositions included a book based on *Dr. Seuss's ABC* (1963), a book based on the story *The Gingerbread Man* (Nolte, 1961), and a book based on one of each child's current favorite stories. Children were actively encouraged to write with any forms of writing they chose (e.g., drawing, scribbling, alphabetic writing).

In the first-grade classroom, children received instruction in phonics for fifteen minutes several times a week using The Phonovisual Method (Schoolfield & Timberlake, 1970). Children also engaged in shared reading experiences, which often involved teacher-led compre-

hension activities. The teacher also conducted instructional conversations (Tharp & Gallimore, 1988) with the children about punctuation, capitalization, and other aspects of grammar and usage during the second half of the year and in the context of preparing their writing for public display. Much like in the kindergarten classroom, all children composed several of their own *books* throughout the year. These books were modeled after the styles of published books that they had read. For example, children wrote their own books based on different predictable books such as Bill Martin's (1982) *Brown Bear, Brown Bear, What Do You See?* They also wrote their own books based on books from Arthur Loebel's *Frog and Toad ...* series. Additionally, they wrote books based on several informational texts about fish that were used as part of the integrated language arts unit on animals.

In the second-grade classroom, children were responsible for learning spelling words and vocabulary words every week. They also engaged in reading comprehension activities during whole-class discussions and on their own using materials from the Mastery Education Corporation's *Insights*. Throughout the year, second graders also kept reading logs and wrote book reports on books of their own choosing on a fairly regular basis. Every day, just before lunch, all children who desired to do so shared favorite jokes and riddles with the other members of their class in a "sharing time" format. In the autumn of the school year, all children read and discussed several poems and then wrote a couple of poems of their own. They also wrote a biography of a famous person and a short social studies report about a Native

American cultural group. For about a month during the winter of the school year, all children kept a science journal on a pair of mice and their offspring, all of which were classroom pets.

Almost no formalized explicit instruction about any of the genres under investigation was part of the language arts curriculum in any of the classrooms. However, all teachers occasionally engaged children in discussions of some of the characteristic features of different types of texts. As I mentioned above, children constructed texts of various genres based on ones that they had read during shared reading experiences.

Materials and Procedures

All data were collected in the spring of the school year. All data collection sessions were conducted by an adult researcher who had worked in the classrooms as a participant-observer all year and was well known to the children. In each of three separate writing sessions conducted by the same adult researcher, each child was asked to make up and compose one of three written texts designed to instantiate one of the focal genres (i.e., story, science report, poem). Across the three writing sessions, each child composed a total of three texts—one text representing each focal genre.

The elicitation instructions used for all three genre sessions were exactly parallel in structure and differed only in terms of their introductions and the task requirements they specified. To insure that they were relatively felicitous, task introductions differed as a function of what other tasks children had already completed. Task requirements differed only with respect to changes in the genre specified. Each of the three writing ses-

sions occurred on a different day. Task condition was counter balanced. The time lag between the execution of any two tasks with any given child was never less than 3 days or more than 5 days. Task sessions were modeled after those of Sulzby (e.g., Sulzby, Barnhart, & Hieshima, 1989). During each writing session, each child worked individually with an adult examiner in a quiet spot in the hallway adjacent to her or his classroom. After providing the instructions for each writing task, no further information was provided about task requirements, editing, or revising. Each text was produced within a single session of approximately 20-30 minutes. Each child was asked to read her/his text after she/he had finished writing it. Each child was then asked to talk about the kind of text she/he had written and where she/he had gotten the ideas for it. Finally, each child was asked to read the text "one more time before you go back to the classroom." All writing sessions were audio taped, and transcriptions of all audio tapes were made.

Neither the examiner nor anyone else assisted in the production tasks. The topic about which the children wrote was the same across the three writing tasks. All children wrote their stories, biology reports, and poems about animals. This general topic was chosen because it had been the thematic focus of classroom instruction just before data collection. Children had received instruction and engaged in a variety of activities that focused on different classes of animals, animal habitats, animal life cycles, and pets. Some topics were emphasized more by some teachers; other topics were emphasized more by other teachers. Texts representing many different genres—

including stories, poems, and information books—had been included in reading activities and talked about in discussions. Additionally, children had also engaged in self-selected and assigned writing that included numerous genres.

Contextual data on children's experiences with different genres were collected during the four months (January through April) prior to collecting writing samples. I kept records of all assigned and self-selected reading and writing done by children in the classroom. I also conducted observations in all classrooms to document the metadiscourse used by teachers in relation to the three focal genres. Children and their parents kept records of the books that children read (or had read to them) at home and the writing that children did at home. Finally I conducted interviews with children that focused on their sources of knowledge for different genres (e.g., Where do you usually learn about science and science books?).

Textual Features Included in Analyses

There are numerous dimensions of textual organization that could be analyzed to understand children's genre development. Based on previous theory and research, I selected a subset of dimensions that met three criteria. First, they were simple and salient ones that children were beginning to understand, analyze, and use. This criterion is particularly important in a developmental study. Second, these dimensions were distributed differentially across different genres in relatively unambiguous ways. Third, these dimensions represented different levels of textual organization: text structure, text cohesion, and text register.

Descriptions and explanations of the forms and functions of these dimensions and the features that constitute them appear below.

Text structure. Texts may be characterized according to the overall hierarchical organization of clauses within them (e.g., Schank & Abelson, 1977; vanDijk & Kintsch, 1983). All texts have both surface structures and underlying structures. The underlying structures of texts are abstract representations of the information contained both explicitly and implicitly in the texts. The surface structures represent particular embodiments of the underlying structures. All text types or genres have a set of principles describing conventional and acceptable underlying structures. Although a given underlying structure can be transformed into many different surface structure variations, the surface structures of all relatively conventional generic texts index their underlying structures. In general, the organization of ideas in different text types is slightly different in terms of the kinds of linguistic and discursive elements included, the relative frequencies of these elements, and the hierarchical organization of the elements.

Because of its balanced focus on both formal and functional aspects of communicative activity, I will use the story grammar developed by Hasan (1989) to illustrate what is meant by structural aspects of narrative. Hasan has argued that there are basic elements that must be present in a text for it to be a story. She refers to these as obligatory elements. In addition to these, there are optional elements that may or may not be in stories or that may be characteristic of certain kinds of stories only. The follow-

ing list shows the elements of a story and how they are typically organized:

Placement: The author may introduce the setting of the story and the characters, provide some locale or historical reference, describe traits or typical activities and attitudes of characters, and so on. (Optional)

Initiating Event: The conflict or problem in the story emerges. (Obligatory)

Sequent Event: A recounting of the character(s') attempts to resolve the problem or conflict. (Obligatory)

Final Event: The conflict or problem is resolved or not resolved. (Obligatory)

Finale: A restoration of the habitual or normal state of affairs or the establishment of a new and usually better state of affairs. (Optional)

Moral: A moral statement or claim is made. (Optional)

These structural elements and this structural organization are related to how stories function in our culture (and most cultures for that matter). Stories function to cultivate personal and interpersonal understandings—what motivates characters, how different characters interact, how their goals and plans to accomplish those goals mesh or conflict, and so on. Narrative genres shape their messages so that inferences about human (and other animate) beliefs, attitudes, motivations, purposes, and the like can be expressed. And they do this largely through the inclusion and hierarchical organization of the structural elements just discussed— the elements and structures that have come to characterize the narrative genre.

In contrast to narrative genres, informational genres do not involve specific characters, goals, motivations, etc.

Rather, they involve describing characteristics and behaviors predicated on a particular event or set of events, class of objects, or class of agents. As a result of this different set of intentions, they have different global structures. Although not nearly as well theorized and researched, a number of investigators have explored the structural aspects of informational writing (Langer, 1986; Meyer, 1975; Pappas, 1991, 1993). Because of its balanced focus on both formal and functional aspects of communicative activity, I will use the text grammar developed by Pappas to illustrate what is meant by structural aspects of information reports. Like Hasan's text grammar for stories, Pappas' text grammar for information reports has both obligatory and optional elements. Below is an outline and a set of descriptions for these elements:

Topic Presentation: The topic or theme of the text is presented or introduced. (Obligatory)

Description of Attributes: A description of the attributes of the class or topic of the text is presented and elaborated. (Obligatory)

Characteristic Events: Characteristic events, activities, or processes related to the topic are expressed, discussed, or explained. (Obligatory)

Category Comparisons: Comparisons and contrasts about different members of the class or topic that the text is about are presented and explained. Sometimes comparisons or contrasts to other related topics or classes are introduced. (Optional but common)

Final Summary: Summary statements are made about the information covered in the text. (Optional but common)

Afterword: Extra information about the topic or theme is presented. (Optional)

Operating together, these structural elements function to introduce, describe, and elaborate upon characteristics and behaviors predicated on a particular event or set of events, a class of objects, or a class of agents. They render a sense of the factual, the general, and the universal, and they do so in a matter-of-fact manner. Unlike stories, which encourage the reader to infer intentions, motives, attitudes, and feelings on the part of agents, actions, and patients, information reports encourage an objective view of these text elements and what they represent.

Discussing the structure of poetry is more difficult than discussing the structures of narratives or informational texts. Certain forms of poetry must adhere to strict text grammatical rules for verse structure, rhyme, and meter. Other forms of poetry, however, have no presupposed text grammatical rules, although it is often possible through literary analysis to discover (or perhaps construct) the architecture of a given poem after the fact. To my knowledge, no general set or sets of structural descriptions have been written for poetry that are comparable to the kinds of text grammars created for stories and informational texts. Moreover, separating textural aspects of poems from structural aspects is more difficult than separating them for stories or information reports.

Nevertheless, three structural features are frequently mentioned by theorists of poetic language (e.g., Friedrich, 1979, 1986; Tannen, 1989). These are *line structure*, *stanza structure*, and *meter*. Line structure refers to the fact that the fundamental organizational unit

of poems is the line rather than the sentence. For example, sentences within poems are often broken up into two or more lines in order to achieve particular rhetorical and aesthetic effects. A second fundamental structural feature of poems is stanza structure. Lines within poems are typically organized into stanzas rather than paragraphs. Much like lines, stanzas tend to mark the content within them as both distinct from and related to that of adjacent stanzas. A third structural feature that tends to characterize most poems is meter (or rhythm). Indeed, many have argued that meter is the master trope of poetic discourse. Basically, meter refers to patterns of measured sound units that recur in fairly regular ways.

I already mentioned that the structural features of stories foreground the intentions, motives, and feelings of characters while the structural features of informational texts foreground factual, general, and universal aspects of a natural or cultural process. In contrast, the structural features of poems function primarily to involve the reader in both the medium (language) and the message (content) of the poem. These features draw attention to the poetic text as an aesthetic object, and they help the reader imaginatively participate in the textually rendered world of the poet, thus forging connections between their experiences.

Text cohesion. Cohesion is a complex linguistic phenomenon that indexes both the relative particularity and generality of textually rendered topics and themes, as well as the degree to which agents, patients, attributes, locations, or activities are connected across stretches of extended discourse. Halliday and Hasan (1989) have argued for three distinct kinds of cohesive devices (co-refer-

ence, co-classification, and co-extension), and they have articulated many of the ways in which the differential use of these devices relates to genre. Co-reference is a linguistically articulated semantic relationship of situational identity of reference. Co-referential ties connect tokens that refer to the same particular entities, attributes, or activities across textual space (e.g., *Barbra Streisand* is a popular *female vocalist*. *She* is famous for *her* exquisite and powerful voice and for *her* skill as an *actor* and *film director*.).

The second kind of cohesive device posited by Halliday and Hasan is co-classification, which may be defined as a linguistically articulated semantic relationship wherein the things, processes, and circumstances are characteristic of all members that belong to a certain class or category. Co-classification ties, then, link either general tokens or different tokens of superordinate categories because of their identical relationships to those categories (e.g., *Lions* are *carnivorous mammals who* live in Africa and southern Asia. *They* are also exhibited in captivity at zoos and in circuses.).

The third kind of cohesive device articulated by Halliday and Hasan (1989) is co-extension, which may be defined as a linguistically articulated semantic relationship wherein two tokens refer to something within the same general field of meaning. Relationships of co-extension, then, connect tokens that exhibit a general resemblance even though their primary class affiliations are not identical (e.g., "I had a little nut tree / Nothing would it bear / But a *silver* nutmeg / And a *golden* pear") (p. 73).

These different cohesive relations are not independent of lexical and grammati-

cal forms. For example, relations of co-referentiality are typically realized by pronominals, definite articles linked to individual nouns, demonstrative determiners, and possessives. By contrast, co-classification relations are usually realized by nominal and verbal repetition, substitution, and ellipsis. Finally, variation in these different kinds of cohesive devices and the particular lexical and grammatical forms that constitute them is often genre-related. For example, stories tend to contain an abundance of co-referential chains composed of nouns (especially pronouns) that allow the reader to maintain an understanding of a particular referent—a character, place, or object. Information books, by comparison, have relatively few co-referential chains. Rather, they contain co-classification chains that specify continued reference to classes of objects or living things. Poems, to provide a further comparison, may embody co-referential chains, co-classification chains, or a combination of the two in cases where they forge connections between the more particular and the more universal. Additionally, in comparison with stories and reports, poems are more likely to contain co-extension chains.

Text register. Because of their different functions and contexts of use, particular kinds of texts are distinguished by different linguistic registers, each with specific forms of lexis, syntax, and formulaic phrasing (e.g., Berman et al., 1986; Biber, 1988; Hasan, 1989). For example, phrases such as "once" or "once upon a time," "in a galaxy far far away" or "there was a girl who lived in the woods," and "the end" are found almost exclusively in stories and tales. Such phrases, which I refer to as *specialized*

narrative discourse, typically function both to mark texts as narratives and to place textual events in the past.

Scientific lexical items and phrases (e.g., gills, respiration, carnivorous, osprey, bear live babies, have many rows of teeth) are more common to scientific (biological) texts than narrative or poetic ones. Such forms of discourse, which I refer to as *biological lexis and phrasing*, foreground the timeless and universal nature of the attributes and events to which they refer.

Poetic devices or *tropes* foreground the aesthetic or poetic quality of texts. Tropes typically violate conventional or unmarked phonological, syntactic, and semantic rules or expectations, thus intensifying the form of linguistic messages (Berman et al., 1986; Friedrich, 1979; Tannen, 1989). Well-known examples of poetic tropes include rhyme, repetition, assonance, alliteration, imagery, simile, and metaphor. Different tropes operate at different levels of linguistic organization. Assonance and alliteration, for example, operate primarily at the level of sound. Repetition operates at the level of syntax. Metaphor and simile operate at the level of semantics. And rhyme operates simultaneously at the levels of sound and syntax. These and other tropes tend to be extremely common in poetry, somewhat common in narratives, and much less common in expository prose.

Coding and Analyses

Based on the general distribution patterns of various textural and structural features across different genres, I first analyzed all texts descriptively to get a sense of the character and range of the texts in the corpus. I examined all analy-

ses for major patterns within the corpus, and I selected analyses of a subset of texts to represent most of these major patterns.

To provide a more systematic account of the distribution of linguistic features across different genres and as a function of grade, all texts were coded and analyzed for the features of text structure, text cohesion, and text register described above. As I already mentioned, all first-grade and second-grade children composed their texts using readable invented spelling or conventional orthography. Some kindergartners, however, wrote their texts using non-phonetic writing systems (e.g., drawing, scribble, non-phonetic letter strings). When children composed texts with invented spelling and conventional orthography, I used their actual texts for analysis. When children composed texts with non-phonetic writing systems, I used children's readings of those texts for analysis.

Following Berman et al. (1986), I segmented children's texts into clauses. A clause is any stretch of extended discourse containing a verb phrase (including elided verb phrases). I then coded all texts for the features of text structure, text cohesion, and text register previously described. A second researcher, who was an advanced graduate student, also coded all texts. For features that were continuous variables, we coded all tokens of feature types and computed ratios of tokens per clause. For features that were dichotomous variables, we coded all texts for the presence or absence of relevant features and computed mean percentages of features present per text. Using 25% of the coded data and Cohen's Kappa as a measure, inter-judge agreement for coding all features was 0.94.

Because certain dependent variables were correlated with others, I grouped variables into three logical sets (text structure, text cohesion, and text register). These sets were analyzed using the Multivariate Analysis of Variance (MANOVA) program of SPSSx advanced statistical software package. For these analyses, grade and gender were between-subjects independent variables; genre was a within-subjects independent variable. Univariate repeated measures Analyses of Variance (ANOVA) were then conducted on all dependent variables that produced significant main and/or interaction effects in the MANOVAs. Because there were no main effects or interactions involving gender, this independent variable was not included in the univariate analyses. This tiered approach to data analysis provided some protection against Type I errors.

Scheffé post hoc comparisons were conducted for the between-subjects main effect (i.e., grade). Paired contrasts, using one-way analyses of variance, were conducted for the within-subjects main effect (i.e., genre). When interactions occurred, one-way analyses of variance with Scheffé post hoc comparisons were conducted to determine grade-level differences within each genre. Additionally, paired contrasts, using one-way analyses of variance, were conducted to determine genre differences within each individual grade. Significance levels for all post hoc analyses were set at .017, which is recommended according to the Bonferroni adjustment for independent variables with three levels.

I analyzed the contextual data on children's literacy diets and experiences using either descriptive or inferential statistics. Inferential statistical analyses were conducted on data concerning children's reading practices at home. Descriptive statistical analyses were conducted to determine the distributions of the kinds of books read by children in relation to school tasks, the kinds of texts written by children in relation to school tasks, and the kinds of discourse teachers used in relation to different types of texts. Descriptive statistical analyses were also conducted on children's interview responses to questions about where they typically learned about, produced, or consumed the focal genres.

Results and Discussion

Descriptive Analyses of Children's Texts

In the following several pages, I will analyze a subset of children's texts to demonstrate the range and the flavor of texts produced within this study. In doing so, I will present one of the most prototypic examples of each text type, one of the most atypical examples of each text type, and an example of a hybrid or blurred genre that was produced in relation to the request to write each type of text. The examples of hybrid or blurred genres are all ones that seem to suggest or capture children's inchoate and/or coalescing genre categories rather than children's intentional efforts to push the limits of genre boundaries. As such, they provide important insights into the development of genre categories for some children.

Stories. Most of the children in the study produced prototypic stories in response to the request to write a story. Table 1 shows an example of such a text written by David, a second-grade child.

David's text has the basic look and sound of a story. Thematically, it is about life's vicissitudes, and it outlines the contours of an individual character's desires, needs, goals, and social conduct. David's story centers around perplexing and non-canonical events and attempts to re-establish the canonical balance of things (Bruner, 1986). David's story is also written in the language and style typical of narrative genres. The text is organized temporally. It is cast in the past tense. Cohesion is built through co-reference. The text incorporates all of the structural elements that are obligatory in stories (initiating event, sequent event(s), final event), as well as a number of other optional elements (e.g., placement, felicitous character introduction, finale).

David's story also includes some reported speech marked by dialogue carriers and quotation marks, features which are not always common in the texts of early elementary school children. Also worth noting are the genre transformations David enacted to create his story. The original source for many of his ideas was a Discovery Channel documentary on serval cats. Like most such documentaries, this one had some narrative qualities. However, most of its discourse texture and structure was informational in character. David seemed to construct his story by appropriating relevant information from the documentary, ideas from other popular cultural resources (e.g., *Crocodile Dundee*, *Teenage Mutant Ninja Turtles*), and activities and events from

Table 1 David's Story (Typed Facsimile of Child's Text)

One day a Serval cat was born but, he wasn't as smart as the rest. As he was growing up he lerned evey thing but to hide his food up in the trees. If They didn't hide there food the Hyenas will steal it. His friends Had to share there food whith him. After a few weaks they got tired of it. The kept on telling him over, over, to hid his food up in the tree. But he always forgot. So They all thought of sending Him of to a place where there are no Hyenas. So they biult him a tree house. They put a giant leave for the roof. And luckely He had cable so he could watch the The Discovery chanel. And he lerned a lot about him self. Then one day a thunder storm came And wrecked his house. But he hadn't herd any thing about Hyinas when he was watching the chanel, and his house was ruyned. So they all got together again. But this time they desided to write the derections for hideing his food up in trees on his paws. It worked for one day. The next day he took a bath. It washd of. he went up to his friends And Said "Kowabanga my print washed of." So the rest of the Serval cats put there heads together And thought of a better solution. So they sent him to a island. Things where fine for a while. But the hyenas found crockadile dundies bout. They toaed themselves to The island And stole the Servals food. So The Serval Cats decided for him to go fallow a pack of elephant's so The hyeniys won't steale his food. He followed the elephant's for tow weeks. Then one nihgt the elephant's went to go and get a drink at the water hole. The next day The Serval Cat hunted And was Lucky. Because He didn't forget to put his food in Trees. The next day He forgot. And the Hyenays got it Again. So The Serval cat started wondering Through the plains. After 3 days he Found his pal Sand cat. They decided to Live together and help each other.

his own life (e.g., watching lots of cable television). Importantly, he embedded these ideas and events from multiple domains of discourse practice into a rich and almost seamless narrative that contained no discursive intrusions from other genres.

In response to interview questions about why his text was a story and not some other genre, David replied, "Because it has a setting, a problem, and a solution. It's funny and exciting. It's also made up. Serval cats can't talk. Sand cats are not supposed to build houses. And hyenas aren't smart enough to tow themselves in a boat. It has the right words, too. Authors don't use wimpy words like 'take.' They use words like 'steal' instead." David's response suggests that he has developed considerable knowledge about story grammars. He also seems to use certain binary distinctions (e.g., fiction/non-fiction) to distinguish between certain text types. David seems to know that one function of stories is to entertain audiences. Finally, he has a keen sense of the kind of language used by "authors." In sum, David seems to possess considerable metadiscursive knowledge of many of the characteristics of good stories. And this metadiscursive knowledge doubtless contributed to his ability to produce such a prototypic and rhetorically powerful story. As an aside, I found that many children who produced such stories were also able to talk about

Table 2 Laura's Story (Child's Reading of Non-Phonetic Manuscript)

Fish and Caterpillar
The fish's name is Swimmy.
The caterpillar's name in Laura.
They are playing and eating.

their texts in reasonably sophisticated ways.

Table 2 provides an example of an atypical story. This text was written by a kindergarten girl named Laura. In contrast to David's story, Laura's story exhibits few of the features typically associated with narrative discourse. It hardly is built around the vicissitudes of life. Its character's desires, motivations, and goals remain undeveloped. It does not unfold temporally. It is cast in the present tense rather than the past. It makes little use of cohesive devices of any kind. It does not contain any of the obligatory structural features of stories unless we consider "They are playing and eating" to be an initiating event. Except for the last clause, it reads much more like a list of facts than a temporally organized and related set of actions and events. The list-like quality of this story may have been due to the fact that Laura read her story from a drawing with no added print. In this regard, her reading resembled what Sulzby (1985) has referred to as "labeling and commenting" and "following the action." However, it is important to note that many other children who read their stories from drawings produced well-formed and often quite elaborate narratives.

When asked why her text was a story rather than a poem or an information report, Laura replied, "It doesn't have rhyming words plus stories don't have rhythm, and it doesn't have anything that you have to look up." What Laura seemed to be saying here is that stories have neither rhyme nor meter nor information of the sort that you might find in a book such as an encyclopedia. Thus, she clearly has some knowledge of rhetorical and literary features. However,

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her sense of how this knowledge might be deployed to compose effective texts of different genres seems more nascent. Her emergent sense of the differential distributions of features across different genres may have been partially responsible for Laura's difficulty in producing a prototypic story.

Almost no hybrid or blurred genres were produced in response to the request to write a story. However, there were a few, one of which is represented in Table 3. This story was produced by a kindergarten child named Daniel, and it incorporates features typically associated with several different genres. It begins with the kind of formulaic opening typical of many children's narratives, but it quickly turns into a descriptive attribute series with elided verb phrases of the sort more commonly found in information books. Daniel also shifts back and forth between the past and present tenses, as well as between a specific bunny and bunnies as a class of animals. Finally, the final clause of his story has a certain poetic

quality. In fact, Daniel mentioned that this clause was borrowed from a "peek-a-boo" book that he had. As it turns out, this book contains many rhyming words. In response to a question about why this text was a story and not a poem or an information report, Daniel simply said, "I don't know." He was no more loquacious with further probing.

Science reports. Although most children composed prototypic stories in response to the request to write stories, fewer children produced prototypic science reports, and quite a few children had difficulty instantiating this genre. Anne, a first grader, was one of the children who composed a very well-formed science report. Her text, which is shown in Table 4, provides an example of one of the better science reports produced by the children in this study. Although it is not a structural masterpiece, Anne's report resembles the sort of text one might find in a children's animal encyclopedia or a science book for children. It is factually accurate. It contains many textural ele-

Table 3 Daniel's Story (Child's Reading of Non-Phonetic Manuscript)

Once there was a bunny. A bunny has short ears, long feet, and no tail. The bunny doesn't hop. He was a funny bunny.

Table 4 Anne's Science Report (Typed Facsimile of Child's Text)

Catopelers
Catopelers have eyes just like we do catopelers do not have bons like we do catopelers have a mof [mouth] to eat les [leaves] with Thay hav to have these or thay will die catopelers have nous [nose] to small [smell] with just like we do catopelers have ers [ears] to her [hear] with just like we do catepelars don't have long arms like we do thay don't have long legs just like we do catopelars don't have big heds like we do Catopelars do not make a coocoon thay make a charisales Thay stay insid the Charisales for a long time And wen its redy to come out it terns into a buttefly A coocoon terns into a moth and a charisales terns into a buttefly
The end

ments common to the information report genre (e.g., present-tense verbs, co-classification chains, and a biological register). Anne's text contains all of the structural elements that are obligatory in information reports (topic presentation, descriptions of attributes, characteristic events). It also has some very nice category comparisons (an optional but common structural element in reports). Although Anne ends her report with a formulaic element more typical of stories (The end), this feature does not really detract from the overall rhetorical effect of the text.

When asked why her text was a science report instead of some other type of text, Anne said, "Because it has a lot of true information. A lot of people don't know that a butterfly comes out of a chrysalis and not a cocoon." Although she only states it implicitly, Anne seems to understand the importance of scientific vocabulary and using it in a precise fashion. She certainly brought this knowledge to bear when she wrote her report. Anne also noted that "it's a lot longer than a poem, and it doesn't have a beat. A poem is like two or three lines." These comments suggest that Anne distinguishes different genres according to their relative lengths (and perhaps other formatting characteristics), as well as according to the differential distribution of discourse features such as meter.

A number of children, especially the younger ones in the study, responded to the request to produce science reports by composing texts that were more like stories than any other genre. Jon, a first grader, was one of these children. His science report appears in Table 5. Besides reading more like a story than a science report, Jon's composition contains many textural features typically found in stories (e.g., past-tense verbs, co-referential chains), as well as all three structural elements that are obligatory in stories (initiating event, sequent event, final event). Although somewhat understated, Jon's text also betrays some poetic qualities—a staccato-like meter and parallelism. Finally, Jon's text contains two structural elements that are obligatory in information reports (a topic presentation and a characteristic activity). However, because these elements follow and are in some ways predicated on Jon's narrative about a particular lion, it remains unclear whether Jon intended them to function as structural elements of a report or as an epilogue or ethically neutral moral to his story. Finally, even if we grant that these elements were intended as a topic introduction and a characteristic activity, Jon's text remains a narrative within which some science report features are embedded.

In response to the question about why his text was an information report rather than some other kind of text, Jon said: "This is the lion's story, and I wrote what a lion is and can do. These things are true." Later in the interview, Jon added that "this story can help people because they might go in the jungle, and if they don't know what a lion can do, they might get eaten up." Although these various comments are somewhat ambiguous, they do seem to indicate that Jon was struggling to sort out the differences between narrative and paradigmatic forms of thinking and communicating. For example, sometimes he seemed to refer to particular lions. Other times he seemed to refer to lions as a phylogenetic class. Similarly, he referred to his text both as a story and as true. Jon had apparently begun to think about how textual and rhetorical features are used to distinguish different genres, but his knowledge in this regard seemed emergent. Based on his interview responses, Jon seemed to know a tremendous amount about the forms and functions of the information book genre. Based on the text he produced, however, his sense of this genre appeared to be conflated with his sense of narrative genres.

A number of texts produced by children in response to the report-writing task (as well as the poem-writing task) combined linguistic features typical of several different genres and constituted texts that I view as hybrid genres. The genres from which the children borrowed linguistic features to create these hybrid genres included the three genres that were the focus of this study plus several others. Quite a few children produced texts that combined features from the requested genre with features more typical of stories. Several children imported features from genres not typically associated with school-based genres. One text of this sort was written by a kindergarten child, Denise. In response to the request to write a science report, Denise composed the text shown in Table 6.

The report begins much like an online event cast (Hicks, 1990), in which the narrator is telling the audience about an event that she is witnessing. Perhaps implicitly, an initiating event or problem is stated. Next, Denise provides a solution to the problem cast in a discourse style that seems to derive from a media advertisement, infomercial, or public service announcement. As I listened to Denise read her story, I almost expected to hear a pronouncement related to calling 911 or to hear even clearer echoes of intertextual links to relevant media messages. Indeed, Denise's report contains information that is useful for dealing with a particular sort of problem. However, neither this information nor the discourse style in which it is cast are typical of school-based science reports or even school-based information reports more broadly conceived. Denise seems to have borrowed thematic and structural aspects from several genres related to the acquisition of useful information, but the blurred genre she has created is quite different from what most of us would call a science report.

Table 5 Jon's Science Report (Typed Facsimile of Child's Text)

Lloyn [Lion] was very hugry [hungry]
Lloyn Kiled an anolop [antelope] and ate him
Then he went to sleep
Lloyn is King in the Jungo
Lloyn can run fast

Table 6 Denise's Science Report (Child's Reading of Non-Phonetic Manuscript)

There's a cat a dog out chasing each other on the lawn.
Call collect.
Start calling now if your cat and dog ever do this.
And please call this toll-free number.

When she was asked to justify classifying her text as a science report rather than some other kind of text, Denise told me, "Cause it's got numbers in it." Even with probing, she did not elaborate on this response. One may only guess exactly what she meant. She may have meant that certain numbers (e.g., toll-free ones) are valuable resources for specific types of information. Or she may have been operating with the more general knowledge that numbers figure prominently in many kinds of informational texts. Based on her relatively non-specific interview responses, however, I am inclined to think that Denise framed the task by activating her interdiscursive knowledge (Fairclough, 1992) of informational genres from popular culture (e.g., infomercials), which are somewhat distant cousins to the informational genres that are more typical of school-based discourses.

Poems. As was the case with information reports, some children produced remarkably sophisticated poems, while others had difficulty composing texts that instantiated this genre. Probably the most sophisticated poem in the corpus was written by Keisha, a second-grade child. Keisha took great pride in her "ways with words" (Heath, 1983). She wrote many stories and poems both at home and at school during the year in which this study was conducted. She also frequently sought out adult reactions to her writing. Keisha's poem appears as Table 7. Although rhyme was the primary feature of most children's poems, Keisha built her poem out of more subtle and complex literary tropes. She organized her poem according to a specific line structure, a sophisticated accomplishment for a child her age, or, indeed, for a child much older than she. She also constructed a meter pattern that is complex and pleasing to the ear. She used three similes in as many clauses. And she created rich patterns of assonance (like … white … shining) and alliteration (looks like). Finally, Keisha's poem evokes images more rich than those evoked in many published poems. These images are much like those described by Tannen (1989) and hailed as a primary feature of poetic language.

When asked why her text was a poem rather than a story or an information report, Keisha replied, "Poems can rhyme, but they don't have to, and this one doesn't rhyme. … But it has a beat, and it describes exactly what my fish looks like." Keisha's understanding and use of literary terms, as well as her sophisticated sense of the optional nature of rhyme in poetry, suggested that she possessed a wealth of explicit knowledge about poetic language and the poem as a distinct genre. While she did not produce precise literary language to describe the presence and function of imagery in her poem, Keisha was clearly aware of having created an imagistic text. Her explicit knowledge of poetic language and the verbal and visual organization of poems quite likely contributed significantly to Keisha's ability to produce her beautiful and prototypic poem.

Many children in the study generated texts that instantiated the poem genre reasonably well but which were not as exquisite as Keisha's. Most of these children composed poems that depended heavily on rhyme (often forced) and sing-song meter patterns for their poetic effects. Some children, however, had a difficult time with the poem-writing task. Like the children who had difficulty with the report-writing task, these children tended to produce texts that were more like stories than poems. Beth, a kindergartner, wrote a poem of this sort. Her text appears in Table 8. Although Beth admittedly borrowed some language and ideas from "The Three Little Kittens Who Lost Their Mittens" nursery rhyme to construct her poem, she seemed to expunge these borrowings of most of their poetic quality. Even the potential poetic effects of end rhyme (mittens—mittens, pie—pie) get all but erased by the way relevant lines are embedded within a basic narrative text. The same is true for the potential poetic effects of meter. Finally, this text does contain most of the textural and structural features typically found in narratives. For example, it focuses on life's exigencies—losing and finding important objects. It has a basic temporal framework. The text is cast in the past tense. Cohesion is achieved through co-referentiality throughout. And the text has all three structural elements that are obligatory in stories.

Beth talked incessantly while composing her text. One of the things she said was, "I have a book of poems at home. And I'm going to use the kitten and mittens poem and change the kittens to horses because I *love* horses." In response to a question about why her text was a poem rather than a story or an information book, Beth said, "Because it's make believe, and they can't really make apple pie or anything. They just meow and stuff, go outside and put mittens on and stuff. And it's short. Poems are short and stories are really long." Except perhaps for this issue of text length, most of Beth's textual justifications would seem to apply equally well to both stories and poems. Although she knew the names of different kinds of texts and recognized the book from which she got many of her ideas as a poetry book, she did not seem to know precisely how stories and poems are different from each other. In the absence of consolidated knowledge about the textures and structures of different text types, the story may have functioned as a default genre for Beth. Like Jon, she seemed to have some sense about how textual and rhetorical features vary across different genres, but this seemed inchoate and emergent. This assessment was par-

Table 7 Keisha's Poem (Typed Facsimile of Child's Text)

My fish has a body like a small piece of gold.
And his eyes look like a white bulb shining.
And his tail looks like a duck swimming upside-down.

Table 8 Beth's Poem

Typed Facsimile of Child's Text	Gloss of Child's Text
WNTS A MOTHER HORS WAS	Once a mother horse was
MAKIN A APUL PI	making an apple pie
HER LITL FOLS LS THR MITI	Her little foals lost their mittens
THA TRID TO FIND EM **N**	They tried to find them
THA FUOND THR MITNS **S**	They found their mittens
THA HAD APOL PI	They had apple pie

tially supported by her response to the information report writing task. Although her information report was more prototypic of that genre than her poem, it, too, contained some narrative elements. Moreover, she claimed that it was an information report both because "it is real" and because "I like horses and I think my Mom will like to read my story."

Alan, a first-grade child, produced a hybrid genre in response to the request to write a poem. His text, which is displayed in Table 9, combines textural, structural, and rhetorical features from several different genres. Like many poems, Alan's poem embodies a defined meter, imagery, and the intensification of linguistic form through the repetition of words, phrases, and syntactic structures. Alan also seemed to pay some attention to the aesthetic effects of line structure as evidenced in his line breaks. Although he had plenty of room left on the page, Alan ended two lines out of eight with the word *and*, which urges the reader to move quickly to the next line. Despite these poetic qualities, Alan's text bears a strong family resemblance to information reports typically written for children. The present tense predominates. A biological register is evident. And the text contains

two of the obligatory structural elements of information reports (characteristic activities, descriptions of attri-butes). Finally, Alan embeds a past personal narrative snippet into his poem (And I watched *Mother Earth*, and I saw monkeys. …). That Alan's "poem" exhibits these features should not be particularly surprising since the source of his text was a television documentary entitled *Mother Earth*. Like Alan's text and many television documentaries, this program is basically an information report embedded within a narrative (i.e., the "story" of Mother Earth).

When asked why his text was a poem rather than some other genre, Alan answered, "Because it helps you learn about animals, and I like animals." Later in the interview, he said, "It's also short. Stories are longer. And it's true. Stories aren't usually true." Alan's responses were interesting and complex. Moreover, they were as telling for what they left out as for what they included. To stress the teaching power and the veracity of his text seemed to betray the fact that he thought of it as informational in some way. He mentioned that stories are usually not true, but he never said that poems were true. In fact, his referent in this regard seemed to be the documentary that

was the thematic source for his poem. The only unambiguous distinction he made was about the fact that stories tend to be longer than poems. But this distinction also holds up with respect to comparing typical children's stories with typical information books or encyclopedia entries written for children. Finally, Alan did not mention any of the poetic qualities of his text—meter, imagery, intensification of form, or line structure. It may have been that, although he had some working knowledge of poetry, which he used to compose a nascent poetic text, he did not yet have the metadiscursive tools typically used to talk about poems. It also may be the case that Alan actually knows more about poetry than he demonstrated in the production and interview tasks but that this knowledge was suppressed by the fact that he modeled his text after a "narrativized" informational television program.

Summary of Descriptive Analyses

These descriptive analyses highlight the major patterns that characterized the data set as a whole. There was a general tendency for the first-grade and second-grade children to produce more prototypic and rhetorically powerful stories, science reports, and poems than the kindergarten children. There was also a general tendency for children's science reports and poems to be less prototypic and less rhetorically effective than their stories. Finally, in cases where children's science reports and poems were atypical, these texts often exhibited narrative qualities. Notwithstanding these grade-related and genre-related tendencies, there was also considerable variation within each grade in children's instantiations of each genre. Some children in each grade produced

sophisticated tokens of some (or all) genres. Some children at each grade level produced atypical (and usually low-level) tokens of some (or all) genres. And some children at each grade level produced tokens of some (or all) genres that were characterized as "hybrid genres" because they embodied characteristics typical of two or more different and reasonably distinct text types.

Quantitative Analyses of Children's Texts

Text Structure

I analyzed children's texts for the obligatory text-structural elements of stories, information reports, and poems described above. All texts, irrespective of the genre that they were supposed to instantiate, were analyzed for the presence of the obligatory text-structural elements of *all* three genres. Analyses were conducted in this way to determine not only whether particular texts were well-formed tokens of the target genres, but also whether there were any systematic patterns of overgeneralization across genres. Such patterns, when found, are extremely useful in constructing plausible accounts of children's emergent understanding of different genres and the relations among them.

Narrative text structure. All texts were coded for the presence or absence of the three obligatory narrative structural elements: initiating event, sequent event(s), and final event. Percentages of the obligatory narrative elements in each text were calculated. Mean percentages of these elements appear in Figure 1.

As this figure illustrates, children at all grade levels constructed relatively

Table 9 Alan's Poem

Typed Facsimile of Child's Text	Gloss of Child's Text
grafs / eta / grss	Giraffes eat grass
peckoc haf Big wags	Peacocks have big wings
AnD Drnrs are estenct	And dinosaurs are extinct.
ELfint haf Big truk AnD	Elephants have big trunks and
Dlfin AnD Wels are ded	Dolphins and whales are dead
AnD I wocht Mothe Erth And	And I watched Mother Earth and
I sow mukkey AnD I sow hepos	I saw monkeys and I saw hippos
AnD mor AnD mor AnD mor	And more and more and more

well-formed stories. The figure also suggests a somewhat complex pattern of findings with respect to the presence of narrative elements in science reports and poems. Analyses yielded a significant main effect for grade (F (2, 51) = 8.53, p < .001), a significant main effect for genre (F (2, 51) = 76.45, p < .0001), and a significant grade level-by-genre interaction (F (4, 51) = 3.84, p < .01). Post hoc analyses showed that the stories of children in all grades contained significantly more narrative structural elements than their science reports. Additionally, the stories of first-grade and second-grade children, but not kindergartners, contained significantly more narrative structural elements than their poems. As I have mentioned in relation to other features, kindergartners tended to overgeneralize story features, especially in their poems.

Information report text structure. Children's texts were coded for the presence or absence of each of the three obligatory structural elements of information reports: topic introduction, description(s) of attributes, characteristic events. Percentages of these obligatory elements

were calculated. Mean percentages of the obligatory structural elements of information reports appear in Figure 2. Analyses revealed a significant main effect for grade (F (2, 51) = 19.49, p < .001), a significant main effect for genre (F (2, 51) = 51.60, p < .0001), and a significant grade-by-genre interaction (F (4, 51) = 3.17, p < .05). Post hoc analyses showed that the science reports of children at all grade levels contained significantly more structural elements typical of informational texts than either their stories or their poems. Additionally, the poems of first-grade and second-grade children contained significantly more structural elements typical of informational texts than their stories. When I looked more closely at these poems, it turned out that they often included topic presentations (usually in the form of a title) and/or rich sets of descriptions. Interestingly, these descriptions were quite different from the descriptions of attributes contained in science reports. In science reports, descriptions were typically lists of facts (e.g., Dogs have sharp teeth. Dogs have long noses.). In poems, descriptions often conjured up the sort of imagery that Tannen (1989) has argued is a centerpiece of poetic texts (e.g., My fish has a body like a small piece of gold. And his eyes look like a white bulb shining.). Indeed, the poems that contained such rich sets of descriptions were among the best poems in the entire corpus. This finding suggests that Britton et al.'s (1975) distinction between transactional and poetic discourse may be somewhat artificial. Rather, it seems that certain linguistic forms may inhabit differ-
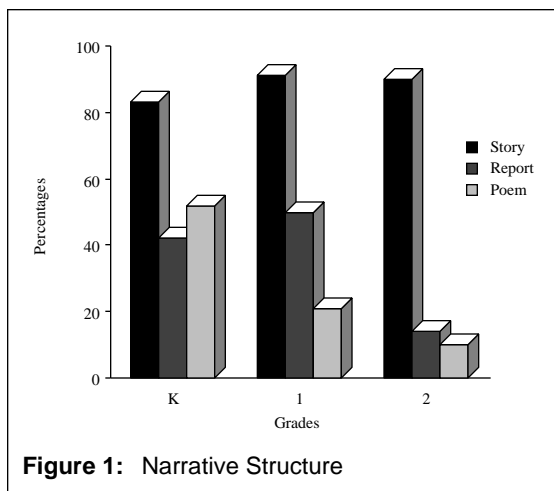

Figure 1: Narrative Structure

ent kinds of texts but function in quite different ways.

Finally, within the science report genre, the texts of first-grade and second-grade children contained significantly more informational structural elements than the texts of kindergarten children. I was curious about the distributions of the three structural elements as a function of grade. More specifically, I wondered whether there was a random mix of these elements in the kindergartners' reports or whether the kindergartners were prone to include one or more specific elements more than any others. A further analysis of the kindergartners' reports revealed that the obligatory structural element that was most common in their reports was "characteristic events." A close examination of reports that contained "characteristic events" was enlightening. These reports also contained very high ratios of present-tense and present-progressive-tense verbs. These verbs were employed to narrate events within the children's texts (e.g., Super Bunny puts on his shoes; now he's jumping to the moon.). Sometimes the children also narrated the
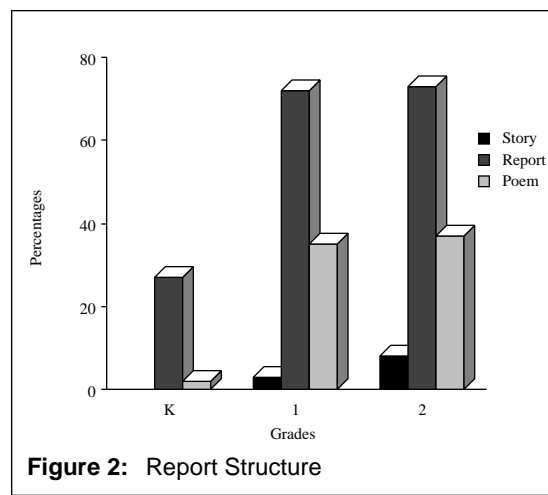
habitual events of particular characters in the present tense, modifying their verbs with adverbial intensifiers (e.g., Frog always eats his lunch before noon.). These narrations were often "read off" pictorial texts. In sum, while it makes sense that my coding procedures led me to code clauses in kindergartners' science reports as "characteristic events," these texts were not really reports. Rather, they were like event casts or on-line narrations (e.g., Hicks, 1990) or perhaps instances of "following the action" narrations (Sulzby, 1985).

Poetic text structure. All texts were coded for the presence or absence of each of three structural elements considered to be extremely common though not necessarily obligatory in poems: distinct line structure, distinct stanza structure, and meter. Percentages of these elements per text were calculated. Mean percentages of obligatory structural elements of poems are shown in Figure 3. Analyses yielded a significant main effect for genre (F (2, 51) = 57.74, p < .0001) and a modest but significant grade-by-genre interaction (F (4, 51) = 3.29, p < .05). Post hoc analyses showed that the poems of children at all grade levels contained significantly more text-structural elements typical of poetic discourse than their science reports. Additionally, the poems of first-grade and second-grade children contained significantly more poetic structural elements than their stories. Within the poem genre, the texts of first-grade and second-grade children had significantly more structural elements typical of poetic discourse than the texts of kindergarten children. Finally, chil-

Figure 2: Report Structure

dren's stories and science reports contained hardly any poetic structural elements.

Together, these findings suggest that, at least as early as kindergarten, children have developed some sense of poetry as a unique and intensified form of discourse. They also suggest that this sensitivity to poetic language and discourse continues to develop in the early elementary grades. Additionally, these findings show that these children did not use the text-structural organizational patterns typical of

poetic discourse in their narrative or informational texts to any considerable degree. In other words, they did not seem to overgeneralize poetic forms to other kinds of texts.

Text Cohesion

I analyzed all children's texts for the relative presence of tokens of co-reference, co-classification, and co-extension. There were so few instances of co-extension that analyses of these devices will not be discussed.

Co-reference. Mean ratios of tokens of co-reference per clause appear in Figure 4. Analyses revealed a significant main effect for genre (F (2, 51) = 52.60, $p < .0001$) and a significant grade level-by-genre interaction (F (4, 51) = 3.83, $p < .01$). The main effect for grade level also approached significance ($p < .06$). Post hoc analyses showed that children in all grades used co-reference to create cohesion significantly more in their stories than in their information reports. Such usage is consistent with cultural expectations. First-grade and second-grade children also used co-reference to create cohesion in their stories significantly more than in their poems. This result partially reflected the high ratios of co-referential tokens in the older children's stories—stories that were a good deal more complex and tightly woven than the stories of most kindergarten children. Finally, kindergarten and first-grade
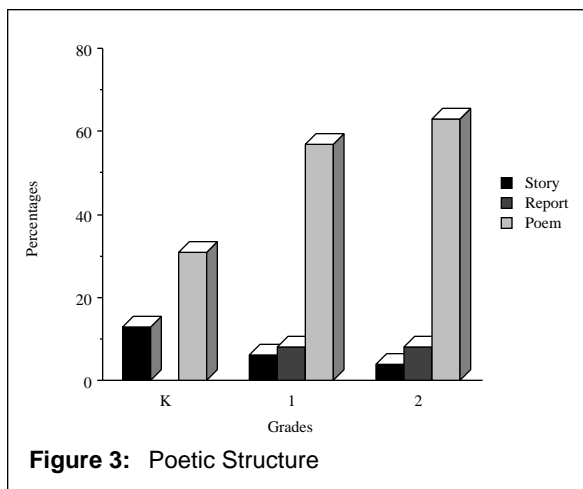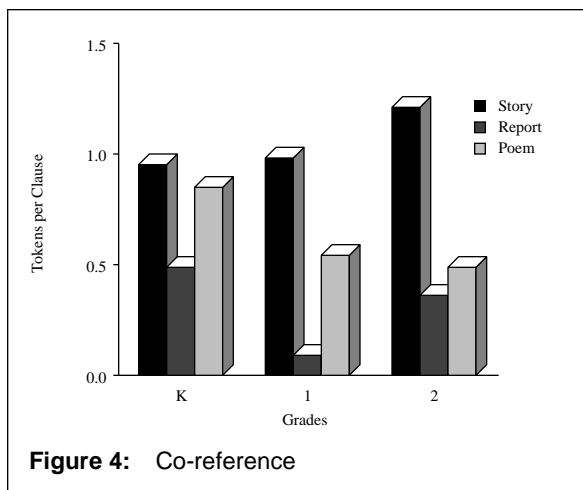

Figure 3: Poetic Structure

Figure 4: Co-reference

children, but not second-grade children, used co-reference to create cohesion significantly more in their poems than in their reports.

A close examination of Figure 4 discloses several other interesting patterns. First, there was a steady decrease across the grades in the use of co-referentiality as a means of creating textual cohesion in poems. This finding reflected two trends. First, children's poems became increasingly less story-like as a function of grade. Second, the thematic content of children's poems focused increasingly on classes of objects and experiences and universal themes, rather than on particular characters, actions, and events. Another pattern shown in Figure 4 is the reasonably high ratios of co-referential devices in all texts composed by kindergartners. As with other findings, this reflected the fact that kindergartners produced story-like texts in all conditions. Finally, Figure 4 shows that the science reports of second-grade children contained unexpectedly high ratios of co-referential devices. This finding related to the fact that a high percentage of second graders wrote reports about their pets.
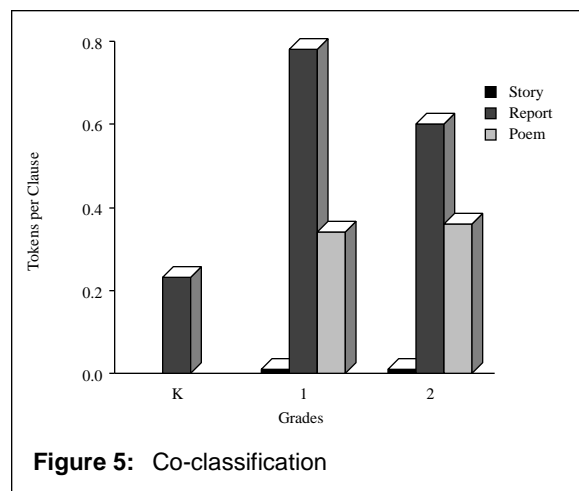
Co-classification. Mean ratios of tokens of co-classification per clause are displayed in Figure 5. Analyses revealed a significant main effect for grade level (F (2, 51) = 8.63, $p < .001$), a significant main effect for genre (F (2, 51) = 42.17, $p < .0001$), and a significant grade level-by-genre interaction (F (4, 51) = 4.19, $p < .01$). Post hoc analyses showed that children at all grade levels used co-classification devices to create cohesion significantly more in their science reports than in either their stories or their poems. Additionally, first-grade and second-grade children, but not kindergartners, used co-classification devices significantly more in their poems than in their stories. Finally, within the science report genre, the texts of first-grade children contained significantly more co-classificatory tokens than the texts of kindergarten children.

In general, co-classification was almost never used to create cohesion within stories. However, it was used increasingly across the grade levels within children's science reports and poems. A close look at Figure 5 discloses some other interesting patterns. Within the science-report-writing task, where one would expect to find co-classification devices used, first graders used this cohesive device more than any other children. For kindergarten children, the relatively low ratios of co-classification tokens in their reports and their poems reflected the fact that many of these texts were story-like. As with co-referentiality, the relatively low ratio of co-classification tokens in second graders' information

Figure 5: Co-classification

reports seemed an artifact of the fact that many of these children wrote reports about their pets. Finally, the relatively high ratios of co-classification tokens in the poems of first-grade and second-grade children reflected the fact that their poems focused increasingly on universal themes and classes of objects and experiences.

Narrative, Scientific, and Poetic Registers

I analyzed children's texts for three indexes of specialized language, which are distributed differentially across narrative, expository, and poetic texts, and each of which tends to predominate in only one of these genres. The indexes that I analyzed were "specialized narrative discourse," "biological wording and phrasing," and "poetic devices."

Specialized narrative discourse. Using a dichotomous scale (0, 1), all texts were coded for the presence or absence of the kinds of openings, settings, and closings that are typically found in narratives. Mean percentages of the "specialized narrative discourse" were calculated by adding these scores togeth-

er and dividing the sum by three. These percentages appear in Figure 6.

Analyses revealed a significant main effect for genre (F (2, 51) = 20.11, $p < .001$) and a significant grade level-by-genre interaction (F (4, 51) = 2.86, $p < .05$). Post hoc analyses showed no statistically significant differences in the percentages of specialized narrative discourse within kindergartners' stories, reports, and poems. However, the stories of first-grade and second-grade children contained significantly higher percentages of the specialized language of narratives than either their science reports or their poems. As illustrated in Figure 6, this pattern of results was more pronounced for the second-grade children than it was for the first-grade children, even though this grade-level difference was not statistically significant.

Qualitative analyses revealed yet more interesting differences. Most of the kindergartner's specialized narrative discourse consisted of formulaic openings and formulaic closings (80% of all tokens of specialized narrative discourse). In contrast, most of the specialized narrative discourse of first-grade and second-grade children consisted of explicit settings (67% of all tokens of specialized narrative discourse). This suggests not only that older children have a better sense of the relation between different registers and different discourse contexts, but also that they realize that certain features (e.g., settings) are more fundamental to good fictional narratives than other features (e.g., formulaic openings and closings). This difference may relate to the fact that stories with formulaic openings
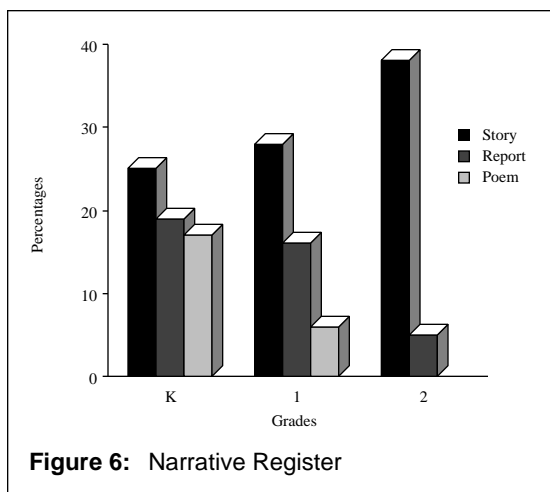

Figure 6: Narrative Register

and closings (e.g., folktales, fables) are more common in the literacy experiences of younger children. In contrast, stories with well-developed settings are more common in trade books read by older children (e.g., juvenile chapter books).

Biological wording and phrasing. Based on Myers (1990) demonstration that biological wording and phrasing plays a central role in foregrounding the universality of scientific concepts and processes and backgrounding particular instantiations of these concepts and processes, this feature was chosen as an index of scientific register. Mean ratios of tokens of biological wording/phrasing per clause appear in Figure 7. Analyses revealed a significant main effect for genre, F (2, 51) = 26.95, $p < .0001$. Post hoc analyses on the main effect for genre demonstrated that children's science reports contained significantly more tokens of this feature than either their stories or their poems. As illustrated in Figure 7, this pattern of results was stronger for first-grade and second-grade children than it was for kindergartners. This may mean that first and second grade is a particularly sensitive develop-

mental period for the increased understanding of the technical language of scientific texts.

Poetic devices. I coded children's texts for tokens per clause of five different poetic tropes: rhyme, assonance, alliteration, metaphor, and simile. I then created a summary score of "poetic devices" by summing these ratios. Mean ratios of tokens of poetic devices per clause are shown in Figure 8. Analyses of this measure revealed a significant main effect for genre only, F (2, 51) = 39.72, $p < .0001$. Post hoc analyses on this main effect showed that, irrespective of grade, children's poems contained significantly more tokens of poetic devices than either their stories or their science reports. A careful examination of Figure 8 also shows that, although there was not a significant main effect for grade or a genre-by-grade interaction, this pattern of results was exhibited more dramatically by first-grade and second-grade children than by kindergartners.

Individual analyses of poetic tropes revealed some other interesting differences. Although children's poems contained abundant instances of assonance, alliteration, and rhyme, they contained very few instances of metaphor and simile. This suggests that young children may be more sensitive to some aspects of poetic language (i.e., phonology and syntax) and less sensitive to others (i.e., semantics).

Children's Experiences With Different Genres

Because research in emergent literacy (e.g., Strickland & Morrow, 1989), whole language
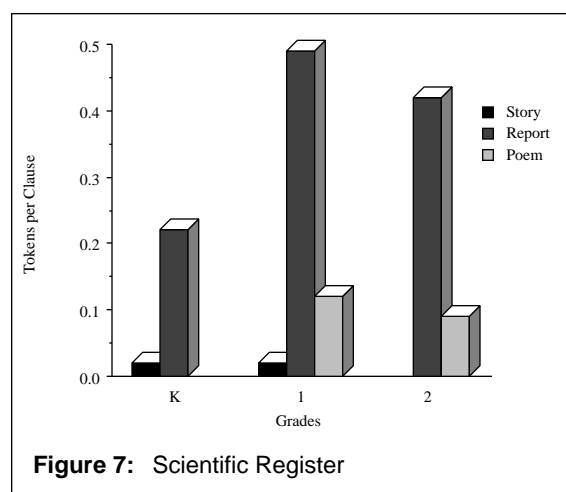

Figure 7: Scientific Register

(e.g., Newman, 1985), and situated cognition (e.g., Lave & Wenger, 1991) has emphasized the critical roles of experience with texts and participation within literacy activities, I wanted to gain at least a partial sense of children's experiences with different discourse genres. To this end, I analyzed (a) the kinds of texts that children read at home, (b) the kinds of texts that children read as part of school instruction, (c) the kinds of writing that children were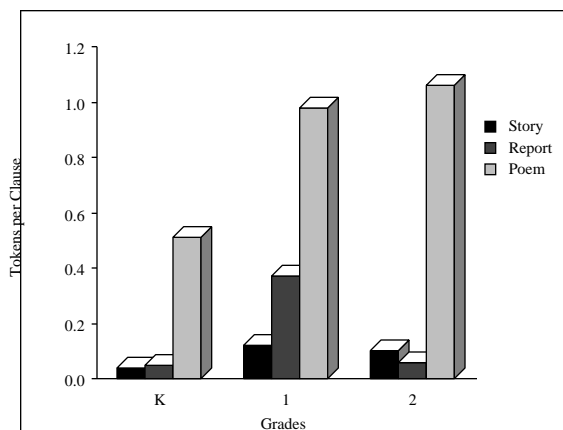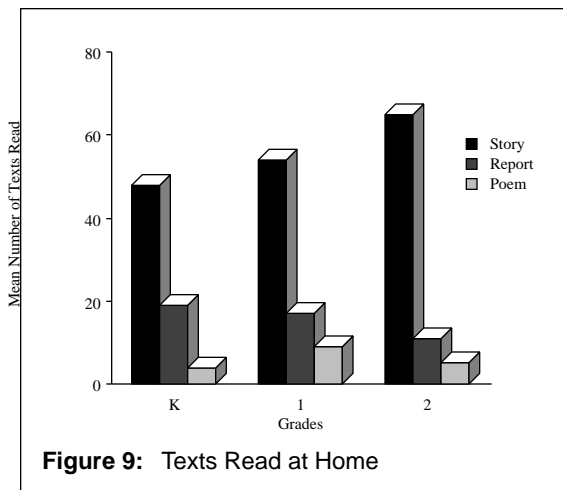 asked to do in school, (d) the explicit metadiscourse used by the children's teachers in relation to the three focal genres, and (e) children's self-reports about where they learned the forms and functions of different genres.

Children's literary diets at home. Figure 9 graphically illustrates the mean numbers of stories or storybooks, science reports or science books, and poems or poetry books that the children claimed they had read (or had read to them) at home during a four-month period. As the figure shows, children at all grade levels read many more stories than either science reports/books or poems. Additionally, the gap between children's experience with narrative versus non-narrative genres increased across the grades.

A repeated measures ANOVA on this variable yielded a significant main effect for genre, $F(2, 51) = 149.54$, $p < .001$, and a significant grade-by-genre interaction, $F(4, 51) = 3.61$, $p < .05$. Post hoc analyses on the main effect for genre showed that children at all grade levels read statistically significantly more stories than they read either science reports or poems. Additionally, kindergarten children read statistically significantly more science books than poems.

Texts representing focal genres included in language arts activities. The numbers of stories, science reports/books, and poems used during language arts instruction in the three classrooms are shown in Figure 10. As this figure illustrates, many more stories were read by children than texts

Figure 8: Poetic Register

Figure 9: Texts Read at Home

representing any other genres. This pattern of findings parallels the pattern of findings yielded in relation to children's home literacy diets.

Children's assigned classroom writing. The numbers of classroom writing assignments involving the three focal genres are shown in Figure 11. As this figure illustrates, children at all grade levels were asked to write narratives more often than they were asked to write any other genres. This differe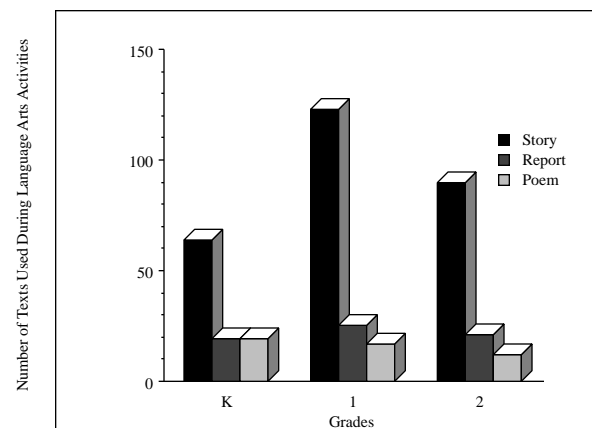nce was more pronounced for first-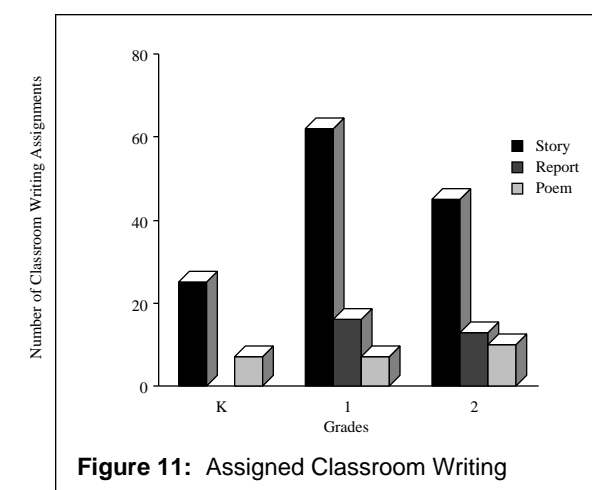grade children than it was for kindergarten and second-grade children. This pattern of findings parallels the pattern found for the use of tokens of different discourse genres as part of shared reading experiences during language arts instruction.

It is important to note that narratives were not as overwhelmingly present in children's unofficial writing. Although I did not systematically analyze children's self-selected writing journals because they were not used routinely by all children and because I could not decipher all that was contained within them, these journals contained much higher percentages of drawings, lists, personal letters, all about texts, descriptions, and poems than the percentages yielded from analyses of their assigned classroom writing.

Teachers' use of explicit metadiscourse in relation to different genres. By metadiscourse, I mean the language used to talk about language and text. Some examples of metadiscourse include *character*, *setting*, *description of attributes*, *characteristic activities*, *rhyme*, and *metaphor*. The number of instances of explicit metadiscourse about different discourse genres that the children's teachers engaged in during shared reading experiences and other instructional conversations is represented in Figure 12. Children heard much more explicit metadiscourse about narrative genres than about any other genres. This difference was more pronounced for first-grade children than it was for kindergarten and second-grade children.

Figure 10: Texts Used in Language Arts

Figure 11: Assigned Classroom Writing

These findings parallel those yielded in the analyses of different text types used during language arts instruction and the analyses of the kinds of texts that children were asked to produce within classroom writing activities.

Children's self-reports about the sources of their genre knowledge. In the context of a comprehensive, open-ended interview, children were asked questions about where they learned about the three focal genres of this study. The results were telling. The most common responses to the question "Where do you usually learn about stories and storybooks?" were parent/sibling (58% of children in the entire sample) and teacher/school (67% of children in the entire sample). The results were quite similar for the question, "Where do you usually learn about poems and poetry books?" Fifty-four percent of children mentioned parent/sibling and 39% mentioned teacher/school. However, the results were quite different for the question, "Where do you usually learn about science and science books?" The most common response was The Discovery Channel (37% of children in the entire sample). Only 12% of the chil-

dren mentioned parent/sibling as a source of this knowledge, and only 18% mentioned teacher/school.

Summary and Conclusions

The findings from this study suggest that early elementary school children seem to have a fairly good grip on the cultural conventions of narrative genres, but a more nascent sense of the cultural conventions of informational and poetic genres. Many findings support this claim. There were a large number of main effects for genre, as well as a considerable number of grade-by-genre interactions. Based on structural analyses, children's stories were much more well-formed (88% of all obligatory elements for the entire sample) than their science reports (59% of all obligatory elements for the entire sample) or their poems (51% of all obligatory elements for the entire sample). Younger children tended to overgeneralize narrative features but not features of other genres. Children produced considerable numbers and kinds of blurred genres, such as those illustrated in the qualitative analyses. Children also provided complex and contradictory responses when asked to explain why their texts represented certain genres. In sum, although the early years of schooling mark a time when children are actively constructing their knowledge of many different genres, these years seem particularly important for the development of scientific and poetic genres.

I was somewhat surprised to find only three significant main effects for grade. Several partial

explanations for this finding come to mind. First, based on comparisons with patterns of feature distribution described by other researchers (e.g., Biber, 1988; Langer, 1986; Pappas, 1991), many of the features that did not yield statistically significant grade effects were textural features. Some of these features may have been ones that children master very early in development (e.g., verb tense, temporal connectives, co-referentiality, specialized narrative discourse, biological lexis, rhyme). Other features may be so subtle and complex that they are not acquired until children are older than the ones in this study (e.g., syntactic embedding, logical connectives, co-classification, various poetic tropes such as metaphor).

A second possible reason for the small number of grade-level differences might relate to my analysis techniques. Although conducting repeated measures analyses of variance with two independent variables of three levels each was the proper choice for the kind of data in this study, these analyses are less sensitive to variance than some other kinds of analyses. Had I chosen to conduct separate one-way analyses of variance for each genre, I may have found more grade effects. Similarly, had I conducted within-in-genre pairwise comparisons for grade effects, I may have found even more differences.

Finally, it is worth noting that kindergarten through second-grade children spend a tremendous amount of time and energy on formal dimensions of writing and text production (e.g., letter formation, spelling, capitalization, punctuation, syntax, etc.). This intense focus could "use up" most of their cognitive resources, leaving little left to devote to functional dimensions of written dis-

course (e.g., style, genre, rhetorical purpose). Based on the findings from this study, however, it is clear that children are by no means genre somnambulists during the first few years of school. Like their developing knowledge of symbolic aspects of written language, their developing knowledge of genres is complex and multiplex.

The findings from this study support, extend, complement, and sometimes contradict previous findings on children's genre development. For example, this study suggests that children's knowledge of narrative genres may be more well developed than Hicks (1990) suggested. Related to this point, the first-grade and second-grade children in this study performed in ways that were quite similar to those of Langer's (1986) third-grade children on both the narrative and information report production tasks in both task conditions. This supports the findings of Newkirk (1989), Pappas (1993), Sowers (1985), and Zecker (1996), which have suggested that 6-year-old and 7-year-old children have considerable (but not necessarily comparable) working knowledge of narrative, informational, and poetic genres.

The children in this study also displayed more knowledge of narrative, informational, and poetic discourse than the kindergarten through second-grade children in Kroll's (1990) naturalistic study. One possible explanation for this difference lies in the different data collection techniques used in the two studies. Kroll simply collected whatever texts children wrote either spontaneously or as part of their language arts activities. I specifically asked children to write texts designed to instantiate two different and specific discourse genres. Among other
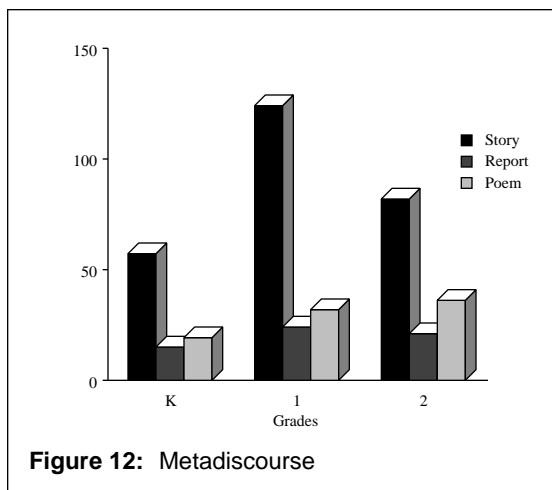

Figure 12: Metadiscourse

things, the differences between Kroll's findings and my own suggest the complementarity of more naturalistic and more experimental studies in trying to understand children's developing communicative competencies.

My findings also differed somewhat from those of Pappas (1991, 1993). The kindergartners' performances in this study seemed "lower" than the performances of Pappas' children. This difference may be attributed largely to our different task constraints. Asking children to generate original texts and to write them down—as I did—is considerably more complex and difficult than asking children to recount texts with which they are familiar—as Pappas did. Such differences reinforce Scribner and Cole's (1981) insistence that tasks and task contexts influence how and to what extent children display their knowledge, as well as the fact that different tasks scaffold development and learning in different ways and to different degrees. From this perspective, Pappas' work and my own are complementary. Together, they suggest that, although kindergartners may have considerable tacit knowledge about different genres that they use to complete oral or written reenactment tasks, it may take them some years for such knowledge to become explicit and to be integrated with the cognitive, linguistic, and discursive requirements of composing original extended written discourse. More research is necessary to understand this complex developmental process and the roles that various social and cultural experiences and practices play within it.

The performances of the children in this study on the poetry production task extend Dowker's (1989) work on children's ability to produce poetic discourse in two ways. First, they demonstrate that children as young as five years old are adept at writing poetry and not just speaking poetically. Dowker's tasks required the production of poems in the oral mode alone. Second, my findings showed that kindergarten, first-, and second-grade children have little trouble responding to bald requests to produce poetic texts. Because Dowker scaffolded children's performances by providing them with poetic texts and asking them to produce similar texts, she was not able to document what they might have done on their own.

The poetic performances of the children in this study partially contradicted the findings of Ford (1987). Most notably, the children in my study demonstrated much more knowledge of poetic devices as defining characteristics of poems than the children in Ford's study. Additionally, whereas Ford's study suggested that third grade is a watershed for poetic competence, my study suggested that children's knowledge develops slowly and steadily across the grades. I suspect that these differences are partially related to the very different tasks used in the two studies. Ford asked children to talk about their knowledge using traditional interview questions (Mishler, 1986). I asked children to use their knowledge to produce poems of their own. Quite plausibly, my tasks allowed children to draw upon their "tacit" or "working" knowledge of poetry in ways that Ford's tasks did not. Additionally, writing "their own" poems may have been more motivating than simply talking about what poems are.

The overall set of findings from children's poetry writing merits some discussion. Although children produced many instances of tropes that involved the dense co-patterning of sound and syntax (e.g., alliteration, assonance, rhyme), they produced almost no tropes that involved the dense co-patterning of meaning (e.g., metaphors, similes). There are several plausible partial explanations for this finding. Most research on children's developing understanding of metaphor and simile has been conducted with children much older than the ones in this study. As Winner (1988) has explained, what research that has been conducted with five-year-old through seven-year-old children has produced contradictory findings. This suggests that this age period may be a time when the understanding of semantic tropes is only beginning to emerge. Additionally, most studies of young children's developing understanding of semantic tropes have focused on metaphor and simile comprehension and not metaphor and simile production. Abundant evidence exists within the child language literature documenting a comprehension-before-production pattern in the acquisition of many linguistic and discursive concepts and skills.

Drawing together previous findings with the findings from this study, it seems that the acquisition of phonetic and syntactic tropes is easier for children and may occur earlier in development than the acquisition of semantic tropes. This idea has been implicit in many anecdotal reports of children's language play and literary dexterity (e.g., Bauman, 1982; Brady & Eckhardt, 1975; Chukovsky, 1968; Heath, 1989; Rogers, 1979), but it has never constituted a primary trajectory of research. This is indeed an area of inquiry ripe for systematic investigation.

Reinforcing the findings of Chapman (1994, 1995), this study suggests that children's developing understanding and use of different genres are emergent phenomena. By this I mean that development is complex and varies as a function of generic constraints, task conditions, and other contextual variables. This characterization is supported by several pieces of evidence in my data. First, certain kinds of linguistic features tended to produce more effects and/or different kinds of effects than other features. For example, children demonstrated more knowledge of macro-level features such as text structure than knowledge of more micro-level features such as co-classification devices. Moreover, this finding was more common among younger children than older children. Second, although most children displayed much more knowledge of fictional narratives, some children displayed more knowledge of scientific (biological) texts (e.g., Anne's report) or poems (e.g., Keisha's poem). Third, although older children tended on average to produce more well-formed instantiations of all three genres, some younger children produced the most well-formed tokens of these genres. Fourth, although many of the children's texts were fairly conventional (even formulaic), some children produced texts that either did not represent the genres they were designed to represent (e.g., Laura's story) or were distant cousins of the target genres (e.g., Denise's report). It was common for some children (especially younger ones) to produce stories when asked to write science reports (e.g., Jon's report) or poems (e.g., Beth's poem). Interestingly, however, many of these story-like reports included a moral or an epilogue, and stories with morals and epilogues are among the most informational kinds of narratives. Similarly, many story-like poems

embodied some poetic features such as imagery, rhythm, or repetition. A fifth piece of evidence for characterizing children's genre development as emergent was the fact that many children produced hybrid science reports that incorporated elements from popular informational genres—phone books, encyclopedias, infomercials, and advertisements (e.g., Denise's report). Sixth, some children produced texts that were both culturally conventional and highly inventive, apparently reflecting children's idiosyncratic interests, experiences, and predilections. Finally, children's metadiscursive talk showed that they were working hard to organize their knowledge of the complex relations among rhetorical purposes, text features, and genres. Anne, for instance, wrote an exceptionally well-formed science report, which she justified by noting that it contained factual information. And she reported this factual information using technical vocabulary or a scientific lexicon with extreme precision. Similarly, although Jon wrote a report about lions that was very story-like, his justification of the text as a report demonstrated that he was struggling to organize his knowledge of different genres. For example, he used the term lion alternately to refer to "lion" as a particular character in his text and as a phylogenetic class of animals.

Taken together, these various findings suggest that children's category systems for genres are more nascent and less discriminatory than those of most adults. Yet, they also suggest that children develop increasingly complex and flexible knowledge repertoires of generic forms, functions, and the relations between the two. Theoretically, these repertoires seem to be organized less like classical Aristotelian category systems and more like prototype systems (e.g., Pappas et al., 1995; Rosch, 1975, 1978; Swales, 1990) or cognitively flexible systems (e.g., Spiro, Vispoel, Schmitz, Samarapun-gavan, & Boerger, 1987), with category membership based on family resemblances rather than mutually exclusive and exhaustive feature sets. As children construct their genre theories, they appear to integrate many different kinds of genre knowledge: textural, structural, and functional. Children also seem to exhibit considerable uniqueness in the particular ways that they organize and reorganize many different kinds of and degrees of knowledge. All this suggests that learning about different genres is an extraordinarily complex affair that probably unfolds over many years, may proceed in many different ways, and may be linked in non-trivial ways to children's interests and experiences.

Summarizing the results from analyses of children's literacy diets and experiences with different genres is fairly simple and straightforward. According to all the indexes used, children's experience with narrative discourse and metadiscourse exceeded their experience with expository and poetic discourse and metadiscourse to a considerable degree. At home, there was a gradual increase across the grades in the numbers of narrative texts that children read. The numbers of informational and poetic texts that children read at home remained fairly constant. At school, children in all three classrooms also read, wrote, and talked about narrative genres much more than non-narrative genres. Interestingly, television was reported to be the most common source of knowledge about informational genres.

Drawing conclusions about the specific relations between children's literacy diets and experiences and their performances on text production tasks is much less simple and straightforward. Nevertheless, it seems fair to claim that children's overexposure to narratives and their underexposure to poems and informational texts contributed in no small way to their differential performances on text production tasks. I will return to this issue when I discuss the pedagogical implications of this study.

Directions for Future Research

This study suggests several directions for future research. First, longitudinal research using both experimental and multiple case-study designs is needed to understand more fully the "emergent" qualities of children's developing knowledge about genres. Second, since producing texts representing different genres involves responding to different contexts and their communicative demands, we also need more research that integrates textual and contextual analyses. It is not enough to measure development and learning alone, even when design techniques are employed to insure validity and reliability. Nor is it enough simply to describe different socialization and acculturation experiences and to accept that such differences adequately account for differences in measures of cognitive development and communicative competence. Learning different discourse genres (and I suspect many other dimensions of literacy) seems to involve a complex interplay of opportunities provided through social and cultural experiences and somewhat idiomatic patterns of uptake that are grounded in individual life histories.

A third area ripe for investigation concerns the possibilities for genre pedagogy. Because we know very little about the relative effects of explicit versus implicit instruction in the teaching of genre (e.g., Fahnestock, 1993; Freedman, 1993; Williams & Colomb, 1993), much research also remains to be conducted on how different kinds of instruction, tasks, and practices influence genre learning. In relation to this point, we also need research that helps us know what might be the most productive grades during which to provide certain experiences and kinds of instruction.

Finally, most research on children's genre development has focused only on stories and informational texts. To develop a comprehensive theory of genre development will require expanding this focus to include many other genres and sub-genres (e.g., poems, biographies, letters, memos, and even e-mail).

Implications for Pedagogy

A key implication for pedagogy suggested by the findings from this study has to do with children's literacy diets. These findings suggest that it is important for young children to experience many high-quality examples of narrative, poetic, and expository texts during the early years of elementary school. According to a kind of negative dialectic, the fact that the children in this study read more than five times as many storybooks as either information books or poems supports this claim. When you multiply this exposure pattern by the number of years children spend in elementary school, the claim seems yet more valid.

Children need and deserve more balanced literacy diets. The types of writing required for achievement in school and

beyond assume an awareness of many specific textual forms and functions, as well as an awareness of the contexts in which certain kinds of texts tend to circulate. Knowledge of genres is central to becoming a competent writer across multiple communicative contexts because genres "correspond to typical situations of speech communication, typical themes, and, consequently, also to particular contacts between the meanings of words and the actual concrete reality under certain typical circumstances" (Bakhtin, 1986, p. 87). From this perspective, the ability to write an outstanding natural history report on the rain forests of Brazil does not insure that the same writer could write an even adequate closing statement in a court of law or a sonnet for an English class. Such a situation is probably not attributable to the increased difficulty of the latter task in comparison with the former. It is more likely that this writer has had more exposure to and more experience with writing and talking about natural history genres than legal genres or the genres of poetry. Concomitantly, children who encounter different kinds of written genres are likely to have a much greater general awareness of these genres, their shapes, their meaning potentials, and their functions than children who do not. In this regard, Halliday (1978) pointed out that most of the problems of educational failure are not linguistic problems but problems associated with making transitions from familiar to unfamiliar discourse genres, practices, and communities in school settings. An important task, therefore, for researchers and practitioners alike is to investigate the properties and demands of different discourse genres, practices, and communities, and the ways in which indi-

viduals can master the conventions of discourse requisite for full participation in various school sub-communities (e.g., the mainstream context of the classroom, the science lab, the mathematics class, the poetry reading group). If children do not read, write, and talk about different discourse genres, they are unlikely to fare well in the discourse contexts in which such genres are common currency. As Fowler (1982) has emphasized:

> Far from inhibiting the author, genres are a positive support. They offer room, one might say, for him to write in—a habitation of mediated definiteness; a proportional neutral space; a literary matrix by which to order his experience during composition … . Instead of a daunting void, they extend a provocatively definite invitation. The writer is invited to match experience and form in a specific yet undetermined way. Accepting the invitation does not solve his [sic] problems of expression … . But it gives him [sic] access to formal ideas as to how a variety of constituents might suitably be combined. (p. 31)

According to Graves (1983), beginning writers experience particular difficulty locating where information belongs in their written texts. Knowledge of genres helps children represent their knowledge and experience in textual form. For example, when children attempt to construct a personal narrative, they are able to develop a much stronger sense of chronology, as well as of missing textual information if they are guided by structural and textural knowledge of the narrative genre. In domains such as social studies and science, where the order is determined largely by logical relations among information, children are aided significantly in organizing this information if they know something about the structures and textures of the

genres of informational texts. Eventually, such knowledge can be extended, analyzed, and incorporated into the child's evolving understanding of what it means to compose or to criticize different types of texts, just as children gradually analyze and reconstruct most features of their natural language into an increasingly more powerful communicative system (Lindfors, 1987; Pappas & Brown, 1987; Villaume, 1988).

Several researchers (e.g., Christie, 1989, 1995; Cox, 1986; Newkirk, 1989; Pappas, 1991, 1993) have recently documented myriad ways in which children have been overexposed to narrative genres and underexposed to all other genres. The findings from this study certainly fit with this characterization. Together, these various studies suggest that we may be guilty of curricular genre-cide with respect to language arts pedagogy in the public schools. Any system of education that limits children to one genre, even one as powerful as the fictional story, may also limit the cognitive, social, and political vantage points that children may assume. The extent to which knowledge of the conventions and distinctions of different genres can be enabling to students *vis*-à-*vis* academic tasks, social interactions, and political action must be a central concern within American education today. If we presume a productive dialectic between genres, mind, and world, then the more different kinds of genres that children learn as part of their language socialization and education, the deeper and broader their potential for cognitive and communicative growth will be.

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Biography

George Kamberelis is an Associate Professor of Education at Purdue University where he teaches courses on literacy, classroom discourse, and inter-pretive research methods. His research draws upon social theories, theories of practice, and theories of discourse to investigate situated language and literacy learning in school and community con-texts. He is currently working with teachers in urban schools to investigate discourse socialization across different subject areas.