

The Social Origins of Essayist Writing¹

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Résumé

Une des hypothèses en vogue concernant la didactique des textes est que la narration constitue la forme de discours la plus accessible aux enfants de l'école primaire, pour des raisons cognitives et didactiques. Cet article développe une conception différente des relations entre types de discours et conditions d'apprentissage scolaire. A l'établissement d'une hiérarchie des discours fondée sur leurs caractéristiques structurales, la démarche que nous adoptons substitue une approche centrée sur l'analyse des contextes sociaux de production de l'ensemble des discours (narratifs ou non), et en particulier sur l'étude des formes d'interaction susceptibles de les susciter. Une analyse est proposée de la construction, en situation de classe, d'une forme de discours expositif, en l'occurrence un discours scientifique; celle-ci montre que les discours non narratifs sont accessibles aux jeunes enfants aussi tôt que les discours narratifs, pour autant que les structures socio-interactives y soient adaptées.

A theoretical assumption that has received considerable attention in the literature on children's discourse development in the early years of schooling is one related to the modes of discourse that frame children's classroom activity. Particularly in the area of literacy education, some cognitive and educational theorists have suggested that *narrative* modes of discourse are developmentally more "primary" than non-narrative modes of discourse. Advocates of this theoretical perspective on discourse and learning maintain that the story form, which is in

¹ The classroom research described in this paper was made possible by a Spencer Postdoctoral Fellowship, awarded by the National Academy of Education, and by an additional Spencer Small Grant. I gratefully acknowledge the support of this work by the Spencer Foundation. I would also like to thank Rhoda Kanevsky, a valued colleague in this research, for helping me to stay grounded in real issues of teaching and learning.

many respects the most structurally visible of narrative genres, is developmentally more accessible to young children than other forms of discourse. When extended to the realm of literacy education, instruction in reading and writing, this theoretical perspective on discourse would suggest that literacy instruction should be initially grounded in personal and fictional narratives. In some ways, this developmentalist framework is one that is instantiated in classroom practices for young children in the primary (K-2) grades. Teachers read storybooks to children, children write stories of personal experience, and literacy instruction in general is viewed largely in terms of children's facility with narrative forms of discourse. Some reading curricula, for instance, include assessments of reading comprehension in which children are asked to record the basic elements of story structure: the characters, the setting, the problem, and the resolution to the problem.

Although I support the view that narrative modes of discourse are of enormous importance for children's classroom learning, in this paper I wish to suggest that narrative discourses are not developmentally "primary" for young children. In critiquing this view of the relationship between discourse and classroom learning, I will critique more generally a structuralist orientation towards discourse and literacy development. What I will suggest in place of this view of the developmental primacy of narrative forms of discourse (and in place more generally of a structuralist orientation towards discourse and learning) is the study of classroom discourse as it emerges through the local contingencies of social interaction. I will suggest that children's involvement with varying modes of discourse is not determined by the structural properties of those varying genres; rather, children can construct any number of discursive types—narrative and non-narrative—which arise in the context of differing forms of social activity. As children move between interactional settings, they co-construct meaning "in" or "through" varying forms of discourse. However, non-narrative discourses are, in my view, as facilitative of this process of meaning construction as narrative discourses. Through the use of one exemplar, I will show how non-narrative discourses emerge in response to the local contingencies of interactional settings in the classroom. My focus will be on a research study of the social origins of *essayist* writing, in this case scientific writing about growth and metamorphosis, in a first grade classroom setting. I will conclude by returning to a discussion of theories of

discourse, literacy, and learning, emphasizing the need to move beyond structuralist depictions of children's discourse and learning in the classroom.

Modes of Discourse, Modes of Learning

The suggestion that narrative modes of discourse might better facilitate young children's classroom learning is one that has appeared in the overlapping fields of psychology and education. Kieran Egan, a developmental psychologist and curriculum theorist, is one proponent of this theoretical orientation. Egan (1988, 1993) has articulated a theory of relations between modes of discourse and children's development. As children develop throughout the school years, differing modes of discourse are accessible to them in differing ways. According to Egan, young children's thinking is grounded in *orality* as opposed to literacy. Not having literacy as a mediational tool (Vygotsky, 1978) or, *bonnes à penser* (Egan, 1993, drawing on Levi-Strauss, 1967), young children inhabit a cognitive world that is qualitatively distinct from that of adults. For young children (and Egan would probably suggest for adults in some predominately oral cultures), stories provide an ideal discursive means for learning more abstract concepts. However, Egan's theory is not simply a rephrasing of the familiar adage that children learn difficult concepts more easily when they are embedded in stories. Rather, this theory, grounded in a recapitulationist depiction of the orality of children's thinking, suggests that it is the discursive structure of stories that makes them cognitively accessible to younger children. Egan suggests that stories have a binary structure, a familiar example being the good-versus-evil theme that often appears in fairy tales. Such binary structures are the initial means through which children develop conceptual understandings of what Egan terms *mediational* concepts. For instance, children initially use the *hot-cold* binary opposition as a means for deriving the mediated concept, *cool*. Thus, for Egan, the binary structure of stories makes them the ideal discursive tool for teaching and learning abstract concepts in early childhood.

One could argue the point that storied discourse genres always have a binary structure, the kind of thematic structure that one typically finds in fairy tales and fables. Egan's work seems premised on such an assumption, and indeed such binary oppositions are certainly characteristic of some stories. An example that comes to

mind is the *Teenage Mutant Ninja Turtle* story (as told on film and in book form), which has had an extraordinary appeal for young children. This kind of story relates a tale grounded in relationships between good and evil characters; hence, perhaps, its success for young viewers and readers (see Bettelheim, 1989; Greenberg, 1990). One critique of Egan's very interesting theory of learning might be directed towards the assumption that stories constitute such accessible *bonnes à penser* because of their binary structures. I have, in fact, critiqued this theory along similar lines, suggesting that narrative discourse genres are much more multifarious than Egan suggests. Not all narrative genres are organized around binary oppositions, as one would find in fairy tales and myths. However, such a critique is well beyond the scope of my discussion here. What is important for this discussion is the notion of a developmental theory grounded in the structural properties of discourse, in this case narrative discourse. It is the discursive *form* of narrative, Egan would suggest, that makes it an ideal mediational tool for learning, and for instruction. As such, narrative genres should receive greater attention in the early grades of schooling, since lessons can be made more meaningful through the use of the story form:

The story form is not a trivial thing meriting attention only if we are discussing fiction. Rather it is a fundamental, perhaps the fundamental, intellectual tool that enables us to make sense of the world and of experience. In particular, it seems crucially important in early childhood... The task of the teacher who wants to make lessons and units more accessible and meaningful to young children is to learn how to use the main features of the story form in planning and teaching (Egan, 1988, p. 232).

A somewhat similar theory of classroom instruction has been forwarded by the literacy educator, James Moffett. In *Teaching the Universe of Discourse* (1983), Moffett develops a theoretical framework for the teaching of language arts—primarily writing—but which also serves as a more basic framework for the entire school curriculum in the early years of schooling. Like Egan, Moffett proposes an ordering of modes of discourse that matches the qualitative differences in children's thinking at differing developmental points in time. Also like Egan, Moffett suggests that narrative discourse genres are more accessible to young children than non-narrative genres. Through narrative form, suggests Moffett, abstract concepts become embodied through the words and actions of characters. Categories of experience that are more symbolic (e.g., the good fairy and the bad fairy) are

related through story plot. Moffett maintains that, for younger children, this one mode of discourse encapsulates the more differentiated forms of discourse and thinking found among adults:

Whereas adults differentiate their thought into specialized kinds of discourse such as narrative, generalization, and theory, children must for a long time make narrative do for all. They utter themselves almost entirely through stories - real or invented - and they apprehend what others say through story... Children must represent in one mode of discourse - the narrative level of abstraction - several kinds of conception that in the adult world would be variously represented at several levels of abstraction. Growth, then, is toward a differentiation of kinds of discourse to match the differentiation in abstraction levels of thought (Moffett, 1983, pp. 49-50).

Moffett extends his theory of modes of discourse to a rather specific curriculum for the teaching of the language arts (reading, writing, drama, etc.). He proposes a sequential ordering of modes of discourse, one in which young children initially record what is happening (drama) and then move into the reporting of what happened (narrative). For Moffett, drama and narration should precede exposition in the teaching of writing and, more generally, in curriculum design. Other forms of writing come later in this developmental and curricular sequence. Expository writing, for example, entails generalizing from what happened to "what happens", and the presumed audience is one more distant in time and space (pp. 37-38). Such writing entails an abstraction from immediate or prior experience. Moffett's depiction of relations between modes of discourse and cognitive development (and instruction) differs from Egan's in terms of the metaphor proposed for this relationship. In Moffett's case, this metaphor is one of greater differentiation of discourse types and forms of thinking over the course of the school years. In the case of Egan, the metaphor is more one of qualitative change in forms of thinking, heavily related to the move from oral to literate *bonnes à penser*. However, the end result for both cognitive and educational theorists is a curriculum grounded in a hierarchy of discursive modes. For children in the early years of schooling, the predominant discursive form for learning and instruction appears for both theorists to be narrative.

The importance of narrative discourse genres for the education of young children seems indisputable, and I certainly do not wish to undermine this importance. Stories and other narrative genres seem to be a crucial discursive means through which children structure their experience in and out of classrooms. The sociolinguistic research on

discourse development in the preschool years would lend further support to the important role of narrative in children's learning (see, for example, Heath 1983, for a study of narrative development among children in three communities). However, I would like to suggest that non-narrative discourses, such as exposition, can be equally accessible to children in the early years of schooling, and that narrative and non-narrative modes of discourse do not form a cognitive hierarchy. In questioning the developmental primacy of narrative, I also call into question the structuralist theories employed by both Egan and Moffett. Recall that both developed their theories through an analysis of the structural properties of modes of discourse, and a structuralist interpretation of children's cognitive development in school. What I would propose instead is a non-structuralist theory of relations between discourse, instruction, and children's learning, focusing in particular on the realm of literacy education.

I would like to suggest instead that both narrative and non-narrative discourses arise through the contingencies of children's participation in interactional settings like journal writing, classroom discussion, and bookreading. When classroom discourses and social participation structures are facilitative of generalization and theorizing (and hence of more essayist forms of discourse), children engage easily in those modes of discourse. Forms of discourse and forms of thinking are interactionally co-constructed through joint activity, and these can assume a wide range of modes. Children engaged in a discussion about scientific phenomena, even in the early years of school, can theorize as well as narrate. More "generalized" forms of discourse are, in this view, appropriated by children in the same manner as more narrative forms of discourse. They arise as forms of response to particular kinds of classroom social activity.

This alternative (and more non-structuralist) view that I have begun to develop is grounded in a discursively-oriented view of teaching and learning. In much of the sociocognitive literature that has emerged since the publication of the collected writings of Vygotsky (1978, 1987), discourse has been depicted as a key mediational tool through which children structure their social experience, and their thinking. In contrast to viewing discourses in terms of their structural characteristics, however, I am taking a more prosaic stance ---one focused on the everyday "contingencies" in which discourses are constructed through social interaction (see Hicks, forthcoming; also Morson & Emerson, 1990). In the everyday world of the classroom,

non-narrative discourses can co-exist with narrative discourses as children describe, explain, and narrate --as they "talk into being" various forms of knowledge (Green & Dixon, 1993). Such a discursive and interactionally-situated theory of teaching and learning is consonant with a new wave of research and theorizing on how knowledge is socially constituted (Gee, 1992; Harre & Gillett, 1994; Lave, 1992; Rogoff, 1990; Wertsch, 1991). In the section that follows, I will illustrate through some interpretative classroom research the ways in which essayist forms of discourse (talk and writing) emerged in response to the contingencies of social activity in the classroom. I will then return in a final section to a discussion of how this type of research supports a depiction of narrative and non-narrative discourses as interactional achievements, rather than hierarchically-ordered forms of thinking.

The Social Origins of Essayist Discourse: An Exemplar

One of the challenges faced by current researchers interested in pursuing research on classroom literacy education is that of developing methodologies that are suited to the study of discourse as an interactional achievement. As I have suggested in my comments thus far, a new wave of research in psychology and education is grounded in studies of how discourse and knowledge are situationally constituted. In my own research efforts, I have attempted to meld a sociocognitive theoretical orientation with the employment of methodologies suited to the study of the social construction of discourse. These methodologies, what I have elsewhere (see Hicks, forthcoming) termed *contextual inquiries*, are rooted in what Bakhtin (1986) described as the "human sciences". Such forms of inquiry draw upon interpretative methods of research such as literary analysis and ethnographic writing that are more typical of the humanities than the "physical" or "hard" sciences. In my work, I have attempted to articulate means of inquiry that explore discourse as both an interactional achievement and as an individualistic response to one's surround. I have melded interactional studies of classroom discourse, garnered through participant observation and videotape analysis, with interpretative studies of the discourse of individual children in classroom settings. The research that I describe in this paper is drawn from one such study, a year-long interpretative study of the discourse development of three African-American first graders. In that study, I

obtained extensive samples of the talk and writing of the three children as they moved through their first year of formal schooling. The particular subsection of that research that I will use in this exemplar is a six-week science unit on silkworms.

In the classroom in which I was a participant-observer for one year, science held a special place for the teacher. The children's teacher felt that explorations of the natural world were an integral part of children's development in school; she also believed firmly in the value of socially sharing these explorations. In late spring of the school year, the classroom teacher organized a six-week thematic unit in which children individually and collectively explored the life cycle of silkworms. Silkworms are cultivated for the silk they spin around them as they form cocoons. However, pedagogically they are valuable as means for studying processes of growth and metamorphosis. Being members of the caterpillar family, silkworms spin cocoons and hatch as moths. Thus, over a six-week time period, children are able to observe the entire life cycle of silkworms: from tiny black larvae, to fairly large caterpillar-like creatures, and finally to moths which then mate and in turn produce eggs for more silkworms. Children in this classroom were given two-four silkworms to observe over the six-week science unit. The silkworms were kept in small plastic containers on each child's desk, in full view throughout the day. Each morning, children noted changes in their silkworms, and wrote and drew about these changes in individual "science diaries". Children were encouraged by the teacher to note changes such as differences in the size of the silkworms over time, the differing activities of the silkworms, and details of the silkworms' physical anatomy. These observations were also shared publicly in whole class discussions. From time to time as the need arose, the teacher organized class discussions in which children shared their descriptions and emerging theories. At times, such whole class discussions were precipitated by special events, such as when one child's silkworm was killed (when the child accidentally stepped on it) and subsequently secreted green as opposed to red bodily fluids. Events like these were discussed in light of children's emerging scientific understandings (e.g., the teacher to the children in a whole class discussion: "Why do you think it's *green* inside?").

Even with this brief description of the six-week unit on silkworms, it is undoubtedly apparent that there was a good deal of instructional scaffolding for the production of more "scientific" or essayist

discourses in this first grade classroom. Although children were allowed to make whatever comments they chose in their science diaries or during whole class discussions, essayist commentary on emerging theories or descriptive observations readily emerged in the context of the work that went on. Children sometimes combined descriptive or essayist commentary with more narrative forms of discourse. An example might be a child who began a science diary entry by naming her four silkworms after the four *Teenage Mutant Ninja Turtles* (as if she were beginning a narrative entry about the four), but then moved into a description of the size of the silkworms. The social interactional contexts that were co-constructed by teacher and children, however, were highly supportive of more essayist forms of discourse, and these will be the focus of my extended exemplar. In the exemplar, I will move through samples of discourse obtained during my observations of the six-week unit. Through microethnographic and discourse analyses (see Erickson, 1992), I will attempt to show how more essayist forms of talk and writing emerged in response to the local contingencies of social interaction across the six-week period. The analytical focus with these examples will be on the *how* of children's construction of scientific, essayist discourses. The samples from children's science diaries, from which I will draw some pertinent examples, are testimony *that* first grade children were fully able to engage in non-narrative forms of discursive activity. The more interesting research question is how these non-narrative discourses arose in response to particular social contexts and, furthermore, what this might mean with respect to theories related to discourse, teaching, and learning.

"What do you know about silkworms?"

I have mentioned that over the course of a six-week science unit on silkworms, the teacher in this first grade classroom facilitated whole class discussions on a range of topics. During these whole class discussions, children were seated on the floor in a semi-circle around the teacher, and each child had a turn to make some comment about a question or an issue related to the silkworms. This discussion format stemmed out of the teacher's belief that children learned from one another and, moreover, that it was imperative that each child be given equal space for commentary or questioning. Such discussions were both scaffolded by the teacher and co-constructed by teacher and

students. The teacher often framed the discussions by offering a focusing question, or raising an issue of importance for the discussion. A wide variety of forms of response were accepted as legitimate ones by the teacher, and no particular genre or type of response was sanctioned over others. This was particularly important in a classroom that was ethnically and socioeconomically diverse. Children represented a wide range of cultural and community backgrounds, and thus a wide range in ways of constructing knowledge through discourse. In the context of whole class discussions, both narrative and non-narrative discourses intermingled as the children formed responses to focal questions about the silkworms. An example is the whole class discussion below, shown in transcription form as derived from videotape analysis. The framing question posed by the teacher is: "What do you know about silkworms?". This question was raised by the teacher in light of the fact that the children had, at this point in the unit, been observing the silkworms for some weeks. What follows are the responses of three children to that focusing question.

Example 1: Whole Class Discussion¹ "What do you know about silkworms?"

- C1: on Saturday one of my silkworms shedded its skin
 T: tell what it looked like when it shedded its skin
 C1: it looked different
 T: well (.) say what you mean by that
 C1: it had a different pattern
 T: the new skin?
 C1: nods yes
 T: okay
 C2: I learned they weren't worms (.) they're caterpillars
 T: what?
 C2: I learned they weren't worms they're caterpillars
 T: they weren't worms they are caterpillars
 well what's the difference?
why is that important?
 C2: because worms are different from caterpillars
 cause worms # uhm are sort of like snakes

1 The following transcription symbols are used in Example 1 and other examples: (.) = very short pause or breath intake, # = longer pause, underscoring = greater stress on word, caps = increased volume, vowel: = lengthened vowel. Speaker overlap is indicated by horizontal placement of two utterances on one line.

and they move around # like (.) in the same way snakes do
 but caterpillars don't (.) cause caterpillars have legs

- T: okay
 C3: they eat from the little brown ball in front of their face
 T: they eat from the little brown # yes!
 oh that's an interesting way to say # that
 you don't know that's there until you look real close at where they're
 eating (.) right
 it's like a little brown ball
 I like the way you said that
 [T writes: many children comment at once]

This short excerpt from a longer whole class discussion (there were about thirty children in this classroom, and nearly every child made some comment) suggests the co-construction of both narrative and non-narrative discourses. In response to the orienting question, the first child (C1) shares a personal narrative about what happened to his silkworm over the weekend. Children took home their silkworms for the weekend to care for them, and in this case one of the silkworms had shed its skin. The second child (C2) shares some scientific knowledge that she had acquired about silkworms, probably from one of the many books on silkworms present in the classroom during the unit. Her commentary on the species membership of the silkworms (they are members of the caterpillar family and not the worm family; hence they move in ways characteristic of the former) assumes essayist form. It is framed from the perspective of a more distant speaker-hearer relationship, and the speaker deals with generalities. Finally, the third child (C3) voices her direct observations of the silkworms, commenting on the "little brown ball" with which the silkworms appear to be eating leaves. Her comments can also be described as more essayist in nature. Minimally, they represent a non-narrative discourse. Note that all of these differering discursive responses to the discussion are validated by the teacher. The last comment in this series is given special note by the teacher, probably because the child in question (C3) had experienced some hesitancy over the year in voicing her comments in a public setting. However, over the course of this short excerpt, essayist or non-narrative discourses and personal narration intermingle freely. Within the social-interactional framework of a discussion about silkworms, essayist discourses appear to arise with the same facility as more narrative forms of discourse.

A second example from a whole class discussion reinforces the notion that more essayist forms of discourse emerge in response to the contingencies of social interaction and participant structures. In this second example, the teacher constructs a "zone" (see Vygotsky, 1978; also Wertsch, 1984), a discursive and interactional space within which theorizing about the silkworms arises as a joint accomplishment between teacher and students. The focusing question on the floor is that of why the internal fluids of silkworms are green as opposed to red. The discussion emerged as a result of one child having stepped on a silkworm (as I noted earlier) and the children's subsequent wonderment at the green fluids that were excreted from the dead silkworm. What follows is a climactic moment in the discussion, when one child (C2) voices an explanation that many children wanted to share.

Example 2: Whole Class Discussion
"Why do you think it's green inside?"

- T: and I wanna know why it's green inside?
 [many children raise their hands excitedly and say, "I know!"]
- C1: sometimes when blood comes out of uh peoples they die
 when a whole lot of blood come out
- T: pass it [the dead silkworm] on to (C2) now
 (C2) what do you wanna say?
- C2: the green stuff is for the uhm help it get bigger and bigger
- T: that's right
 and how would it help to get bigger and bigger?
- C2: cause if he keep # this is from uhm (.) all these leaves he eatin
 [many children sigh or say "oooh"]
- T: (child's name) wanted to say it
 and (child's name) wanted to say it
 who else wanted to say it?
- C3: I was gonna say something similar
- T: okay
 did you hear what (C2) said [to whole group of children]?
 I need to have (C2) say it again
 what's the green stuff from?
- C2: from the flowers
- T: what's it eating?
- C2: leaves
- T: from the leaves it's eating (.) right

Whether or not the theory that emerges in this discussion is the "correct" one scientifically, the talk that is co-constructed in this example is more scientific or essayist than narrative. The talk is a joint attempt at the explanation of the color of the silkworm's internal fluids. The first child (C1) in this excerpt comments on how people die when a large amount of blood is excreted. The second child (C2) initially reflects on the "green stuff" inside the silkworm, though he does not at this point articulate a scientific theory of why the silkworm's fluids are green. This theory is constructed interactionally, as the teacher nudges the children towards an explicit explanation: "how would it [the green fluid] help [the silkworm] to get bigger and bigger?". The result is a scientific explanation that is constructed across several turns of talk. The various contingencies of the context at hand support what emerges as a form of scientific, more essayist commentary. The silkworm itself, passed around among children seated on the rug area, is one dimension of the context; others include the teacher's instructional agenda and the children's prior experience in talking about their observations of silkworms. The essayist discourse that emerges is an interactional achievement as opposed to a discursive form or cognitive structure that exists "inside the head" of any one child (see Edwards, 1993; Erickson, forthcoming; Hicks, 1994; Toulmin, 1979; for discussions of related issues).

Thus far I have focused my discussion on the whole class discussions that took place during a six-week unit on silkworms, stressing how non-narrative, more "scientific" or essayist discourses emerged in response to particular interactional contexts. Critics of my analyses might suggest that the more essayist discourses evidenced in Examples 1 and 2 only arose through the teacher's intervention. They might insist on a view that narrative discourses are more "natural" than non-narrative ones for children in this age range. I would counter by suggesting that the analytical points I have made in these examples could hold true for any construction of discourse. When one looks closely at the social-interactional processes of discourse construction, *all* discourses emerge as interactional achievements among participants. This is, in fact, the centerpiece of the dialogic theory of discourse articulated most fully by Bakhtin (see Bakhtin, 1981; see also Holquist, 1990; Morson & Emerson, 1990), and the centerpiece of my own critique of the structuralist viewpoint that some discourses are cognitively more accessible to young children than others.

The Social Origins of Essayist Writing

Lev Vygotsky in his writings about mind and society coined the phrase "zone of proximal development" to describe the difference between what the child learner could cognitively and interactionally accomplish on her own versus with the help of a more capable peer or adult (Vygotsky, 1978; see also Wertsch & Rogoff, 1984). In my own discussion of how essayist discourses were co-constructed in a first grade classroom, I use the term "zone" somewhat more broadly. Drawing heavily upon the theories of discourse articulated by Bakhtin, at the heart of which lies *dialogue*, I am attempting in my analyses to describe the social-interactional "zones" that are co-constructed as participants move in response to one another and to other texts. I move now to a discussion of the ways in which children's science diary writing and talk about science diary writing emerged as forms of response to their surround. I will maintain throughout the analyses that follow that children's writing can be viewed in the same manner as their talk: like scientific or essayist forms of talk (as in the whole class discussions), essayist *writing* about silkworms emerges as an interactional achievement, as a form of dialogue.

I will begin my discussion of children's science diary writing with an example taken from the writings of one of three focal children, Janeen. Some weeks into the extended unit on silkworms, Janeen's silkworms had become quite large on their steady diet of mulberry leaves (the sole source of nourishment for silkworms). As I observed and videotaped Janeen's work on her science diary entry on a morning in late May, I noted that she seemed intensely interested in her four silkworms' eating of leaves. She spent some twenty minutes observing the eating behaviors of the silkworms, taking one silkworm out of its plastic container and placing it directly on a leaf for closer observation. At the close of this extended period of observation, Janeen had written in her science diary:

The silkworms

love to eat To silkworms

eat ing

Gloss: The silkworms love to eat. Two silkworms eating²

2 Janeen, being a member of an inner city African-American community, speaks a dialect of American English in which auxiliaries are occasionally dropped and in which some inflectional endings are omitted. Such minor variations from "standard" English are correct within the community of which she is a member. I have

At this point in the episode that I observed, the teaching assistant approached Janeen's desk to examine what Janeen had written thus far. Janeen and the teaching assistant then proceeded to co-construct a slightly different form of journal entry than had been constructed thus far. One of the pedagogical agendas that had been emphasized by the teacher was that of charting the growth of the silkworms. Children had been given rulers for measurement of their silkworms, and they were encouraged to draw or write about changes noted in the silkworms' physical size. As the teaching assistant approached, Janeen left her desk momentarily to retrieve a ruler, in an unspoken acknowledgment of the formal agenda of measuring her silkworms. The teaching assistant helped Janeen to place one silkworm directly on the ruler. Jointly, Janeen and the teaching assistant then constructed science writing centered on the size of the silkworms. My representation of this interactional episode includes both a transcription of the talk that took place, and the science diary entry in its final form.

Example 3(a): Science Diary Writing Janeen (J), Teaching Assistant (TA)

TA: [leaning close to J] how big is it [the silkworm?]

J: [examines the silkworm on the ruler]

five

[I stands upright]

TA: okay come on (.) come right here [indicates I's chair]

J: [sits down in her chair]

TA: who is that?

J: [looks at silkworm to the right of her science diary]

George [softly]

TA: this is George? [begins writing in J's diary]

George is what?

J: huh? [looks at TA writing in J's science diary]

TA: how big is George? [writing in I's diary]

how big is he? J: five

TA: five what? [writing]

J: inches

TA: [looks at J] uhm uhm

preserved these grammatical and phonetic aspects of Janeen's talk and writing in all of the examples used.

look at 'im [TA points to silkworm on ruler]

J: [examines silkworm on ruler]

TA: this is # not inches

J: centimeters [looks up]

TA: centimeters

Example 3(b): Science Diary Entry (Final Form)

5/22/90

The silkworms

love To eat To silkworms

eat ing

George is almost 5 centimeters, Weezie is almost 5 centimeters, Damon is almost 4 centimeters, Jamal is almost 5 centimeters.

Although somewhat different forms of response, the science diary writing done by Janeen and the writing jointly constructed with the teaching assistant are grounded in direct observation of the silkworms. Janeen's writing about the silkworms' love of eating is a response to her close observation of the silkworms' eating behavior. The writing about the length of the four silkworms, the four having been given names (George, etc.) previously by Janeen in an earlier entry, is the result of the joint activity of measuring them. Example 3 illustrates the social origins of essayist writing, in that even the "independent" writing that results is a form of response to the discourses and activity structures linked to the silkworm unit. One might question whether or not such writing is truly "essayist" in the sense of being generalizable. The science diary writing seen in Example 3 is largely reflective of direct observation of four silkworms, and the written comments seem to relate to those silkworms only. However, I believe that a very strong case could be made that Janeen's science diary entry represents an emergent form of essayist writing. At the very least, this entry is more reflective of a non-narrative discourse genre than a narrative genre, particularly when stories are held as the defining narrative genre.

A second example of science diary writing, also one supplemented by my observations and videotape analysis of the process of writing, again illustrates the emergence of scientific writing in response to the interactional demands of the six-week unit. The science diary writing by Rasheem, another focal child in my research study of three children, is unquestionably "scientific" or essayist. In the entry, Rasheem writes about his emerging theory of how the silkworms spin

their cocoons. As was the case with Janeen's science diary entry, however, my analytical focus with Example 4 is on how this entry emerges as a form of dialogic response. Although there is no evidence of instructional "scaffolding" with this example, the activity structure of science diary writing about one's observations and an established social-interactional history of talking and writing about silkworms serve as a larger context within which Rasheem constructs "his" entry. Example 4 begins with Rasheem working at his desk early in the school day, at a point about midway through the silkworm unit. Children had been prepared by the teacher for the time when the silkworms would begin spinning cocoons. Books showing pictures of cocoons had been placed around the room, and there was a sense of expectation of this forthcoming event. My representation of this episode begins with Rasheem "voicing" aloud what he will write in his science diary.

Example 4: Science Diary Writing Rasheem (R)

Rasheem and his peers are writing science diary entries. Rasheem says aloud:

R: should I put # "I know where # why the silkworms shed their skin or should I say I know how the silkworms spread their cocoon?"

Later, children are called to the rug for a whole class discussion. When Rasheem is asked to provide a comment about the silkworms, he voices his reflections:

R: I got it # I got it # I think I know where they get (.) they spread their cocoon (.) at the back of their tail (.) I see this little spik~~ba~~#konf the their tail

Still later, Rasheem composes his written science diary entry:

Written:

5/15/90

I knoe howL They

SReD There KOM BY

THeT SteKy THeg on

There Taol

Gloss: I know how they spread their cocoon. By that sticky thing on their tail.

Again, Rasheem's science diary writing is rooted in his direct observations of the silkworms, in this case his observation of the

"sticky thing" that he thinks will be the site where the silkworms spin their cocoons. At the same time, like Janeen's entry, this entry is one that I would interpret as an emergent form of essayist writing. Rather than being oriented towards "what happened" in a storied sense, it addresses the more general topic of how silkworms spin cocoons.

A final example looks ahead one year to the science diary writing of Janeen, the child whose writing was also explored in Example 3. Janeen remained in first grade for two consecutive years, having initially entered first grade at a very young age compared to her peers and having experienced some difficulty in that first year. Towards the end of her second year in first grade, Janeen had the opportunity to participate once again in the six-week silkworm unit. Late in the school year, she composed the following science diary entry in response to the classroom teacher's suggestion that children write down the "facts" they had learned about silkworms.

Example 5: Science Diary Writing

Janeen

Written:

Facts About Silkworms

1. They turn into moths.
2. When They are Little They eies are gery and wen they Are big They eies are Black.
3. The sikworms make cocon.
4. The silkworms have spaet on them.
5. The silkworm have 8 Leg.

Gloss:

Facts About Silkworms

1. They turn into moths.
2. When they are little their eyes are grey and when they are big their eyes are black.
3. The silkworms make cocoon.
4. The silkworms have spot on them.
5. The silkworm have 8 leg.

These five "facts" about silkworms are clearly framed in a way that resembles scientific or essayist writing. They are written from a general, abstract point of view, with the writer assuming a more distal perspective in relation to her audience. This type of generalized essayist writing is what some theorists would consider cognitively

"higher" on a developmental hierarchy of discursive forms. And yet, such forms of writing appear to be highly accessible to Janeen, Rasheem, and other children in the social context of talk and writing about science. I should add at this point in my discussion that both Janeen and Rasheem were in the early stages of learning to write as I conducted my research study. The science diary entries seen in Examples 3 and 4 (since Example 5 is drawn from work a year later) are representative of the writing of children who only in mid-year had begun to write extended segments of discourse. Looking at these entries and also considering the rich science-related talk that emerged in whole class discussions, I find perplexing the notion that literacy education in particular, and education more generally, should be grounded in *narrative* during the early years of schooling. The examples that I have shown in this extended exemplar from my own classroom research suggest otherwise: that young children can readily engage in narrative *and* non-narrative (e.g., scientific or essayist) discourses from the earliest days of schooling onwards. What does seem to be crucial are the social-interactional contexts in which both narrative and non-narrative discourses are constructed by participants. When social-interactional frameworks are supportive of the joint construction of essayist discourses, children can "talk and write science" (see Lemke, 1990) with relative ease. Of course, my own interpretations of Examples 1-5 are rooted in a theoretical framework that is inconsistent with the more structuralist theories of discourse and learning discussed earlier. It is to this alternative theoretical framework and its implications for classroom researchers that I turn in the final section.

Towards a Dialogic View of Discourse and Learning

In this study of the social origins of essayist writing in a first grade classroom, I have explored how children and teachers engaged in the co-construction of scientific discourse. I have used interpretative forms of analysis to look closely at how scientific or essayist discourses emerged in response to the contingencies of a six-week unit on silkworms. What has emerged through these analyses is a view of discourse as a form of dialogic response to one's surround. Such dialogue may take the form of a written science diary entry, one embedded in the larger context of observation and talk during an extended unit on silkworms. It may also take the form of a scientific

explanation that is constructed across turns of talk during a whole class discussion. Even forms of discourse that are "individually" constructed by children, such as a written science diary entry, emerge as a form of response to a particular social context.

Such a view of the construction of discourse, and of learning more generally, is one that I have culled from my readings of the work of Bakhtin and other more contemporary theorists of language. It is from this theoretical perspective that I can return to my opening critique of the more structuralist depictions of discourse forwarded by theorists like Kieran Egan and James Moffett. Again, I am not attempting to deny the importance of narrative discourses in classroom instruction and learning. I would, however, like to reiterate my belief that narrative and non-narrative discourses do not form a developmental hierarchy. This belief is rooted in the alternative theoretical perspective that I have proposed for looking at discourse and learning in the classroom: one centered on the dialogic construction of both talk and writing. From this perspective, I can suggest that *all* discourses emerge as forms of response to social settings, as interactional accomplishments. In this sense, the structural properties of discourse genres are of less import than what is being done interactionally to construct them. My case study of one science unit supports the notion that young children can readily engage in more abstract essayist discourses when they are engaged in forms of interaction that facilitate those discourses.

My closing remarks are centered on what this theoretical and research-driven work might imply for educational researchers interested in facilitating children's literacy development. At the very least, this work on the social origins of essayist writing suggests that narrative and non-narrative discourses can play an equally important role in young children's learning. Young children can observe, describe, and theorize "in" or "through" more essayist, scientific discourses, just as they can readily engage in more storied forms of discursive activity. Perhaps more broadly, this work suggests that literacy research has to account for children's social and discursive activity and not simply their oral or written texts. It is only by viewing the interactional accomplishment of discourse that *dialogue*—as opposed to genre structures of discourse or presumed cognitive hierarchies—becomes a salient analytical construct. Thus, the work discussed in this paper can be viewed as an argument for the employment of research methodologies that bring into focus the

dialogic construction of discourses, their embeddness in the particulars of classroom interactional contexts.

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