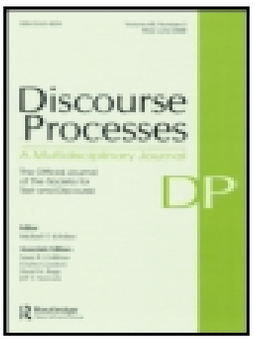

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Situation and Task in Young Children's Talk*

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Two studies were conducted in which the speech of 3- to 4-year-old, black Head Start children was compared in two situations; a trip to a local supermarket and discussion about the trip upon their return to the classroom. Comparisons were carried out using a method of speech–act analysis developed by Dore (1977) to supplement more standard psycholinguistic measures of language development. Results of the first study showed that speech in the two situations was markedly different, but that differences appeared at different levels of data aggregation depending upon the age of the children. Differences were located in the frequency with which different speech acts were used in the two settings, not intra-speech act characteristics of talk. A shift in quality of talk between the supermarket and classroom situations was not obtained in the second study.

Discussion of the two studies centers on the way in which participants' constructions of the task constrain their talk and on the inferences regarding language use that different situations make in speech.

A common observation among psychologists, dating back at least to the 1920s (cf. Issacs, 1930; Piaget, 1923; Vygotsky, 1978), is that children appear to talk in a more sophisticated way and to accomplish more complicated intellectual acts in the course of spontaneous interactions with their social and physical environments than they do when they are being interrogated by adults. There are, generally speaking, two lines of explanation for this observation. Arguing from somewhat different developmental perspectives, Piaget and Vygotsky both claimed that spontaneous problem-solving was, in general, easier than

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problem-solving at the instigation of adults. Although she did not take up this topic in a formal fashion, Issacs interpreted performance differences associated with spontaneous and elicited problem-solving differently. She believed that the young child performed better in spontaneously generated, everyday interactions, because the contents of those interactions are things the child knows and cares about (in contrast with the content of adult questions used for cognitive assessments, which are arbitrary, uninteresting, and perhaps alien in content as well).

This issue has taken on considerable contemporary importance for both practical and theoretical reasons. Practically, the search for cognitive assessment devices that would be valid across different ethnic and language groups has led to repeated reassessments of the standardized cognitive and linguistic tests used to screen young children entering educational programs or for evaluation of those programs (cf. Raizen & Bobrow, 1974). A common claim by critics of standardized tests echoes Issac's dissatisfaction with Piaget many years ago: in the modern context, the claim is that minority-group youngsters know less and care less about the contexts of standardized tests than do their Anglo, middle-class counterparts. In effect, the argument goes, tests are based against minority group youngsters because of test content and language. There is also widespread feeling that the social interactions embodied in standardized testing situations are themselves a source of performance differences. This latter claim has been made most forcefully by William Labov, who stated that failure of Black English vernacular speakers is not the result of a deficit in the children but of failures in the educational system itself: (1) the failure to take into account the child's dialect; (2) the failure to assess Black children's intellectual competence accurately; and (3) the failure to implement policies to remedy (1) and (2).

Labov's work has long been concerned with how "sociolinguistic factors control speech" (1972, p. 209). To make his point in the context of a language competence test, he describes a typical interview with a child in New York City: the boy, eight-year-old Leon, enters a room where there is a large, friendly white interviewer, who puts a toy on the table in front of him and says, "Tell me everything you can about this!" What ensues in this case is a painful sequence of prods from the interviewer and minimal verbal productions from the child. The child answers questions with single words or short phrases, and there are long pauses after the interviewer's questions, pauses of up to 20 seconds. Labov (1972) describes the child's talk as "defensive, monosyllabic behavior." He suggests that "the child is in an asymmetrical situation where anything that he says can literally be held against him. He has learned a number of devices to avoid saying anything in this situation, and he works very hard to achieve this end" (pp. 205–6).

At another time, a Black interviewer, Clarence Robbins, who was raised in Harlem, interviewed Leon about street-fighting. Although the topic and setting were designed to be more evocative, the results were similar to those obtained in the formal assessment task: the adult asked the questions and, when Leon did respond, it was with one-word answers. Since the topic was of obvious

interest to Leon, this case further challenged Labov and his colleagues to search for the sociolinguistic factors that determine speech. In a subsequent interview with Leon, they made the following changes:

1. Robbins brought along a supply of potato chips, changing the interview into something more in the nature of a party.
2. Robbins brought along Leon's best friend, eight-year-old Gregory.
3. Robbins reduced the height imbalance by getting down on the floor of Leon's room.
4. Robbins introduced taboo words and taboo topics.

The results in terms of Leon's speech production were startling. Not only did he go beyond one-word answers but, as Labov puts it, he began "actively competing for the floor; Gregory and Leon talked to each other as much as they did to the interviewer" (p. 210). When Robbins raised the topic of street-fighting in these circumstances, Leon engaged in extensive disagreement exchanges with Gregory.

On the basis of demonstrations like these, Labov concludes that "the observer must not draw a very different conclusion about the verbal capacity of Leon," who here has "no difficulty in using the English language." What's more, for Labov's theoretical purposes, "we obtain the volume of speech and the rich array of grammatical devices which we need for analyzing the structure of Black English vernacular." Labov then generalized.

> We can now transfer this demonstration of the sociolinguistic control of speech to other test situations, including IQ and reading tests in school. It should be immediately apparent that none of these standard tests will come anywhere near measuring Leon's verbal capacity.

Labov's general conclusion was that

> the social situation is the most powerful determinant of verbal behavior and that an adult must enter into the right social relation with a child if he wants to find out what a child can do. This is just what many teachers cannot do. (p. 212)

Although provocative, Labov's conclusion is not necessarily incompatible with developmental theories which assume that providing support for the child is one aspect of any "right" social relation. Blank (1973), for example, would agree with Labov that a defensive, turned-off child cannot reveal competence, but would also assert that in noninstructional dialogue, the intellectual demands on the child are reduced, relative to comparable demands in one-to-one instructional dialogue. Slobin and Welch (1973), who found that their two-year-old subject could not imitate sentences which she had emitted ten minutes earlier, suggest that spontaneous speech encodes "intention to-say-so-and-so," whereas elicited imitation requires the child to process sentences in linguistic terms alone. Such elicitation robs speech of its intentional and contextual support, thereby adding to its cognitive demands. A similar line of interpretation can be found in the recent work of Bloom, Rocissano, and Hood (1976).

A major problem in evaluating the merits of these rival viewpoints is the noncomparability of the data obtained in test and nontest environments. Labov relies on presentation of individual cases for data. These cases, while persuasive, are based typically on the observation of a few informants, instead of on data aggregated over many individuals that would permit group comparisons of the sort psychologists typically use. No attempts are made for systematic comparison of the structure, function, or cognitive demands of talk in various settings. Thus, although we have no reason to question Labov's interpretation of his observations, we are in no position to determine their generality. We also do not obtain much of a feel for the kinds of changes in the settings that produce the kinds of changes he illustrates. The situation which "works" in the previous example is an instance. But what is the class of situations under which it should be subsumed? What are the systematic differences in the tasks being attended to?

Insofar as we are concerned with evaluation on a larger scale, we need to see if there are techniques more accessible to teacher and evaluator for producing variety in children's cognitive performance, both linguistic and nonlinguistic. Thus, we need some way to determine performance change when there are changes in setting, participants, or task. Otherwise, we will be in no position to evaluate competing explanations of situational variations in linguistic or cognitive performance.

In the following pages, we present the results of two studies in which settings, participants, and tasks were varied in planned ways for the same children. The functions of their talk and its structural complexity will be described in terms of a theory of communicative acts formulated by philosophers of language and empirically worked out by Dore (1977a, 1977b) for nursery school children's speech. Our intent is to specify the variations in the structure and function of children's speech across different situations. This is a necessary theoretical prerequisite for understanding situational variability in intellectual behavior and for constructing valid language-assessment techniques.

STUDY I

Pilot Observations and the Development of Procedures

Study I was conducted in a federally sponsored Head Start program situated in a housing project in central Harlem. Its purpose was to develop techniques for producing and describing changes in children's speech by changing the setting in which the speech occurred.

During the first month of school, conversations between the teacher and children in two classrooms were recorded. The recordings were made during formal teaching sessions because virtually the only substantive interaction during the rest of the three-hour program was when the teacher disciplined or monitored

the children's behavior as they played. The teachers directed lessons at the learning of colors, numbers, animals, and geometric shapes. These lessons often proved to be very frustrating for the teacher. The following is an example of one teacher of three-year-olds sitting with the children and showing them a book about animals.

Teacher	*Children*
What is this animal?	A horse
And what color is this horse?	Red, blue
Who knows what color this horse is?	(no answer)
Does anyone know what color this pretty little horse is?	Brown, blue, brown
Does this horse look like Donna's sweater?	Yeah
It's not the same color as her sweater.	
This horse is the same color as my hand and your face, and your face . . .	(Children cheer)
Who knows what this is?	A bird, a bird
Who knows what color this bird is?	It's green!
Only one of us knows our colors?	Green! Green!
What is this animal?	Cat. A cat. A tiger.
'Scuse me, excuse me, children.	
Tad, why did you bend John's finger?	
Stand up and apologize.	Sorry, John.

There were times when the children's verbal interchanges became quantitatively and qualitatively different from their interchanges with the teacher during lesson time. For example, the following excerpt is from a conversation with four-and-a-half-year-old Suzy while sitting with Gillian Dowley in the hallway outside her classroom. She was talking about her brother.

Everytime he went back to Amsterdam (Avenue) and he buy his self a a blow balloon, one balloon that cost and and was one dollar and he and he he um he he always like to play with it 'cause it got one of these stems that blow up and you're supposed to put water in it and he took some water and put it in and you're supposed to take a glass of something and take the and pour it inside the glass and that was a magic trick. And it got everything you need and you have to follow instructions because them got a book with it. You're suppose to put water and soup and every kind of ingredient you're supposed to in it and then you shake it up and it turn into infared or something and and everytime my brother do that magic trick he one day he did it the day and guess what he made? A car, a play car and and and the key was in the car and we took it out and winded it up and then the car was going every place and we did break up cars and then you put it back together. And there were no batteries and I got a wiggle wagon and I always my brothers go out go outside and play with this thing. An my brothers and sisters always do it because them was bad. My mommy have to spank them.

It became evident, while we were getting to know the children in the Head Start center during the first month of school, that the situations in which they were chosen to go to the supermarket with Ms. Dowley (who was working as a teacher's aide in the classroom). Each child was paired with a socially compatible

One day during a formal lesson period the teacher used a large, colored book about a supermarket to stimulate discussion. This discussion period was riddled with problems: At first the children sat silent; then they grew restless; eventually they were shrieking, laughing, and squirming. Yet, the pictures of the supermarket provided a wealth of material to talk about, objects to be counted, colors to be named. It occurred to us that a child encounters a real supermarket in everyday life, so a wide range of school subject matter is naturally embedded in it. We thought that by taking the same children to the supermarket, we might be able to observe how they would demonstrate knowledge of colors, numbers, and relational concepts in the course of conversation about the things they saw and handled. In this way, we would have a means of comparing children speaking about school-related materials in both a school and a nonschool situation.

We decided that the children would go to the supermarket in pairs and be recorded two at a time. We were guided in this decision by Labov's comments on what happens in typical experiments or interviews between one child and one adult, especially if minority group children are involved. If the two children could talk to each other, they could also include the adult in their conversation. The adult could learn from listening what they know or want to know, how they express themselves, and how to enter into their conversations successfully.

During the fourth week of school, the teacher discussed the supermarket as part of the formal lesson period, using the large picture book. In the fifth week, the formal tape recording of the children in the supermarket and in the classroom began. Every morning or afternoon, when it was convenient, two children were chosen to go to the supermarket with Ms. Dowley (who was working as a teacher's aide in the classroom). Each child was paired with a socially compatible peer of the same age. The two children and the research assistant, Ms. Dowley, walked to the store two blocks away and remained there while the rest of the class was in free play activity.

The first few pairs of children would choose a product to bring back to school to share with the class. However, this led to great confusion, so succeeding children were allowed to buy bubblegum for themselves from a machine in the market. The children were sometimes interested in buying things, but were not preoccupied with possible purchases. They were permitted to handle merchandise, but not to abuse it. Only two children were restricted because their behavior ran counter to store regulations. Most of the children never questioned why they were there; they were caught up in the excitement of leaving school to go to the supermarket and ride in a shopping cart. It was a great adventure. We hoped only that the children would enjoy themselves and talk about whatever they wanted to. Most of the children met this expectation, and in only three or four cases did they ask why we were not going to buy things, clearly expressing their desire to do so.

When the two children returned to the classroom the teacher or her assistant talked with them about what they had seen and done. In this way, the context of

interaction was similar to the supermarket situation, in which there had been one adult and two children. It differed in that the research assistant who had taken the children to the market was often present as an observer, and was included in the conversation from time to time. The adults understood that we were interested in how the children used language to express themselves both in and out of school. They were told that any approach that they might adopt for eliciting the children's talk would be of interest to us.

Sometimes when the children returned from the supermarket, the class was still engaged in free activity; sometimes they would be preparing for lunch; sometimes they would be on the playground or just coming inside. Whatever the circumstances, either the teacher or her assistant would talk with the children while the research assistant looked on. Though one adult led these classroom discussions, more than one adult was always included in the conversations.

Formal Data Collection

Twenty-four children were taken on expeditions to the supermarket and interviewed by the adults upon their return. Twelve (7 girls and 5 boys) were 3.2 to 4.1 years of age. They attended the Head Start program from 8:30 to 11:30 a.m. The remaining 12 (5 girls and 7 boys) ranged in age from 4.2 to 4.10 years and attended afternoon sessions at the Center. With the exception of one boy of Puerto Rican parentage, all the children were Black. Two adults, a certified Head Start teacher, and a teacher's aide supervised the children in each classroom. All teachers and teachers' aides were Black. The research assistant was White.

Trips to the supermarket lasted 30–45 minutes. Teachers' interviews with the children when they returned to the classroom averaged about 10 minutes in length. Three-minute segments from the middle of each observation session were randomly selected for transcription and analysis.

Qualitative Description of Results

Comparisons of the speech samples of the children in the classroom and supermarket settings quickly indicated that we encountered several instances which replicated the main features of Labov's demonstration with Leon. Although not every child behaved in a grossly different manner with respect to language production in the two settings, both group and individual differences were striking.

In the next section, we will describe and apply a theory of speech acts to permit a rigorous quantitative and qualitative documentation of this observation. First, however, we will present data taken from individual protocols to illustrate both the extent to which we were able to create the contrasts we

sought and to give the reader an intuitive feeling for those data, which we shall later analyze more formally.

Tony, a boy in the older age group, who was 4.10 years old, simply did not talk in school. After having been in the Head Start for six weeks, he had said almost nothing. The teacher said that he was shy, stubborn, and liked to talk only to his mother at home. Tony went to the supermarket with another four-year-old, William, in the beginning of November. He neither spoke spontaneously nor answered questions as preparations for the trip were made in the classroom. However, as he sat in the shopping cart in the supermarket, he began to see things that he liked; he began to name and talk about them. He seemed to forget himself; he and William both grew more excited. Tony even asked for things to hold.

As soon as he was back inside the school doors, he stopped talking. He spoke a total of fifteen words during the rest of the morning; those fifteen words were in response to nine questions out of a total of sixty-three he was asked. Not all the kindness and interest of the teachers that morning could bring Tony to say anything much about the supermarket!

The following excerpts illustrate these generalizations:

Tony and William at the Supermarket with the research assistant, Gil Dowley:

Adult	*Tony*	*William*
Ooh! Tony, look in here.	Huh?	
Look in here.	I want the cookies.	
Cookies?	Yah, I want that cookies right there.	
Want that cookies?	I want the cookies first.	
Want that cookies? You want the cookies first, Tony?		I want that, I want this.
Those are cupcakes. Do you like cupcakes?	Cupcakes. I like that cupcakes. I like two cupcakes right here.	Cupcakes. Ooh! (squeal)
You like that cupcakes right here? How many cupcakes are there?	Five.	
Five cupcakes, Tony! And you want two of them.		I want two.
		One, two, three, four.

	I want one of them. I like that one right there.	
And you like that one, Tony. And a cowboy, William.		Cowboy
	Cowboy right on the box.	
Cowboy, Tony. rides a horsie	Rides a horsie.	
		Look, look, look!
What?	I like that one.	I like that one.
You like this one, and you like this one.		I like that one. Yah, I like this.
	I like these.	
What's that, Tony? A cheerio bone?	A cheerio bone.	
Who's that?	It's a man goin'.	
It's a girl, it's a frog.	A man a girl	
Isn't that a frog?		
It's a frog. Glasses, Tony, right.	Glass	

Tony, Teacher, and Gil Dowley upon return to classroom:

Teacher	*Tony*
What did you see Tony, besides the big donuts? Show me how big the donuts were. Tony, show me how big that donut was. Come on. How big was the donut? Was it that big, Tony? Look Tony, was the donut that big? Look Tony.	
Gil: Tony, did you tell her about the cakes that we saw?	
Teacher	
Was it a little tiny donut? And then you saw a great big donut? Why didn't you bring me back one so I could eat it? Hmm? Why didn't you bring me a big donut back? What did you have to eat there? What did you eat, Tony?	Hmm?

What did you eat in the store?
Do you remember? Tell me what
it was. (He shows his gum.)

You're showing me. Ooh, look
what Tony has in his mouth.

What is that, Tony? Some chewing gum.

Chewing gum, right. Tony's
got chewing gum. Did Gil buy
you chewing gum in the store?
Oh boy. Did you say thank you?
Good . . .

A Preliminary Quantitative Analysis

When we first began to wrestle with descriptions of these results (cf. Hall, Reder, Cole, & Dowley, 1977), we characterized children's responses in terms of five broad classes of speech behavior (see Table 1): the average number of spontaneous utterances per minute of sampled conversation; the average number of

TABLE 1
Parameters of Speech in Supermarket and Classroom[a]

Type of speech event	Location		Difference
	Supermarket	Classroom	(*t*-ratio)
Mean number of spontaneous utterances/minute	5.8	2.4	3.69[b]
Mean length of utterance (MLU)	3.4	2.9	2.05[c]
% of Questions attended to	92.2%	65.7%	4.67[b]
Mean length of response to questions	3.3	2.6	3.03[b]
Number of grammatical structures	6.9	3.8	3.87[b]

[a]The criteria used to determine the MLU in words in Table 1 differ from those applied to data later in this paper. Most importantly, utterances in the earlier analysis were not scored for their conversational act status; thus an utterance was roughly equivalent to a turn at speaking. Also, false starts and repetitions were not treated in the same way.

[b]$p < .01$ with 22 degrees of freedom.

[c]$.05 < p < .10$ with 22 degrees of freedom.

words per utterance; the proportion of time that the child attended to questions directed toward him or her; the number of words in response to questions; and the number of different grammatical constituents that were observed.

In terms of every one of these measures, the responses of the children, taken as a group, were more complicated in the supermarket than in the classroom.

We also observed that the effect of being in classroom or supermarket was different for the three-year-olds than it was for the four-year-olds. As we originally formulated the matter, measures of linguistic maturity (e.g., mean number of words per utterance) were related to age in the classroom but not in the supermarket. We now would like to phrase this result in a different, but formally equivalent, manner: Overall, the three-year-olds and the four-year-olds were not different with respect to our measures of language behavior in the supermarket; they differed only in the classroom, where the talk of the three-year-olds suffered by comparison with that of the four-year-olds, or by comparison with their own talk in the supermarket.

However we phrase these results, characterization of the talk of these children by summary measures, such as those in Table 1, will not prove useful if we want to construct some hypotheses of how the participants in these interactions produce the differences that are reflected in our summary scores. Certain questions are obvious: "How does the role adopted by the teacher affect the children's talk?", or "Are there any modifications in classroom procedures that would produce the same effects that we observed when we took the children to the supermarket?" Answers require more adequate descriptions of precisely what in the behavior of adults and children produced differences in talk between the two situations. The following section presents an analysis of children's and adults' talk. It is intended to provide the basis for the microdescription we need.

A Speech Act Analysis: Theoretical Rationale

1. Introduction

Many schemes have been proposed for describing the functions of language. Some of these are related closely to the grammatical mood system, in which, for example, the functions of declarative, interrogative, and imperative sentences have been classified as statements, questions, and commands, respectively. Others are based on the broad generalizations that language functions to exchange information, make social contact, influence the behavior of others, and express emotions. These schemes have helped to serve the purposes for which they were created; the former are typical of formal philosophical analyses (e.g., Austin, 1962), the latter are typical of socially oriented, empirical inquiries into language use. Neither approach, in isolation, is useful for describing the function of each utterance as a linguistic act or for describing how specific kinds of social "episodes" are created by speakers through their choice of utterance forms. These two concerns are central to the descriptive system which we seek in order to

account for the influence of social settings, and of educational and interactional tasks on children's speech performance. Our central goal is (1) to characterize the language which mediates between the purely linguistic structure of sentences and the social events in which they are used; and (2) to establish a taxonomy of functions which are realized by the grammar and which constitute a repertoire of acts available for use across different situations.

Halliday (1970, 1973) proposed an essentially functional theory in which linguistic structures are themselves determined by linguistic functions. He views language as having three fundamental functions: the "ideational," expressing cognitive content; the "interpersonal," maintaining social relations; and the "textual," establishing links both to situations and among linguistic elements. In his work on language acquisition, Halliday (1975) specified seven distinct functions in terms of which a child learns language: instrumental ("I want"); regulatory ("do this"); interactional ("me and you"); imaginative ("let's pretend"); and informative ("I've got something to tell you"). Though suggestive, and perhaps central to the acquisition of meaning, this list is too general for our purposes. It does not help to identify the set of linguistic acts older children can perform.

A system that was strongly influenced by Halliday's framework and that attempts to classify the act status of preschool children's utterances, was developed by Wells (1973). Approximately 140 utterance functions were postulated, and they are subclassified by "sequence-mode" (control, expressive, representational, social, tutorial, imaginative). We have found this system too unwieldy. Some of the codes are too content-specific, for example, "command not to verbalize" or "justification of a specific moral matter"; some are not specific enough, such as "statement" or "acknowledgment"; and the acts which regulate conversation are not separated from those which convey content.

In this scheme, the same act type is often repeated under different sequence modes, which partly accounts for the large number of act types. But, more importantly, the acts are formulated to cover a wide array of phenomena, ranging from the purely linguistic (question) to the social (silence filler, evasion). As a consequence, a generality crucial to act types may be lost, and the acts are formulated at different functional levels. Thus, the central problems with this scheme, as well as with the other empirically based speech–act codes for children (including earlier versions of our own), are finding principled criteria for (1) motivating the level of the linguistic act identified, (2) constraining the kinds of acts to be included, and (3) defining a decision procedure for classifying utterances into acts. Although the scheme we propose here does not solve these problems conclusively, it does make explicit the criteria used and it does provide some advantages over other schemes.

Several systems have been proposed specifically to describe grade-school conversations. Mishler (1975) identified several types of question sequences, but did not score utterances that were unrelated to questions. Mehan (1976) scored for nonquestion types, but, because he focused on the social organization

of the classroom he left question, response, and acknowledgment types undifferentiated. Sinclair and Coulthard (1975) offered a list of functions similar to the one we will present, but they, too, focused on acts of teachers that function to promote academic lessons; we feel that they did not capture many of the speech acts preschool children perform in less structured situations.

The system proposed here is based upon the propositional content, grammatical structure, and illocutionary function of utterances. The notion of illocutionary function (discussed below) was developed by philosophers of language in order to characterize systematically the acts performed by utterances and the presumed psychological states that are conventionally expressed by linguistic forms. The use of an imperative form, such as "Get out!", for example, conveys a command and indicates the speaker's desire to have the listener perform the act in question. We have expanded the notion of illocutionary function in two ways to cover all the conversational acts we encountered in the corpus. First, we include acts that regulate conversational interaction but that do not necessarily contain a propositional content or conventional grammatical form – acts such as greeting, calling for attention, rhetorical questions, and verbal accompaniments to physical action. Apart from these *Organizational Devices,* two other types of conversational acts (C-acts) in the current system are based upon their function in conversation: *Responses* exist because of their relation to the *Requests* that solicit them;

TABLE 2

Codes, Definitions, and Examples of Conversational Acts Identified on the Basis of Grammatical Form, Illocutionary Function, and Conversational Contingency[a]

Codes	Definitions and examples of conversational acts
	REQUESTS solicit information, action, or acknowledgment.
RQYN	*Yes–No questions* seek true–false judgment about propositions: "Is this an apple?"
RQWH	*Wh–questions* seek specific factual information (include either–or and fill-in-the-blank question forms): "Where's John?"
RQCL	*Clarification questions* seek clarification of the content of a prior utterance: "What did you say?"
RQAC	*Action requests* solicit a listener to perform (or cease to) an act (or process): "Give me some juice!"
RQPM	*Permission requests* solicit a listener to grant permission to the speaker to perform an act: "May I go?"
RQRQ	*Rhetorical questions* seek an acknowledgment from a listener to allow the speaker to continue "You know what I did?"
	RESPONSES provide information directly complementing prior requests.
RSYN	*Yes–No answers* supply true–false judgments of propositions: "No."
RSWH	*Wh–answers* supply the solicited factual information: "John's here."
RSCL	*Clarifications* supply the relevant repetition: "I said no."

(continued)

TABLE 2 *(continued)*

RSCO	*Compliances* verbally express acceptance, denial, or acknowledgment of a prior Action or Permission request: "Okay, I'll do it."
RSQL	*Qualifications* supply unsolicited information in relation to the soliciting question: "But I wasn't the one who did it."
RSRP	*Repetitions* repeat part of prior utterances.
	DESCRIPTIONS express observable (or verifiable) facts, past or present.
DSID	*Identifications* label objects, events, etc.: "That's a house."
DSEV	*Events* describe acts, events, processes, etc.: "I'm making pizza."
DSPR	*Properties* describe traits or conditions of objects, events, etc.: "That's a red house."
DSLO	*Locations* express direction or location of objects, events, etc.: "The zoo is far away."
	STATEMENTS express facts, rules, attitudes, feelings, beliefs, etc.
STRU	*Rules* express rules, procedures, definitions, facts, etc.: "You have to share your things with others."
STEV	*Evaluations* express attitudes, judgments, etc.: "That's nice."
STIR	*Internal Reports* express emotions, sensations, mental events, etc.: "I like to play." (also include intents to perform future acts).
STAT	*Attributions* report beliefs about another's internal state: "He doesn't know the answer."
STEX	*Explanations* express reasons, causes and predictions: "It will fall."
	ACKNOWLEDGMENTS recognize and evaluate responses and nonrequestives.
ACAC	*Acceptances* neutrally recognize answers or nonrequestives: "Yes," "Oh."
ACAP	*Approvals/Agreements* positively recognize answers, etc.: "Right," "Yes."
ACDS	*Disapprovals/Disagreements* negatively evaluate answers or nonrequestives: "No," "Wrong," "I disagree."
ACRT	*Returns* acknowledge rhetorical questions and some nonrequestives, returning the "floor" to the speaker: "What," "Really."
	ORGANIZATIONAL DEVICES regulate contact and conversation.
ODBM	*Boundary markers* indicate openings, closings and changes in topic: "Hi," "Bye," "By the way."
ODAG	*Attention-getters* solicit attention: "Hey," "John," "Look."
ODSS	*Speaker selections* explicitly label speaker of next turn: "John," "You."
ODPM	*Politeness markers* indicate ostensible politeness: "Thanks," "Sorry."
ODAC	*Accompaniments* maintain verbal contact, typically conveying information redundant with respect to context: "Here you are."
	PERFORMATIVES accomplish facts by being said.
PFPR	*Protests* register complaints about the listener's behavior: "Stop."
PFJO	*Jokes* display nonbelief toward a proposition for a humorous effect: "We throwed the soup in the ceiling."

(continued)

TABLE 2 *(continued)*

PFCL	*Claims* establish rights by being said: "That's mine," "I'm first."
PFWA	*Warnings* alert the listener of impending harm: "Watch out!"
PFTE	*Teases* annoy, taunt, or playfully provoke a listener: "You can't do it."
	MISCELLANEOUS CODES
NOAN	*No answers* to questions (after two seconds of silence).
UNTP	*Uninterpretable* or unintelligible, incomplete, or anomalous utterances.
EXCL	*Exclamations* express emotional reactions and other nonpropositional information.

[a]This list was developed in order to classify the utterances in a videotaped corpus of interaction among seven three-year-old, middle-class children and their teacher who attended a nursery (established at The Rockefeller University for research purposes) three mornings a week for seven months. Four hours, one from each of the final four months of the study and containing about 3,000 utterances by the children, were transcribed and coded. The initial reliability for scoring these, as measured in terms of the initial agreements of two experienced coders scoring independently, was 82%.

The decision procedure for classifying utterances as C-acts was as follows (the details and theoretical justifications for this procedure are discussed at length in Dore, 1977a and 1977b). Determine, in the following order:

(a) the literal semantic reading of the primary proposition of the utterance, on the basis of its logical subject, predicate, adverbial phrases and other constituents (according to Katz, 1972);

(b) the grammatical and prosodic operators on the proposition;

(c) the new, or focused, information; new in relation to both conversation and context (Halliday, 1970);

(d) the speaker's related utterances and nonlinguistic behavior;

(e) the reciprocal and contingent behavior, both verbal and nonverbal, of his interlocutors (Garvey, 1975);

(f) the contextual features directly relevant to the pragmatic status of the utterance (Lewis, 1972).

Acknowledgments exist because conversationalists often verbally recognize *Descriptions* and *Statements* addressed to them; and (teachers especially) evaluate the *Responses* to questions they receive. The other category of C-acts in the system concerns *Performatives,* acts which establish facts by virtue of being uttered; for example, when a child in nursery school says "that's mine," he is given temporary rights of possession over the object referred to. The C-act types performed in nursery-school settings are defined and exemplified in Table 2.

The advantages of this coding scheme are that utterances are characterized as acts-in-ongoing-conversational-sequences. C-acts are not restricted to a limited catalogue of grammatical moods, yet grammar does play a part in signaling the acts performed. Nor are acts determined by propositional content alone, yet their content does signal the topics of talk. Also, acts are not situation-specific; children use the same repertoire in different situations, thus allowing one to compare the relative frequency and complexity of a child's acts across settings. More-

over, focusing on the relations among acts in sequences allows us to identify how speakers orient to each other, how their talk is elaborated in successive turns at speaking, and how topics are changed or extended. More particularly, it demonstrates how speakers mutually construct and perform the task at hand, how the utterances of teachers and children affect one another, and how constructing a speaking turn is partly a matter of following conventions and partly of taking certain rights.

Thus, we are concerned with classifying utterances in a conversation into certain kinds of linguistic acts and sequences of acts. This analysis aims to provide a characterization of what participants in a conversation accomplish by using language; that is, what they are doing in their choice of each utterance, and how their sequences of utterances amount to interactional achievements. In what follows, we provide a theoretical rationale for the level at which we formulate our taxonomy of C-acts. We then provide examples and discussion of the C-acts we identified in our corpora. Moreover, because C-acts are meant to represent the level of linguistic function that mediates between the grammatical forms which express them on the one hand and the interactional purposes for which they are used on the other, we discuss those features of grammar and social interaction that influence the classification of C-acts.

2. The Level of Analysis

The level of linguistic function captured by our formulation of C-acts concerns people using language to get the attention of others, to solicit and contribute information, to get others to do things for them, to convey attitudes such as humor or disapproval, and so on. These functions are closely related to the structure of sentences, as opposed to larger-scale social events, such as using language to give a lecture, conduct a marriage ceremony, or have an argument. There is a tradition in the philosophy of language for dealing with utterances on this functional level. Austin (1962) distinguished between the "constative" aspect of utterances (which is evaluated in terms of truth-values), and the "performative" aspect (which concerns the act being performed by the utterance). "Performatives" such as "I promise to go" are evaluated in terms of whether they are sincerely intended and successful as acts. We intend to capture this performative nature of utterances in our functional analysis.

The Scoring of Acts and Sequences

A *conversational sequence* is a series of speaking turns which share a topic and a reciprocal illocutionary domain; the utterances in a sequence are related not only by content, but also in terms of illocutionary phenomena, such as expectation and fulfillment in question–answer pairs. A speaker who initiates a sequence can be said to "get the floor," because it can be demonstrated that

subsequent utterances are oriented to the initial one until the sequence changes. Any request having a new topic, or nonrequestive utterances which extend the topic (except when in Response or Acknowledgment turns) will automatically bid for a new sequence. In canonical question–answer pairs, for example, the speaker displays the expectation that he will receive certain information, and the hearer fulfills it by providing that information. A sequence can be relatively long, although in our data the average length is between three and five utterances.

We can now illustrate how we score C-acts in conversational sequences. In order to substantiate the scoring of many of the utterances, we made several distinctions beyond the coding of the C-act itself. These distinctions can be construed as particular values of an utterance's form and function. Some values explain why an utterance was coded as it was (e.g., it may have been equivocal illocutionarily); others record additional properties that characterize the conversation (such as whether a subsequent utterance repeats or expands a previous one). These values will be indicated in the comment column. They will be of great value in suggesting hypotheses to lead us from a description to an explanation of our results.

1. Requestive Sequences

We can begin with *requestive sequences,* those that begin with a request. For example,

No.	*Speaker*	*Utterance*	*C-act*	*Comment*
1.	ADULT:	What did you see at the supermarket?	RQWH	
2.	CHILD:	Cookies.	RSWH	
3.	ADULT:	Cookies,	ACAC	
4.		and what else?	RQWH	New sequence

Consider first the grammatical form and propositional content of Utterance 1 (U-1). It is a Wh-question, in the interrogative mood, and presupposes the proposition "You saw *something* at the supermarket." Also, as distinct from this presupposition, the focus of the question can be paraphrased as "identify that *something*."

Utterance 2 supplies information which is directly complementary to the information solicited by the question; it is Wh-information of the sort predicted by the propositional content of the question. Therefore, we code U-2 as a RSWH. As a question–answer pair, this canonical example constitutes a strong convention for English speakers.

Utterance 3 is the adult's repetition of the child's response. It is scored as a neutral acknowledgment because it signals the adult's acceptance (without question or doubt) of the answer. Repetition may also be a way of the adult assuring herself of what she heard, of adjusting the child's pronunciation, or of a number of other interactional functions. But whatever else may be going on,

our analysis of what's accomplished at the conversational act level stands. Utterance 4 is another Wh-question, one which extends the topic slightly (the teacher apparently in search of further Wh-information). It thus begins another requestive sequence.

An array of additional examples of sequences will display the variety of their qualities. Consider:

No.	*Speaker*	*Utterance*	*C-act*	*Comment*
5.	ADULT:	Does your mommy ever give you orange juice?	RQYN	
6.	CHILD:	No.	RSYN	
7.	ADULT:	No?	ACAC	Interrogative
8.	CHILD:	My mother had ice cream on that, on that big, big cherry.	DSEV	New sequence

Here we have a self-reference (as opposed to an examination, as distinguished below), Yes–No question about the child's (nonacademic) experience. The child provides a canonical reply (an affirmative or negative answer being the only canonical responses to Yes–No questions). One interesting aspect of this sequence is that the acknowledgment is in interrogative form, and thus suggests that the adult may doubt the child's reply (though accepting it, as well). It is certainly reasonable that the adult would be surprised that the child's mother never gave him orange juice; but what's important for our conversational analysis is that, because the acceptance is in interrogative form, the child is free to take it as an additional Yes–No question, as some children did. In the present case, the child does not take it as a question, but instead starts a new sequence.

Here is a sequence which displays how an interrogative acknowledgment can be taken as a question, and it also shows what the children's qualified answers look like:

No.	*Speaker*	*Utterance*	*C-act*	*Comment*
9.	ADULT:	Do you have any dogs?	RQYN	
10.	CHILD:	No.	RSYN	
11.	ADULT:	No?	ACAC	Interrogative
12.	CHILD:	Yea,	RSYN	
13.		I got a dog toy.	RSQL	Semantic
14.	ADULT:	A toy dog?	ACAC	Interrogative
15.	CHILD:	Yea.	RSYN	
16.	ADULT:	Oh!	ACAC	Exclamation

Utterances 10 and 13 by the child are intelligible, which is why the adult's interrogative acknowledgments are not scored as Clarification questions. But the acceptances (ACACs) are equivocal, insofar as they doubt the child's answer. In these two cases, the child does take them as additional questions. In fact, he changes his initial negative answer and then supports it with a qualification (U-13); the comment here means that it is scored as a semantic qualification (as

opposed to a pragmatic qualification; see below), because it provides a lexical distinction beyond that solicited by the question.

In U-14, the adult again accepts the response questioningly, but here she also rearranges the child's word order, which accomplishes the additional pedagogical function of expanding the child's utterance form toward the conventional adult model. This, too, the child takes as a question. And the teacher ends the sequence with an ACAC in exclamatory form, which does not solicit a response.

The following two examples, which occurred a few moments apart, illustrate the distinction between semantic and pragmatic qualifications in children's speech. They also provide an example of how adults often double-acknowledge responses:

No.	*Speaker*	*Utterance*	*C-act*	*Comment*
17.	ADULT:	A green what?	RQCL	
18.	CHILD:	A a green . . .		
		you cut off the skin.	RSQL	Pragmatic
19.	ADULT:	Yea,	ACAC	
		You're right!	ACAP	Exclamatory
20.	ADULT:	Is this green?	RQYN	
21.	CHILD:	That's orange.	RSQL	Semantic

In U-18 the child provides information about the practical, "real-world" conditions regarding the preparation of vegetables, so the response is pragmatically related to the question. (The majority of pragmatic qualifications concern the conditions on requesting, e.g., an "I don't know" answer displays the requestee's lack of knowledge, an "I don't want to answer" displays his desire, etc.; the conditions on requests are formulated in the rules proposed in Dore, 1977b.) U-21 is a semantic qualification, because information in the response contrasts with lexical information in the question. Lastly, here, the adult not only accepts U-18; she positively approves of it by virtue of her evaluative exclamation.

A particularly revealing sequence in our data that shows how long a sequence can last and that displays right-taking by a child is as follows:

No.	*Speaker*	*Utterance*	*C-act*	*Comment*
22.	CHILD:	Uh, do elephants eat,		
		uh, do elephants eat		
		spaghetti?	RQYN	
23.	ADULT:	Do elephants eat		
		spaghetti?	RQCL	
24.		No.	RSYN	
25.		You know what they/		
		eat?/	RQRQ	
26.	CHILD:	/Yea./	RSYN	
27.		What?	ACRT	
28.	ADULT:	Peanuts.	RSWH	
29.	CHILD:	An el . . . and el,		
		and spaghetti?	RQYN	

30.	ADULT:	No, they, elephants don't eat spaghetti.	RSYN
31.	CHILD:	I saw a elephant in a zoo ate a spaghetti and he ate a popcorn and some a dese.	ACDS DSEV

The child asks a slightly unusual question. The adult repeats it (probably to be sure of what the child said). The teacher then answers the question flatly and asks a Rhetorical question. But, before the teacher finishes, the child answers it as a Yes–No question (the slash marks indicate points of overlap in speaking turns). When the adult finishes the question, she returns the floor as is typically done when responding to a Rhetorical question. After the adult gives the child the obvious "peanuts" answer, he asks about spaghetti again. Again the adult answers negatively. Finally, the child describes an experience of his which contradicts the adult's answers, so we score this conversationally as a Disagreement (not a Qualification, because it was not in response to a question). The child perseveres in his questioning and takes the liberty to disagree with an adult. Perhaps more importantly, the adult makes these options available; she listens to his question several times, provides the typical "peanut" information, and does not chastise him in any way for disagreeing.

2. Nonrequestive Sequences

Now let's consider some nonrequestive sequences:

No.	*Speaker*	*Utterance*	*C-act*	*Comment*
32.	CHILD:	An' you know what?	RQRQ	
33.		My mommy gave me some a dis.	DSEV	
		Um, mama, let ma . . . mama . . . let my . . . mommy give me some of this.	DSEV	
34.	ADULT:	Oh, really?	ACAC	Interrogative
35.	CHILD:	Some a baby food.	DSID	
36.	ADULT:	Oh.	ACAC	

37.	CHILD:	I don't like that kind of/food/.	STIR	
38.	ADULT:	/D'you/ like that kind of food?	RQCL	
39.	CHILD:	I like dis, this, an dat.	STIR	

40.	ADULT:	These are the fruits.	DSID	
41.		See, these are the fruits we have.	DSID	

42.	CHILD:	An these are the fruits?	RQYN
43.	ADULT:	No, this isn't fruit . . .	RSYN

There are four sequences here (broken lines indicated segment breaks). Although the child begins the first sequence with a RQRQ, this is not scored as a requestive sequence because he does not pause, and because he produces descriptions which "get the floor." After the adult acknowledges his utterance, the child goes on to identify what he is talking about; he specifies the content of the pronoun of his previous description. The adult again accepts, and the child extends the topic in U-37 (which changes the sequence) by a STIR. But before the child finishes, the adult asks him a question. This is scored as a Clarification question because it repeats the child's utterance and does not introduce new information.

In U-40, the adult resumes a prior topic. This is a one-turn sequence because, although it has some effect "on the floor," the child's orientation to her description goes well beyond a mere acknowledgment. The child points to an object different from that pointed out by the adult and asks a question about it. Questions that extend the topic (which includes the involvement of a different object) always change the sequence. In short, a new question always gets the floor.

Two patterns are discernible in the nonrequestive sequences initiated by the children in our sample: those in which the adults acknowledge them, as they would a response; and those in which adults ask questions about the topic introduced by the child. For example:

No.	*Speaker*	*Utterance*	*C-act*	*Comment*
44.	CHILD:	. . . two orange and two apples.	DSID	
45.	ADULT:	Two oranges and two apples?	ACAC	Interrogative

46.		This is a package of apples, right?	RQYN	
47.	CHILD:	Yea.	RSYN	
		.		
		.		
		.		
48.	CHILD:	Look! Look! Look!	RQAC	
49.		We had this for school.	DSEV	
50.		We had/that at school/.	DSEV	
51.	ADULT:	/What is the name of it?	RQWH	
52.	CHILD:	Was 'tatoes.	RSWH	
53.	ADULT:	Potatoes.	ACAC	

In U-45, the adult repeats the child's description, expanding it by adding the plural morpheme of the adult model. And in the same turn she asks a question, extending the topic only slightly. A few minutes later, the child initiates the nonrequestive sequence from 48 to 53 (he does not pause after the RQAC). But as he repeats his description, the adult takes the opportunity to ask a question.

3. Marking Additional Values of C-Acts

At this point, it is best to discuss the remaining distinctions we make in scoring our protocols. Thus far we have concentrated on the coding of C-acts; these are indeed central, but they are best understood in relation to the array of marked features with which they co-occur. That is, in order to understand fully why a given C-act is coded the way it is, it is necessary to see the additional values which that utterance has. In other words, we score first the dominant conversational function of the utterance as its C-act, but additional values must be scored in order to capture the utterance's potential for multiple functions. These marked values are particular features of the parameters of utterances: the parameters we code for are topic, grammatical form, marked illocutionary value, interactional value, and content. The notion of *marking* used here is taken from traditional linguistic theory: It refers to the fact that certain forms conventionally have a characteristic value and that a change in form can *mark* a different value. The singular noun "boy," for example, is *marked* for plural by adding an "s"; in our scheme, a RQAC is conventionally conveyed by an *unmarked* imperative form, but can be noncanonically conveyed by a marked interrogative form, such as "Why don't you pick it up?" We code only marked values on our protocol forms. These notions will be clarified by providing examples of each value on each parameter. For convenience, we will focus on one value at a time, add to these, and a fully scored protocol form will emerge in the final examples.

From the flow of conversation we first segment the talk by speaker (SP) into utterances, then into turns (TN) and then into sequences (SQ). After these segmenting principles are applied, we apply evaluating principles, beginning with the determination of the C-act. Then we code for shifts in *topic.* The marked values are *extend, change,* and *resume. Ext*end refers to utterances which remain in the same semantic domain but which shift to other aspects of it; for our data *ext*end is defined as the preservation of a primary sentence constituent (subject, predicate, or adverbial phrase or clause) with the extension of other constituents. *Chang*e refers to shifts to different domains. *Res*ume refers to returns to previous topics of the conversation. Each time an utterance is coded for a marked value on topic, the sequence changes. When there is no shift in topic (excluding the conventional information in Responses and Acknowledgments) the sequence continues; many examples of topic shifts have been given above.

The parameter of *form* is divided into two parts: the *relation* in form of succeeding forms to preceding ones, and the *grammatical* form of utterances having an unconventional force. There are three marked values for relational form: *rep*etition for partial or complete repetitions of prior utterances; *exp*ansion for utterances which expand prior ones in various ways; and *ans*wer for responses of speakers who answer their own questions. Each of these is tagged with an '-s' for self-repetitions, etc., or '-o' for other. The values of grammatical form concern sentence mood and the predictability of response types. Action requests, for

example, which are canonically conveyed by the imperative mood (as in "Pick up the blocks!") may also be conveyed noncanonically by utterances in the interrogative, declarative, or exclamatory moods (as in "Why don't you pick up the blocks?", "The blocks have to be picked up," and "Oh! The blocks!", respectively.) There is a value of *noncan*onical for responses which do not provide the grammatically most predictable information to requests. Yes–No and Wh-questions, for example, canonically receive a "yes," "no," or Wh-information response; when a qualified answer is given in reply to these questions, *noncan*onical is scored in the grammatical form column.

Examples of the above values can be seen in:

Sq.	*Tn.*	*Sp.*	*Utterance*	*C-Act*	*Topic*	*Relation*	*Form Grammar*
A	1	ADULT	White potatoes, right?	RQYN	ext	exp-o	
	2	CHILD	uh-uh (no)	RSYN			
			They, they, they rite.	RSQL		exp-o	Noncanonical
	3	ADULT	*Wh*ite! *Wh*ite potatoes.	ACDS	ext	exp-o	
B	4	CHILD	Look!	RQAC	ext		
			What is this?	RQWH			
			Onion.	RSWH		ans-s	
			That look like onions.	STEV			
	5	ADULT	It is.	ACAC			
			That's exactly what it is.	ACAC		exp-s	
			Onions.	ACAC		rep-o	
C	6	CHILD	Turn me to the next block!	RQAC	chan		

In the child's second utterance in turn 2 of Sequence A, he produces the peculiar response containing "rite." This is a noncanonical qualification because the information is not formally predictable from the form of the RQYN. The adult disagrees and strongly stresses the /w/ of "white" to signal her intention to correct the child's pronunciation. In B, though the child answers his own question, the adult nevertheless provides multiple acknowledgments. The child then changes the topic to begin Sequence C.

Technically, the term noncanonical refers to the relation between a response and the *form* of the request which elicits it. All RSQLs are by definition noncanonical because they do not supply the information solicited by the form of the eliciting question. There are several kinds of noncanonical responses. In our protocols, the majority were to equivocal questions. That is, the functions of

certain requestive forms are often equivocal. Examples are:

				Form	*Function*
Sq.	*Sp.*	*Utterance*	*C-act*	*Grammar*	*Illocutionary*
D	ADULT:	Tell us what you saw at the supermarket!	RQAC		Equivocal
	CHILD:	Fruits.	RSWH	Noncanonical	
E	ADULT:	Do you know what this is?	RQYN		Equivocal
	CHILD:	A apple.	RSWH	Noncanonical	
F	ADULT:	Did she tell you where the milk came from?	RQYN		Equivocal
	CHILD:	From a cow.	RSWH	Noncanonical	
G	ADULT:	Why don't you tell us what you saw?	RQWH		Equivocal
	CHILD:	Okay.	RSCO	Noncanonical	

In Sequence D, the form of the request is imperative, therefore it is scored as a RQAC. But because the main verb is one of telling, an obvious response is a RSWH, and this is noncanonical to an RQAC. In E and F, the RQYN form contains an embedded Wh-question, thus they are equivocal because the child can supply Yes-No information or Wh-information. Sequence G is the reverse of D, in a sense; it is an idiomatic Wh-form which is often used to convey commands in English. The child in this case takes it as a command, but he could have provided either "why" or "what" information. From the point of view of scoring the protocols, the configuration of values – that is, equivocal requests and noncanonical responses – capture the facts necessary to account for the relations between form and function in these cases. The configurations display the diversity and the potentiality of functions of some utterance forms.

In moving to the next column on the protocol form, the *illocutionary function* column, we have come to the theoretically most crucial aspect of the coding scheme. A small digression is thus warranted. The theoretical framework underpinning the scheme is most directly reflected by the choices we make concerning illocutionary function. Recall that in the C-act column we record the primary potential illocutionary force of the utterance on the basis of its grammatical form and conversational contingency. Each scoring of a C-act is essentially then a hypothesis about *how the speaker intends his utterance to be taken and what he expects the listener to do about it.* As we have seen, questioners expect answers, requesters of action expect that action to be performed. Presumably, the speaker of a nonrequestive statement or description expects the proposition of his utterance to be accepted (believed) as true, appropriate, accurate, etc., by the listener.

The illocutionary column is meant to capture the additional illocutionary values that an utterance may have, i.e., potential illocutionary intentions or beliefs which may motivate the speaker's choice of an utterance in a given situation.

Accordingly, the most important and pervasive value marked in the illocutionary column is *equivocal.* Quite simply, but in point of fact, most utterances in most conversations must be unequivocal; otherwise speakers could not exchange information as smoothly as they do. We would more often surprise one another. Equivocality of function (i.e., of speaker intention) derives from the fundamental fact that there is no isomorphic relation between form and function in language.

Another value that is marked for additional illocutionary value is *question,* which is a potential value of acknowledgments in an interrogative form. These have already been discussed, but the examples below will indicate how these interrogatives function to question the child's response as well as show how they differ from Clarification questions:

				Form	*Function*
Sq.	*Sp.*	*Utterance*	*C-act*	*Grammar*	*Illocutionary*
H	ADULT:	What did you see, D.	RQWH ODSS		
	CHILD:	Orange.	RSWH		
	ADULT:	What?	RQCL		
	CHILD:	Orange and candy.	RSCL	exp-s	
	ADULT:	You saw what?	RQCL		
	CHILD:	Orange and candy.	RSCL	rep-s	
	ADULT:	You saw oranges and candy?	ACAC	inter	Question

The adult's second two questions are RQCLs because she apparently did not understand the child's response. In the last question, she acknowledges what he said, but the interrogative form of the ACAC suggests that she may question his response. In this case, the child did not have the option to answer the ACAC because the adult went on to start another sequence. Thus, from the child's point of view, these interrogative ACACs are also equivocal, as evidenced by the fact that children often answer them as RQYNs.

The other two values marked in the illocutionary column are *semantic* and *pragmatic.* They indicate the kind of qualification manifested by the RSQLs described earlier in this section.

In addition to illocutionary values, the function parameter also includes interactional values. The values scored for *interactional function* concern social and organizational factors. On the one hand, certain kinds of utterances indicate the interactional task the participants are involved in and, on the other, certain tasks

invoke certain utterances. *Exam* marks a type of sequence, as well as marking a value of an utterance. It is initiated by an examination question, as distinct from a question which genuinely seeks information for its own sake. Adults, and especially teachers, regularly ask children questions to get them to display their knowledge. The adults know the answers to these, or at least know what would count as an appropriate answer (usually from among a small set of alternatives). As a rule, the primary criterion for determining if a question was of the examination type was whether the adult knew the answer. But how does one know this? It could be argued that adults would not ask such trivial questions if they were not trying to check the child's competence, but we sought other grounds for assigning *exam* values to a question.

For our data, we have three sources of evidence for scoring examination sequences. The task, in terms of the adult's objectives, was to get the child to verbalize about objects while in the supermarket and to answer questions about these objects during the question–answer periods. While in the supermarket, adults asked questions about the names and attributes of common objects *when both the adult and child could see the objects before them.* Adults could hardly not know the answers. Most importantly, the adults regularly displayed that the task was an examination of acknowledging the children's responses, i.e., evaluating the appropriateness of the responses. This utterance in the third speaking turn of a sequence constitutes the strongest evidence that the task is an examination.

In this corpus, there are three other values marked for interactional functions. The adults *supervise* the children, in terms of social organization, and occasionally *instruct* them; and the children occasionally *narrate* their past experiences or fantasies. Among the supervisory sequences were the following:

				Form		*Function*	
Sq.	*Sp.*	*Utterance*	*C-act*	*Relat*	*Grammar*	*Illocut*	*Interact*
O	ADULT:	Come here!	RQAC				supervise
		I want to ask you something.	STIR				
		Sit down!	RQAC				
		Let me ask you something.	RQPM	exp-s		equiv	
		Where did you go?	RQWH				exam
	CHILD:	Store.	RSWH				
	ADULT:	You went to where?	RWCL	exp-s			
	CHILD:	To da store.	RSCL	exp-s			

	ADULT:	Yes,	ACAC				
P		Go play, Gn!	RQAC				supervise
Q		What did you buy?	RQWH				exam
	CHILD:	Cookies.	RSWH				
	ADULT:	Cookies?	ACAC	rep-o	inter	equiv	

This example illustrates that there are two kinds of *supervisory* sequences: one in which the requestee is being disciplined somehow and one in which other members are organized around the task at hand. In Sequence O, the teacher precedes her questioning with two commands, a statement, and a permission request (but this last is actually a polite form of commanding, since she does not pause to receive permission). The first four C-acts support the questioning; they set the tone of interrogation, as it were. In Sequence P, the RQAC is directed to a child other than the requestee; it effectively excludes the other child from the task of examination.

Another marked interactional value, *instruct*, on sequences of the types that the adults accomplish, is exemplified in the following sequences:

				Form		*Function*	
Sq.	*Sp.*	*Utterances*	*C-act*	*Relat*	*Grammar*	*Illocut*	*Interact*
R	ADULT:	See the chicken?	RQYN			instruct	
		This is a whole chicken.	DSID				
		See the whole chicken?	RQYN	exp-s			
	CHILD:	. . . whole chicken.	RSRP	rep-o			
S	ADULT:	And these are the parts of the chicken.	DSID			instruct	
		This is the drumstick.	DSID				
	CHILD:	That ain't no drumstick.	ACDS				
	ADULT:	The drumstick.	DSID	rep-s			
		Do you/like . . .	UNTP				
	CHILD:	That ain't no drumstick.	ACDS				
	ADULT:	Yea,	ACDS				

These are called the drumsticks.	STRU	exp-s

In these sequences, the adult is providing the child with information instead of getting him to provide it. As in Sequence R, children characteristically merely repeat information that is relatively novel to them. But in Sequence S, the child disagrees (twice, the second time as an interruption) with the adult.

The final interactional value, the one marked for child-directed sequences, occurs when the child begins to *narrate* events:

				Form		*Function*	
Sq.	*Sp.*	*Utterance*	*C-act*	*Relat*	*Grammar*	*Illocut*	*Interact*
T	CHILD:	He flyin.	DSEV				narrate
		He got that racin car, evil-kenevil	DSID				
		. . . jump up.	DSEV				
		It stop.	DSEV				

Instruct and *narrate* are scored for sequences or parts of sequences when more than one C-act accomplishes that task; *supervise* can be scored for one C-act sequence, such as when a child is excluded from a task by an adult's RQAC.

A final matter of concern in applying the C-act system to our data has to do with the *content* of questions. By *content* is meant not the proposition or what is talked about, but rather the level of question in terms of the cognitive content required to answer it. There are four kinds of content values: choice; product; process; and self-reference. In *choice* questions the requestee must select from among a set of alternatives (usually two) which are readily available; Yes–No questions, either–or questions, and questions presenting more than two alternative answers are of this kind. *Product* questions elicit a particular answer, typically expressible in a word or phrase, and thus require knowledge of a specific fact and are not as amenable to guessing as are choice questions; "what," "where," "how many" are among this type. *Process* questions require a still more complex level of cognitive content; they require the integration of several facts, or at least a display on the requestee's part of relationships among facts; "why" and "how" questions are of this sort, and typically they elicit grammatically complex answers. *Self-reference* questions solicit information about the requestee's past experience or internal state; they do not deal with academic subject matter, and they usually contain a grammatical reference to the requestee or an internal state verb. The first three content types are characteristic of examination sequences; the last occurs in nonexamination sequences. Thus, two coding decisions are necessary for proper scoring: (1) whether the question is academic or self-reference; (2) if academic, which of three types.

With these distinctions in mind, we now turn back to the data from our corpus to determine how a conversational act analysis can enrich our understanding of differences between the children's talk in school and in the supermarket.

A Quantitative Analysis of the Results of Study 1 Based on Conversational Acts

One of the major goals in applying the C-act code to these data was to give a more informative account of the factors that produced the overall quantitative differences in children's talk, summarized in Table 1.

With the coded protocols in hand, we returned to score for the mean length of C-acts in words (mean length of an utterance: MLU) as an indicator of the complexity of the children's talk. Each coded C-act was scored for the number of words which constituted it. Our criterion for a word was any independent lexical item that contributed to the content of the utterance. Excluded from the word count were: (1) incomplete or uninterpretable items, so utterances such as "I want a . . ." were neither coded nor counted for MLU; (2) false starts and rephrasings, so "I want . . . we want to go" was four words; and (3) contractions, so "I wanna go," "We gonna go," and "That's a apple" each counted as three words.

As a result of this scoring procedure, we obtained an MLU count for each C-act that occurred once or more for each child in each of the two settings. A

TABLE 3
Mean Length of Utterance Grouped According to C-Act
Three-Year-Olds[a]

	Supermarket		Classroom	
C-Act	Frequency	MLU	Frequency	MLU
RSWH	28	1.92	72	2.57
RSYN	32	1.68	41	1.45
Other RS (responses)	37	1.98	11	2.12
Qualifications	11	2.46	6	5.25
Questions	24	3.37	4	2.66
Requests	36	2.87	16	2.12
Identifications	31	1.90	–	–
Descriptions	83	4.30	11	5.75
Average MLU		2.82		2.14

[a]The C-acts listed in Table 1 were aggregated for Tables 3, 4, and 7 in the following way: Wh-answers, Yes–No answers, Qualifications, and Identifications remain the same as in Table 1; Questions include Wh-questions and Yes–No questions; Requests include clarification questions, action requests, permission requests, and rhetorical questions; Descriptions include descriptions of events, properties, and locations as well as all statements.

TABLE 4
Mean Length of Utterance Grouped According to C-Act
Four-Year-Olds

	Supermarket		Classroom	
C-Act	Frequency	MLU	Frequency	MLU
RSWH	39	1.9	87	3.1
RSYN	16	1.5	22	1.7
Other responses	38	2.3	15	1.4
Qualifications	9	3.1	5	4.3
Questions	18	3.0	8	3.7
Requests	42	3.1	10	2.9
Identifications	27	1.6	4	3.7
Descriptions	78	4.5	36	4.7
Average MLU		2.7		2.7

number of the possible C-acts occurred only rarely and for only a subset of the children, so for purposes of quantitative analysis, we sought a level of aggregation that would retain the structure of the individual C-act codes, but at the same time produce an aggregate frequency of occurrence that was not trivial. The C-acts used for this purpose are listed in Table 3. A specification of individual C-acts and the classes under which they are subsumed can also be found in that Table.

You will recall from Table 1 that the average utterance is approximately half a word longer in the supermarket than in the classroom. What does the breakdown of MLU by C-act class tell us about the sources of that difference? In order to answer this question, it is necessary to keep in mind both the frequency of occurrence of each class and the MLU of that class in the classroom and supermarket.

Looking first at responses to Wh-questions (RSWH), we see that the MLU in the classroom is longer than in the supermarket and that there are more than twice as many such C-acts in the classroom. This is not the only C-act class in which the MLU runs counter to the summary MLU presented in Table 1. The MLU for response Qualifications (RSQL), Identifications (DSID), Descriptions (DSCP) also favors the classroom, but there are too few instances of these classes to warrant much consideration. Rather more important is the fact that the most frequent C-act in the supermarket – Descriptions – is two words longer, on the average, than the very frequent RSWHs in the classroom. Questions and Requests are also more numerous in the supermarket. From the figures in Table 3 it is clear that the average greater length of three-year-old's talk in the supermarket is primarily the result of increased frequency of long Descriptions. We will return to a discussion of these results, but first it is instructive to examine the same set of results for the four-year-olds (Table 4). Like the three-year-olds, the four-year-olds give longer responses to Wh-questions in the classroom than in

the supermarket. The difference between the two settings in terms of both frequency and MLU is greater than was the case for the three-year-olds. The most significant other comparison concerns Descriptions. This class of C-acts is, again, the most frequent in the supermarket. However, it is the second most frequent class of C-acts in the classroom; it is the longest C-act in each setting and *longer in the classroom than in the supermarket.* The relative frequency and longer length of Descriptions and RSWHs are largely responsible for the fact that, averaging across C-acts, the MLU in the classroom equals the MLU in the supermarket.

Contrasts between the three-year-old and four-year-old corpora at this level help to locate the similarities and differences between them. Consider first the supermarket setting. In summary terms, the MLU of the four-year-olds is slightly shorter than that of the three-year-olds. The difference, however, is not statistically significant. The summary MLU similarity, referred to above, extends to several C-act classes as well. But this global homogeneity belies diversity for the most salient C-act classes. In particular, the average similarity arises because the three-year-olds produce longer utterances for Identifications and Questions, whereas the four-year-olds produce longer Qualifications, Requests, and Descriptions. In light of the data comparing the two age groups in the classroom, the lack of MLU differences in the supermarket is particularly noteworthy.

Turning to a comparison of the two age groups in the classroom, the source of the age-related difference is particularly clear. The four-year-olds give more Wh-responses and give longer responses than do the three-year-olds. The three-year-olds are asked almost twice as many *Yes–No* questions, which are given short answers by *both* age groups. Finally, the four-year-olds offer far more Descriptions.

Summary

The net effect of the pattern of questions asked by the adults, descriptions offered by the children, and the MLU associated with each is to produce the overall difference in MLU between the two age groups in the classroom.

Account of Results in Study 1 in Terms of Conversational Analysis

The primary facts to be explained about Tables 3 and 4 are: the greater frequency and MLU of RSWHs in the classroom for both age groups; the greater proportion of RSWHs relative to RSYNs for four-year-olds, especially in the classroom; the longer MLU for descriptions in general and their greater frequency in the classroom for four-year-olds in particular.

Certain characteristic differences in the task which the adults and children established in the supermarket and classroom settings are quickly made apparent

TABLE 5
Parameters of *Adult* Talk
(Except for Child-Initiated Sequences) which Indicate
that the Task in the Classroom Was an Examination

	Supermarket	Classroom
Total number of questions	118	243
Examination questions	66	181
Self-reference questions	39	18
Proportion of acknowledge sequences to the total	0.19	0.55
Nonrequestive utterances	71	42
Child-initiated sequences	272	65

in their talk. The adults treated the task in the classroom as an examination; intuitively, their talk reveals this because they ask so many more questions in the classroom than in the supermarket. But the predominance of the examination feature of the classroom interaction is apparent in more than the frequency of question-asking and answering; it is recoverable by examining the C-acts for the kinds of additional illocutionary values explained on pages 140–147, as well as interactional properties that encompass sequences of C-acts. This interrogation feature of the classroom talk is corroborated by several other related conversational behaviors recovered from our analysis. Table 5 summarizes features of *adult* talk: a far greater proportion of classroom questions are linguistically marked as examination questions, less of them are self-reference questions, and a much higher proportion of responses are evaluated for correctness by the adult; fewer nonrequestive utterances are produced by adults, and the children do not initiate as many sequences in the classroom. All of these characteristics taken together suggest that the adults' definition of the task-as-examination produced the greater relative frequency of RSWHs in the classroom.

Most of these points are illustrated by the following segment of transcript from a classroom session:

Tn.	*Sp.*	*Utterance*	*C-act*	*Comments*
1	ADULT 2:	What else did you see?	RQWH	
2	CHILD 2:	We saw meats.	RSWH	

3	ADULT 2:	What kind of meats did you see?	RQWH	A 2 tacitly acknowledges previous answer
4	ADULT 1:	What kind of meats, yeah?	RQWH	
5	CHILD 2:	We saw fish.	RSWH	
6	ADULT 1:	Any, any beef steer meat?	RQYN	
7	CHILD 2:	Yeah	RSYN	
8	CHILD 1:	Yeah	RSYN	
9	CHILD 2:	We have meats, yeah.	RSWH	
10	ADULT 1:	Uh huh.	ACAC	
		What kind of candy did you see?	RQWH	(candy mentioned earlier by Child 1)
11	CHILD 1:	We saw, we saw chewing gum candy.	RSWH	
12	ADULT 1:	Uh huh.	ACAC	
13	CHILD 2:	And we saw potato chips.	RSWH	
14	ADULT 1:	Yeah.	ACAC	
		What else?	RQWH	
15	CHILD 2:	He saw a soda.	RSWH	
16	ADULT 1:	Soda.	ACAC	
		I was going to say, what about things to drink?	RQWH	
17	CHILD 1:	Pepsi	RSWH	
18	ADULT 1:	Pepsi, very good.	ACAP	

Next we want to consider factors which influenced the production of longer MLUs for RSWHs for both groups of children in the classroom. This result, on the face of it, cannot readily be explained by claiming the children were more at ease, more interested, or, primarily, more enthusiastic about talking with their adult interlocutors. In general, the kinds of explanations invoked by Labov (1972) to explain Leon's language behavior in test and home appear inappropriate. Nor do we have any reason to expect that the intellectual demands of answering Wh-questions are less in the classroom than the supermarket.

In the supermarket, when asked "What is that?", the child can observe the object being referred to (usually pointed at by the adult or at least in the mutual

line of regard) and produce the correct one-word label if he knows it. But in the classroom, the child has no such environmental support for his answer. He must search his memory for the required domain of information and make decisions of several different orders. When asked the deceptively simple question "What did you see at the supermarket?", the child must remember many different sets of items and decide which item(s) are appropriate in responding to the question. Thus, on both the sociolinguistic ground which led us to take children to the supermarket in the first place and upon a post hoc "cognitive demand" basis, it would seem reasonable to hypothesize that the task of responding to Wh-questions would be more difficult in the classroom than the supermarket, and that these difficulties would lead to shorter answers.

What this analysis leaves out, but a speech–act analysis makes clear, is that the interactional demands for an appropriate response are different in the two settings. Negative cognitive and sociolinguistic factors may have been at work in the classroom, but there is clear evidence in the corpus that the children were responding to different interactional demands in the two settings which helped to produce the patterns of results in Tables 3 and 4. Their relative success in dealing with these interactional demands explains the longer responses to Wh-questions in the classroom. As we will see, the three-year-olds experienced some difficulties in this task, which the adults oriented to in specific ways that reduced the overall task demand and simultaneously reduced the overall MLU for the three-year-olds in the classroom.

The interactional factors coded in the language to which we are making reference manifest themselves in several ways. First, we can distinguish three classes of Wh-questions that vary in the length and complexity of a response which could be considered adequate: (1) "what," "which," and "who" solicit the names of objects, events, places, and people; (2) "when," and "where" solicit phrases of time and place; and (3) "why" and "how" solicit reasons, explanations, processes, etc. Each of these three types requires increasingly longer answers: nouns, adverbial phrases, and sentences, respectively. However, the complexity of the question is not entirely determined by the interrogative pronoun. For example, questions like "What did it look like?" or "What are the big things you saw?" encourage longer responses than simpler questions, such as "What is it?" and "How many . . ."

When we compare the two settings in our corpus for the complexity of Wh-question type asked by the adults, we find a major difference in the kind of question asked. In the supermarket, approximately 98% of the RQWHs are of the simpler "What is that?" sort. Only 40% of the classroom Wh-questions were of this simpler kind. Wh-questions asked in the classroom were predominantly complex (including the more complicated "What else did you see. . . ?" sort of question mentioned above). Thus, relatively speaking, the type of question asked by the adults required a longer response for the response to be informationally and interactionally appropriate in the classroom, as we shall demonstrate below.

Another feature of responses to questions in the classroom that operated to produce longer answers, irrespective of question type, was the fact that the children saw many items of classes queried by the teacher, so that in many cases, longer answers contained a list of items, rather than a single item in the answer.

Finally, there is considerable evidence that both children and adults, recognizing the examination character of the interaction, attempted to produce (or elicit) long, well-formed answers. The adults conveyed a preference for longer answers to Wh-questions in three ways: by their expansions of responses; by their sequencing of questions; and by their preference for longer answers in complete sentence form. They expanded the content of children's responses to questions 40% more often in the classroom than in the market, implying a preference for longer responses. They sequenced their questions in the classroom such that when the child did not give complete or lengthy answers the first time, subsequent questions would parcel out the domain of the subject matter. For example, after a one-word answer to "And what else did you see?", the adults would follow up with "What kind was it?", "How many were there?" or "What color was it?" and so on. The child got immediate positive sanctions and saved a lot of time by giving multiple-word answers to begin with!

Also, on a few occasions adults directly requested longer answers, as in

ADULT: Where did you go?

CHILD: Store.

ADULT: You went to where?

CHILD: To the store.

ADULT: That's better.
Now,
What did you see?

It is clear here from the fact that the child's initial response was quite audible and from the form of her second request that the adult was seeking a phrase in preference to a word for an answer to her "where" question. (Note the word-order shift of the interrogative pronoun in her second question.)

Apart from the explicit remarks which elicit longer responses to Wh-questions, there is an even more direct indicator of interactional dynamics. We analyzed every response to a Wh-question to determine how many words in the response repeated (or grammatically converted) information in the question. For example, if in answer to the question "What did you see at the supermarket?" a child says "apples and oranges," we can say that all the information in the answer is new, relative to the surface information in the question. However, when the child answers "I saw apples," only one word (apples) is new and the first two are merely grammatical conversions of the information in the question (i.e., the deictic pronoun switch from "you" to "I" and the use of the simple past tense form "saw" instead of the question past tense form "did see").

TABLE 6
The Number of Complex Grammatical Constituents in RSWHs and DSCPs

	Supermarket						Classroom					
	Responses			Descriptions			Responses			Descriptions		
	NP	VP	O	NP	VP	O	NP	VP	O	NP	VP	O
Three-year-olds	4	–	–	55	23	5	20	–	–	11	3	5
Four-year-olds	6	1	1	40	22	–	26	1	3	4	5	1

In the supermarket, to a question like "What are those?" one can appropriately answer "apples"; in this case all participants can observe the items in question. However, in the classroom, to a question like "What did you see?," there is a tendency to say "I saw apples," where two of the words in the response repeat information in the question. This is so presumably because (1) the teachers have emphasized the appropriateness of responses in full sentence form, (2) the children must consult their memory and cannot rely on environmental support, and (3) the objects referred to are not being observed by participants. For both age groups in our corpus, slightly more than one-third of the words in RSWHs in the classroom repeated information in the question.

Moreover, from our analyses of the grammatical complexity of children's C-acts (see Table 6 above), RSWHs are more complex for both groups in the classroom. That is, about 25% of the RSWHs contained grammatically complex constituents for the classroom, compared to about 13% for the supermarket. Therefore, the interactional tendency to provide full answers, the absence of environmental support and the greater grammatical complexity all combine to explain the greater length of RSWHs for all children in the classroom. (For further discussion of Table 6, see page 156 below.)

Age-related differences in the ease with which the children could recall the required information and rules of interactional dynamics combined to produce the relatively greater ratio of RSWHs to RSYNs for the four-year-olds, especially in the classroom.

A few examples should clarify the interactional dynamics of concern to us. Consider the following sequences, all of which occurred with three-year-olds:

No.	*Speaker*	*Utterance*
1	ADULT 1:	What did you see from the dairy cow?
2	CHILD:	(no answer)
3	ADULT 1:	Did you see any milk?
4	CHILD:	Yeah.
5	ADULT 1:	A lot of milk or a little milk?

6	CHILD:	A lot of milk.
7	ADULT 1:	What is that stuff in the packages that's near the milk?
8	CHILD:	Milk.
9	ADULT 2:	It was orange.
10	ADULT 1:	How about those long yellow things.
11	CHILD:	(no answer)
12	ADULT 1:	Remember we have them here for lunch sometimes? Did you see those?
13	CHILD:	Yeah.
14	ADULT 1:	They come in bunches, you know.
15	CHILD:	Yeah.
16	ADULT 2:	What?
17	ADULT 1:	What are they?
18	CHILD:	That's that!

In 1 and 10, when the adult asks a RQWH the child does not answer; the adult then asks the simpler RQYN in 3 and 12. The child answers these, and the other choice question in 5, appropriately. Though he gives answers to the RQWHs in 7 and 17, they are not appropriate. Moreover, because the three-year-olds have more difficulty with RQWHs, adults tend to convert them, without pause, to RQYNs by the end of their speaking turn. For example: "Where was the turkey, anyway? Was he on the table?" Finally, given equivocal questions of the "Do you know what this is?" sort, four-year-olds respond more often with Wh-information than do three-year-olds. Overall, the four-year-olds answered virtually 100% of the time, whereas the three-year-olds respond only 60% of the time. Factors such as these indicate how children affect the construction of the conversation and how adults adjust to the comprehension level of the child.

It is also reasonable to assume that, in the kinds of conversation we have been describing, RQWHs place a greater cognitive demand on the child than do RQYNs; he must provide more than a choice between two alternatives, as with RQYNs; an appropriate response requires the production of propositional content in the form of a grammatical constituent, such as a noun phrase, adverbial phrase, or verb phrase.

Other things being equal, the four-year-olds can be expected to deal with the cognitive load inherent in the Wh-question more effectively than can the three-year-olds (cf. Bloom et al., 1976; Flavell, 1976). In effect, they have more information with which to answer the question. This same line of reasoning also suggests why MLUs for RSYNs are lower than for RSWHs for all children in both situations. A one-word "Yes" or "No" can be an informationally and inter-

actionally appropriate RSYN in both settings, but one-word labels as RSWHs are often poorly formed, although informationally adequate.

The third primary result of the age-group comparisons concerns the MLU of descriptions. Both groups produce about the same number of descriptions (DSCP) in the supermarket, with about the same MLU. But four-year-olds produce three times as many DSCPs as the three-year-olds in the classroom. The most salient fact about DSCPs in general is their relatively lengthy MLU. The greater MLU of the DSCPs can be accounted for as follows. Recall, first, that we collapsed all the descriptives (excluding Identifications) and statement types from Table 1 into the class of DSCP in Tables 3 and 4. These DSCPs, in comparison to other C-act types, favor greater complexity because (1) they are volunteered; they neither are solicited nor do they solicit information, so are less constrained conversationally; and (2) the speaker can add as many grammatical constitutents as he desires. Often he must supply several bits of information to convey a complete thought – compare the DSID "they are houses" with the DSEV "they are making houses with the blocks on the floor."

It is important to consider the reasons why the four-year-olds produce more than three times as many DSCPs in the classroom as do the three-year-olds. To understand this, we need to point out that the two primary conversational functions of DSCPs are to initiate sequences and to support responses given to questions. In the classroom, four-year-olds initiate three times as many nonrequestive sequences (i.e., sequences that begin with DSCPs) as do three-year-olds, and they also offer a DSCP in support of a response three times as often.

While this result might suggest an age-related increase in the ability to initiate sequences when both situations are considered, the data do not support such a conclusion. The three-year-olds initiate more nonrequestive sequences in the supermarket than do the four-year-olds.

Finally, we should add that, in addition to comparing MLUs, we have also measured the grammatical complexity of the major C-act types in the classroom. The results suggest that the speech of the four-year-olds in our corpus was *not* more complex than that of the three-year-olds. Complexity was measured in terms of the number of noun phrases and verb phrases that were expanded; for example, "a brown dog" counted as an expanded noun phrase, "a dog" did not; and "we saw one in the store" counted as an expanded verb phrase, "we saw one" did not. We also tabulated other grammatical expansions, such as additional clauses, logical connectives, and so on. The results of this analysis for RSWHs and for DSCPs for both groups in both situations are given in Table 6.

To summarize, the major findings from Study I, when viewed in terms of conversational acts, are a greater frequency of RSWHs, a greater proportion of RSWHs to RSYNs in the classroom, the longer MLUs for descriptions, and the greater frequency of descriptions in the classroom for four-year-olds. We interpreted these findings in terms of the constraints from the task. The task constraints operate in terms of the adults' discourse mode (e.g., examination), the

cognitive requirements of the task (e.g., recalling in the absence of the object to be remembered), the interactional demands (e.g., the form of adults' questions and their preference for a particular form of response), and the children's ability to handle the cognitive and interactional demands. All of these combine together to produce the distribution of results referred to above.

STUDY II

With the results of Study I in hand, we set out to attack some of the interpretive ambiguities that our findings had raised. Of the many possibilities, we decided to concentrate on the variability between settings with three-and-one-half to four-year-olds. In particular, we sought to determine if we could produce variability akin to that we had obtained between classroom and supermarket by changing the conversational situation within the classroom setting. To this end, we set out to obtain recordings from ten children in each of four classroom settings: a "formal" interrogation that had nothing in particular to do with supermarkets; an informal discussion between adult and child about some favored activity that the child often engaged in during school hours; an interaction between pairs of children (in order to avoid the gross differences in power between participants which Mishler, 1975, has shown to affect young children's speech); and interrogation upon return from the supermarket. We also sought to determine the extent to which the supermarket–classroom differences obtained in Study I for the three- and four-year-olds resulted from special characteristics of the woman who took them to the supermarket; she was not a teacher, and was permitted a more informal relationship with the children. To this end, it was agreed that on one of the *two* occasions on which the children went to the supermarket, a classroom teacher would be their guide.

Our attempts at producing four classroom contexts for evaluating language use were successful, but our efforts to obtain usable recordings of the children's talk in each of the settings were not. In this study, we were fortunate to have transmitting microphones which could be worn by the children. The assistant could monitor their talk from a corner of the room and record appropriate segments. However, in the "formal" question–answer situation, too many children were present. As a result, particular target children were called on so rarely that the data were too "thin" for meaningful analysis. While this is of interest in itself, we dropped formal analysis of such talk from our purview. Similarly, we had difficulty in obtaining usable samples of child–child talk. The vast majority of such talk was in parallel play with extended, if intermittent, monologues prevailing. Again, this is interesting, but not particularly helpful for assessing the range of behaviors that can occur when three to four-year-olds engage in dialogue. Hence, we have restricted our analysis to data from the supermarket, the classroom interrogation upon return from the supermarket, and the unstructured

conversation between adult and child in the classroom while the adult plays a game with the child or helps to solve a jigsaw puzzle.

Subjects and Setting

The subjects who participated in this study were ten three-and-one-half to four-year-old children attending a day-care center in the same complex that housed the Head Start Center from which the children in Study I were drawn. Complete data from all sessions (two in the supermarket, two interrogations upon return from the supermarket, and one informal discussion) were available for seven children whose talk will be the focus of later analyses. Of these seven children, three were girls and four were boys.

The adults with whom the children interacted were three female Black teachers and a White research assistant who had taught preschoolers for several years in the neighborhood in which the day-care center is located.

The research assistant, as far as the children were concerned, was a friendly visitor who came to school, helped out the teachers as much as possible, played games with the children, talked a lot with them, and took them to the supermarket.

In this center, there seemed to be no set curriculum. There were never any explicit objectives for the week or the day, and the daily schedule (circle time, snack, free play, lunch, rest, circle time, free play, home) was never changed. The children never went on walks or trips. They stayed in the classroom and went outside only to go to the playground in the backyard. The teachers used circle time as an opportunity to give the children practice in recognizing colors, numbers, the alphabet, shapes. Because it was a structured situation, circle time required considerable discipline to maintain order. The lessons often required a set pattern of responses that were repeated over and over again in rotelike fashion. The children repeated numbers, colors, letters all together and one-by-one. Only one set of responses was acceptable and these answers were insisted upon. Such demands for attention and order in responding seemed stringent. Typically, a wrong answer would be given, and another child would be called on to give the right answer, then the right answer would be repeated four times by all. These sessions often left both the teachers and children confused and frustrated.

Outside of these structured group situations, the teachers had very few interactions with the children. There was little individualized instruction; the teachers usually did not play games or work at the tables; the children's free play was not influenced by adult direction except when it became boisterous. The teachers would tend to their own affairs and be on the watch for fights or other disruptive behavior.

The children were excited by the trips to the supermarket. It meant getting special attention, having a personal adventure outside of school with a teacher or the experimenter. They loved wearing the little shirts into which the micro-

phones were sewn, riding in a shopping cart, and buying animal crackers. The whole idea was novel. Nevertheless, when riding around the supermarket, the experimenter found that, in the beginning, she had to encourage many of the children to talk by asking them to tell her anything they saw that they wanted to look at, anything that they liked in a particular section of the store. She tried to establish an enjoyable situation for the children that was not demanding or that required performance of any particular skill.

Design and Procedure

Children were observed in the following situations, from which three-minute samples of conversation were selected for purposes of analysis:

1. *Supermarket.* Each child went to the supermarket twice, once with the research assistant and once with a classroom teacher. Unlike Study I, there was only one child per shopping basket. As soon as the children and their guides reached the supermarket, they went separate ways. The order of going with each of the two adults was counterbalanced, with half of the children going with each adult on the first trip.

The visit to the supermarket took from one-half to three-quarters of an hour. The children would usually see the fresh fruits and vegetables, cereals, dairy products, meats, and the canned goods. They were allowed to pick up things and feel them while they were talking about them. Each child bought a box of animal crackers to eat before leaving the supermarket. A few times, a child wanted to buy something more than the cookies. When this happened, the children were told that they came to enjoy looking and talking about the things and that the animal crackers were all that could be bought.

2. *Classroom interrogation.* When the two children, the teacher, and the assistant returned to the classroom, each of the two teachers who had stayed in school with the rest of the children would question one child about the trip. In the meantime, the assistant and the third teacher would look after the group. The exact context for the interrogation varied somewhat, depending on what was already going on with the rest of the children. If the children were sitting with a teacher in a circle, then the two children who had been to the supermarket would sit in the two separate circles and be asked about the trip in front of the other children. Sometimes everyone was preparing for lunch, so the two teachers would wait and ask the two children about their trip when they were all sitting down eating. In this situation, too, the children were being asked to talk when the other children were around listening.

3. *Informal classroom discussion.* The assistant observed the children from a corner of the room for a good part of each day. When a likely opportunity presented itself, she engaged the child in a casual discussion about a jigsaw puzzle or a game.

All recordings were made from transmitting microphones that were sewn into denim shirts that the children wore for the entire course of the days on which they went to the supermarket or were being recorded in the classroom. The adults wore identical microphones attached to a pocket or lapel. During the course of the study (approximately six months), all children were given the shirts several times, and from all appearances, wearing them with microphones inserted became a normal part of the classroom routine.

On the average, three months intervened between the first and second trips to the supermarket. Recordings of casual adult–child conversations in the classroom occurred at haphazard intervals interspersed throughout the period of observation.

4. *Formal testing.* Each child was administered two formal language assessment tests, the Peabody Picture Vocabulary Test and the "verbal expression" subtest from the Illinois Test of Psycholinguistic Abilities (ITPA). The Peabody yields a crude measure of IQ that has been used widely in assessment of preschool programs; the verbal expression test uses the question format that Labov (1972) employed as an example of a sociolinguistic context that elicits defensive behavior from some children.

Results

The results of the formal testing supported our belief that we were dealing with children whose tested performance was in the range Labov had been talking about. The range of Peabody IQ scores was 64–107 with a mean of 90; the scaled verbal expression scores from the ITPA averaged 32, a little less than one standard deviation below the norm mean of 36. The children's responses to the ITPA items were heterogeneous, but 31 of 45 responses were one or two words in length, and virtually all of the two-word responses were of the "determiner plus noun" variety.

The key outcome of this second study, which will provide the focus for the remaining analysis and discussion, is best summarized by the overall MLU for all speech acts sampled in the supermarket and in the classroom interrogation about the supermarket. The means were 2.7 for the supermarket and 2.5 for the classroom. This slight advantage appeared in the averages for five of the seven children included in this analysis, but the magnitude of the classroom–supermarket difference is so small that we prefer to treat the outcome as a failure to produce a difference between talk (as indexed by overall MLU) in the two settings. Moreover, the virtually perfect match between the MLU for the classroom interrogation setting when we compare the children from this study with the comparable sample of three-year-olds from the first study focused our inquiry on the factors which prevented us from observing increased length of talk in the supermarket. The MLU count broken down by type of C-act for the supermarket and classroom interrogation situations, along with the comparable data from the

TABLE 7
Mean Length of Utterance Grouped According to C-Act

	Study II					
	Supermarket		Classroom		Casual	
C-Act	F	MLU	F	MLU	F	MLU
RSWH	59	1.64	60	2.45	64	2.57
RSYN	24	1.00	20	1.05	27	1.20
Responses	40	2.02	14	2.48	21	2.50
Qualifications	12	4.54	4	4.88	10	5.60
Questions	24	3.06	1	6.00	2	3.00
Requests	10	3.52	3	2.67	1	3.00
Identifications	21	2.58	3	3.00	30	4.80
Descriptions	34	5.23	12	4.25		
Average MLU		2.7		2.5		2.96

casual classroom interaction are contained in Table 7. To simplify the exposition, we will first concentrate on an analysis of the two situations included in Study I and then turn to an examination of the Casual interactions. Comparison of the *relative frequency* of the C-act classes for the supermarket and classroom interrogation situations presents a striking contrast with the data in Table 3 (i.e., the three-year-olds in Study I). Although the number of each class of C-act is approximately the same for the two studies in the classroom (there are somewhat fewer RSYNs and more DSCPs in the second study), there is a clear failure to shift the relative frequency of the C-acts when these children go to the supermarket. Instead of one-half the number of RSWHs and three-quarters the number of RSYNs, there are approximately equal numbers of these two kinds of C-acts in the Study II corpus. Another critical difference is the failure to obtain a marked increase in DSCPs when the children from Study II went to the supermarket.

As in Study I, the implications of the relative frequency of C-act classes, when combined with the data on MLU, clearly demonstrate the fine structure of the data which produce the overall MLU. As in the previous study, MLU for RSWHs is longer in the classroom than the supermarket, while DSCPs are longer in the supermarket. The relative frequency of longer Wh-responses in the classroom and the relative infrequency of longer DSCPs in the supermarket combine to produce the overall "no-difference result" reflected in the summary MLUs.

Although the comparison may be somewhat awkward, there is a striking similarity of patterns of MLU within C-acts across settings for the two studies. Statistical tests are virtually useless on these data, owing to the small number of subjects in Study II and the variability in the occurrence of C-acts within subjects, but the following conclusions are suggested by comparing the data in Table 7 with the data in Table 3. First, responses to adult-initiated talk are longer in the

classroom than in the supermarket, whereas talk that is initiated by the child is about the same length in the two settings, although it tends to be longer in the supermarket. Second, the actual levels of MLU within C-acts argue forcefully against any interpretation of the data which seeks to pinpoint limitations on MLU as the cause for the failure of the three-year-olds in the second study to produce a longer overall MLU in the supermarket. In most cases for which there are enough data to warrant the comparison, the MLU from children in the second study is comparable to, or longer than, the MLU for the children from Study I. This result is particularly striking for DSCPs that are substantially longer in Study II than Study I. Again, we are forced to conclude that it is the failure to produce shifts in the frequency of C-acts associated with longer MLUs which accounts for the failure of the three-year-olds in Study II to replicate the overall MLU results for the supermarket talk in Study I.

Analysis of the data from the Casual situation, which takes place in the classroom, reinforces this essential point. The overall MLU for the Casual situation was 2.9, slightly longer than in the Interrogation situation within the classroom. From an examination of the comparable rows of Table 7, the source of the overall difference can be ascertained quickly. There are substantially more DSCPs, which are characterized by long MLU and a slightly greater number of qualifications in the Casual situation when compared with the Interrogation. Within C-act types, there is striking consistency with the MLU levels obtained in the classroom for the two studies.

A Conversational Analysis of Studies I and II

The primary facts to be explained about Study II are: the negligible overall difference in MLU between the supermarket, classroom, and interrogation and the failure to decrease the frequency of adult questions in the supermarket and casual situations. The children's long MLU for RSWHs in the casual situation also needs to be explained because the "conversational dynamics" explanation we used to account for the greater length of RSWHs in the classroom would not seem to apply. The exposition will proceed comparatively with the results of Study I.

Several factors apparently caused both the overall similarity of MLU and the equal number of adult questions for the classroom and supermarket settings in Study II. Among them are: Only one child was in the supermarket basket, instead of two, as in Study I; the adult in Study I, *by her talk,* defined the task of visiting the supermarket differently from the adults who took the children in Study II; and the relationship between adults and children in Study II was different from that in Study I.

The fact that only one child was in the basket in Study II had numerous consequences for the conversational interaction. First of all, consider the most

obvious mechanics of turn-taking. In a dyad, either the adult (A) talks to the child (C) or C talks to A. But, with only one more child participating, a nine-way communication system is automatically in effect: A to C1, A-C2, C1-A, C2-A, C1-C2, C2-C1, A-C1 and C2, C1-A and C2, C2-A and C1. Talk in a dyadic system requires greater concentration from both parties, because the one not speaking is necessarily the intended recipient. One child in the basket must respond to all the adult's remarks himself. Moreover, the adult–child power relations seem to be mitigated by the child having a peer present, as Labov noted. The two children in the basket in Study I often competed with one another, as can be seen in the following segment:

Tn.	*Sp.*	*Utterance*	*C-act*	*Comment*
1	CHILD 2:	I want the football.	STIR	
2	CHILD 1:	I want the football.	STIR	Repeats after Child 2, but is distinct claim
3	ADULT:	You want the football?	ACAC	
4	CHILD 2:	Yeah.	RSYN	
5	ADULT:	/Wheaties!/	DSID	Aborted sequence
6	CHILD 2:	/Yeah/the football!	RSYN	Emphatic repetition
7	CHILD 1:	I want the football.	STIR	Repeats himself, to compete
8	ADULT:	You want the football?	ACAC	
9	CHILD 1:	Yeah.	RSYN	

The repetition here functions to get the adult's attention and to "get the floor" away from one's competitor. Here, Child 1 repeats after Child 2 in order to keep in the competition, and, although the adult orients to the second child at first, Child 1 regains her attention at the end of the sequence.

A clear example of a conversational strategy of "one-upmanship" occurs immediately after the football sequence described above. Note that by turn 9, neither child had actually gotten possession of the football, which was actually a picture of a football on a box of cereal. They both stated their desire for it and the adult acknowledged each child's desire, but here is what then ensued:

Tn.	*Sp.*	*Utterance*	*C-act*
10	ADULT:	/There's a/football.	DSID
11	CHILD 1:	Yea, I want the football.	ACAP STIR

12	CHILD 2:	I got the football.	PFCL
13	ADULT:	The football.	ACAC
14	CHILD 2:	And there the football.	DSID

Thus, Child 1 has managed to regain and keep the adult's attention through turn 11; his final utterance on the topic is a repetition of his initial internal report. However, at this point, Child 2 (the initiator of the "football" topic) makes an outright Claim on the football by virtue of his choice of utterance form. In a sense, he "upgrades" his C-act from an Internal Report to the "stronger" (perhaps socially more binding) C-act of a Claim. The adult acknowledges this and Child 2 repeats her Identification in turn 10, singling out the football again as if to solidify their arrangement. At that point, Child 1 changes the topic. The three-year-olds in Study II took far fewer rights like those displayed in the segment of talk above to initiate speech in both situations, but especially while in the supermarket.

This factor of one child in the basket may be related both to why the adult in Study II defined the task differently and why she asked as many questions in the supermarket as were asked in the classroom. With one child, the burden of initiating talk falls on the adult more than when two children are present. In these circumstances, adults initiate talk and attempt to get a child to participate by asking questions. Questions (as opposed to nonquestioning utterances), explicitly solicit responses. When a single child in the basket does not answer initially, the adult is more or less forced into asking further questions. In asking more questions, the adult marks the task as an examination. The children in Study I initiated more talk (in fact, they produced more requestive utterances in the market than

TABLE 8
Parameters of *Adult* Talk
(Except for Child-Initiated Sequences) which Indicate that the Task in the Classroom Was an Examination in Both Situations

	Supermarket	Classroom
Total number of questions	251	259
Examination questions	180	180
Self-reference questions	24	12
Proportion of acknowledge sequences to the total	0.60	0.91
Nonrequestive utterances	109	27
Child-initiated sequences	108	8

did the adult), so the adult had less need to initiate, thus less need to ask questions. As a consequence, the interaction was less examlike.

But the number of questions is not the only indicator of the exam task. When each of the measures listed in Table 5 to indicate the task of exam for the classroom situation in Study I were applied to a comparison of the three-year-old groups from both studies, it was revealed that the adults who took the one-child-in-a-basket to the market in Study II defined the task as exam. That is, in the supermarket, the adults in Study II (see Table 8) asked more questions; asked more exam questions; asked less self-reference questions; evaluated a greater proportion of responses to questions; produced fewer nonrequestive utterances; and provided less of an opportunity for the children to initiate sequences.

Beyond these powerful conversational measures, two other factors indicative of task-definition (not mentioned earlier) concern the amount of exclamatory C-acts produced by the adult and her use of conversational strategies. The adult in Study I produced 31 exclamations with the three-year-olds in the market, compared to only one produced by one of the adults in Study II. This may seem a trivial point, but there is reason to believe that such speech behaviors indicate appropriate speech "registers" (cf. Phillips, 1972). Certainly, the children responded to exclamations by changes in their own register. The three-year-olds in Study II produced two exclamations compared to the 51 produced by those in Study I.

There are more subtle means of indicating task. Consider the relatively few exam sequences that the adult in Study I began in the market, and notice the surrounding sequences in this example:

Tn.	*Sp.*	*Utterance*	*C-act*	*Comments*
1	ADULT:	There we go!	ODAC	
		Now what do we have here?	RQWH	exam
2	CHILD 2:	Orange!	RSWH	
3	ADULT:	Orange.	ACAC	
		Feel an orange!	RWAC	
		Do you like that?	RQYN	self-reference
		How does it feel?	RQWH	
4	CHILD 1:	Good.	RSWH	
5	CHILD 2:	Good.	RSWH	
6	ADULT:	Does it?	ACAC	
7	CHILD 2:	It's kinda cold.	DSPR	
8	ADULT:	Kinda cold,	ACAC	
		Yeah.	ACAP	

9	CHILD 2:	I like cold.	STIR
10	ADULT:	You like cold?	ACAC
11	CHILD 2:	Yeah.	RSYN

Even though this interaction begins with a canonical exam sequence, the adult elaborates the interaction along the lines of a different task. In fact, the second sequence here illustrates the task that was most frequently engaged in by the adult in Study I – a task of "enrichment" by getting the child to talk about his experience in the market. This task may appear to be very similar to an examination, but it actually has quite different consequences for the participants. The adult does not know the answers beforehand, and does not really judge the adequacy of the child's responses. The children are free to express a wide range of internal states, to take the opportunity to produce a wider array of conversational acts, and to initiate and sustain sequences in a way not possible in examination tasks.

When the adult engages in enrichment of this sort, the children are given the opportunity to display a greater variety of linguistic competencies. Consider the following sequence:

Tn.	*Sp.*	*Utterance*	*C-act*
1	CHILD 2:	I want one.	STIR
		Let me, let see the other, a let *me* see.	RQPM
		It got a hole.	DSPR
		Yeah, that one got no hole.	DSPR
		No, that one got no hole.	DSPR
2	CHILD 1:	Get her one.	RQAC
3	ADULT:	I can't get it.	RSQL
		/I can't/get it down.	RSQL
4	CHILD 1:	/Let's/	UNTP
5	ADULT:	We'll let her see.	STEX
6	CHILD 1:	Get me that big doll baby?	RQYN
		Get me that big one, doll.	RQAC
7	ADULT:	Get you the big doll baby?	ACAC
8	CHILD 1:	Uh, huh.	RSYN
9		You can't get it?	RQYN

In this case, the children display their facility with manipulating the grammar: Child 2 produces successive grammatical expansions of her Property Description; Child 1 supports Child 2's Permission Request with an additional Action Request; Child 1 produces an interrogative and an imperative version of her "doll" request,

and then she converts the adult's Qualification in a Yes–No request. Also, in this episode the children are clearly in control of the sequences.

Regarding the tasks displayed by the participants in the supermarket, there is another that is entirely different from other tasks in the corpus. This is the obvious one of *shopping*. The adult did not actually purchase groceries (except in two cases) but she did usually get the children some small gift, such as cookies or gum. What's important conversationally about this is that the children often talked as though shopping were their own task. Many of the Internal Reports and Claims that we have discussed above suggest this – utterances such as "I want the football," "I getting this," "I want juice," and so on. But there were also many explicit remarks suggesting the shopping task, such as:

Tn	*Sp.*	*Utterance*	*C-act*
1	CHILD 1:	Give us some of that!	RQAC
2	CHILD 2:	Fishes.	DSID
3	ADULT:	Fishes?	ACAC
4	CHILD 1:	Yeah.	RSYN
23	CHILD 1:	I want some of this little turkey.	STIR
26	CHILD 1:	We can get some of that.	STRU
27	ADULT:	We can get some of that.	ACAC
29	ADULT:	Want some of that turkey, Child 1?	RWYN/ODDS
30	CHILD 1:	We can, we can eat this.	STRU
31	ADULT:	You can eat that?	ACAC
32	CHILD 1:	Yeah, this . . .	RSYN
		I gonna get some more.	STIR

1	CHILD 1:	I wish you buy this,	STIR
		I wish you buy this for our.	STIR
		They good.	STEV
		Oooh, yeah	EXCL
2	CHILD 2:	I want to get to taste.	
		Ooh, I . . .	STIR

1	CHILD 2:	We should buy apples.	STRU
2	ADULT:	Should we?	ACAC
		Hey, oh, oh	EXCL

The adult never actually buys the products referred to in the above sequences, but what is significant for the interactional analysis is that she does not explicitly deny the shopping task. Thus, shopping remains a possibility for discussion among the children and it therefore generates some of the dialogue from their point of view. On the contrary, in Study II there is almost no discussion of shopping.

With the above characterizations of tasks in hand, we can now return to the third factor for explaining the failure to shift the frequency of child C-acts in the supermarket setting for Study II, namely the status and behavior of the personnel involved. As we have mentioned, the adult in Study I produced more exclamations (and avoided defining the task as an exam in the market) than the adults in Study II. Perhaps this was because she had the status more of an older playmate than a teacher with the children. In Study II, one of the adults who took the children to the market was actually one of their teachers, and the other (who had previously been a nursery school teacher) interacted with the children, outside of the studied situations, to a far lesser degree than did the adult in Study I. One final indicator of personnel attitude, one which related to the higher MLU for RSWHs in the classroom, has to do with how adults explicitly discipline the children's behavior. In Study II the adults who questioned the children engaged in disciplining the children in 29 sequences compared to once in the supermarket. This must have repressed the children's spontaneous speech considerably.

While the two studies varied in several ways at once, we believe that the difference in results between them arose from a combination of differences in participant structure and the failure of the adults in Study II to break out of the examination mode when they arrived at the supermarket.

It remains for us to explain why the MLU for RSWHs was longer in both the question–answer and casual settings than in the supermarket while other response types were fairly constant across settings.

To understand why talk in any situation is characterized by a given level of complexity, we must again refer to the differences in C-act types and the demands they place on conversational participants. Qualifications, for example, are rather long because they require a respondent to be fully explicit about what it is he is taking issue with, while RQYNs encourage one-word, yes or no replies. Intermediate between these types, in terms of demands placed on the listener, are Wh-answers, which convey varying amounts of information.

As we have seen from Table 7 and from the similar frequencies of RSWHs in both situations, the adults in Study II treated the task in the supermarket at least partly as an examination. But the longer MLU for RSWHs in the classroom cannot be explained by markers of task alone; rather, as we have seen in Study I, the explanation must be sought in the complex interaction among the cognitive, social, and linguistic factors operative in the conversations. First, almost all of the Wh-questions in the supermarket were of the simpler "What is that?" sort, whereas more than half of the questions in the classroom were of the more complex sort such as "Where did you go?" and "What was next to the milk?" As discussed above, in answering the latter sort: (1) children must consult their memory for lexical items; (2) for the various reasons mentioned again below, they tend to provide answers in full sentence forms and of the "I saw . . . x . . ." sort in order to respond in interactionally appropriate ways to questions about

the supermarket; (3) about a third of the words in such responses repeat (or grammatically convert) information in the questions; and (4) the products and events being referred to by the children are not available for mutual observation by the participants.

In addition to these factors, there are also adult conversational strategies which elicit longer responses in the classroom. Adults expanded the children's responses more often in the classroom; they sequenced their questions to elicit more semantically related information about the object under discussion; and they explicitly sought longer answers. In general, the same factors encouraging longer answers in the classroom settings occurred in both studies. However, an additional factor is apparent in Study II, that is, there were 29 sequences during the classroom conversations (marked interactionally as supervisory sequences) which involved disciplining the children in specific ways, compared to the one occurrence of such a sequence in the supermarket. Almost all of these were meant to orient the children to the exam task at hand in some way. In general, despite the partial definition of the task as exam in the market, there was an even greater pressure exerted on the children in Study II to produce longer answers to Wh-Questions in the classroom.

We may now consider the MLU for RSWHs in the casual situation, where it is longest. The physical setting for this situation was the classroom, but the conversational task was not intended to be an examination; the adult was instructed to engage the children in 'casual' conversation concerning their current activity or any other topic that happened to come up. Interestingly, the fact that the adult asked as many questions here as in the other situations suggests again that, on a one-to-one, child-to-adult basis, the adult's primary strategy for eliciting child talk is to ask questions. Yet factors relevant to answering questions were not the same in each of the three situations. Whereas in the market most Wh-questions were grammatically simple and answerable by consulting the environment, and in the classroom more than half of the questions were grammatically

TABLE 9
Young Children's Simplicity/Complexity Responses to Wh-Questions in Terms of Their Retrieval Location: Casual Situation

Retrieval location	Kind of response			
	Simple		Complex	
	Frequency	Avg. MLU	Frequency	Avg. MLU
Immediate environment	46	1.8	2	1.5
Nonimmediate environment	14	1.5	22	3.5

complex and required reliance on memory, in the casual situation, there was a more equal division between simple and complex question types and between the environment and memory as sources of information for providing answers (see Table 9 for actual number of occurrences). Also, in terms of the adult's expansion of children's answers and her sequencing of questions, the casual situation was intermediate between the market and the classroom. However, there were no occurrences of explicit adult statements eliciting longer answers, nor were there any supervisory sequences.

The most likely explanation for the longer MLU for RSWHs in the casual situation concerns the complexity of Wh-questions asked and the sources for answering them. We divided all the adult's Wh-questions into those which solicited simpler kinds of information (what, who, how many, etc.) and those which solicited more complex information (why, when, how, etc.); that is, the former solicit one-word labels, usually nouns, while the latter solicit verb phrases, adverbial phrases or entire clauses of new information. We then correlated this breakdown with whether the information for the answer could be gotten from inspecting the immediate environment. The results appear in Table 9. Despite the low frequency of occurrences for the "simple-nonimmediate" and, especially, the "complex-immediate" cells, the results suggest that, when the question is complex and the child must consult his memory, his answer is considerably longer than under the remaining conditions. Some of the factors mentioned earlier probably affect this result. For answers relying on memory the child tends to repeat some of the information in the question, while for answers concerning mutually observable objects he does not. Moreover, to complex questions the child produces more complex answers (i.e., those with expanded or additional phrases). The 3.5 MLU for "complex-memory," question–answer pairs contributes significantly to the relatively long overall MLU for RSWHs in the casual situation.

Thus, it appears that different factors elevated the MLU for RSWHs in the classroom and casual situations. In the classroom just more than one-half of the questions solicited complex responses, but there was an additional impetus to elicit longer answers stemming from the definition of the task as examination and the abundance of supervisory sequences. While there were no supervisory sequences in the causal situation and far fewer markers of the examination mode from the teacher, the frequency and MLU of answers to "complex-memory" questions was sufficient to make the overall MLU for RSWHs in the casual situation about the same as in the classroom.

Despite the fact that the frequency and MLU for RSWHs makes the casual situation appear similar to the classroom in some respects, other factors suggest that it was in part like the supermarket; specifically, the greater frequency of "Other Responses" and the greater frequency and MLU for both Qualifications and Descriptions. The qualifications suggest that the children felt freer in the interaction, even to the point of disagreeing with the adult. The greater number of

DSCPs (which characteristically have longer MLUs) reflects the fact that the children initiated more nonrequestive sequences in the casual situation than in the classroom, and also that they offered more DSCPs in support of their responses to questions. In conclusion, the casual situation seems to be intermediate "conversationally" between the market and the classroom for the children. The setting was the same as the classroom interaction, but the topics were different. While the adult asked as many questions as in the classroom situation, there were only half as many exam questions. The most conclusive factors affecting the casual conversations seem to be the variable sources of information for answering questions present in the situation, or demanded of memory, and the greater freedom to initiate sequences.

DISCUSSION

We began this research in order better to understand well-accepted, but incompletely understood phenomena involving situational variability in young children's use of language. In this final section we would like to review the rather arduous road we have traveled, pointing to what we consider the main accomplishments of the work, its implications for educational practice, and the direction that further work in this domain should take.

As the course of the work made abundantly clear, it is possible to produce situational variability in children's talk, but we have no firm demonstration of the necessary conditions for producing such variability among the children with whom we worked. Our difficulties are not confined to securing experimental control over the amount of talk in different situations; we also encountered the very serious problem of providing a useful means of describing the differences we produced.

Each of these aspects of the current work deserve more detailed attention. We are now in a position to attend to those two aspects of the work simultaneously, as we were not when the work began.

It is useful to specify three sources of variation in children's language use which we have identified as interactively responsible for the performances we have observed in the settings explored in this research.

Following Labov (1972) and Bloom et al. (1977), we can identify several *sociolinguistic* factors which influenced performance: the status of the participants, the number of participants, setting factors (living room, supermarket, classroom), and the "task" are some of the features that we have emphasized in our analysis of this corpus.

We have also identified several factors which arise from linguistic factors associated with both the structure and the function of adult and child utterances: structure was analyzed in terms of the complexity of questions addressed to children, the complexity required of a (linguistically) appropriate response, the grammatical constituents and mean length of various classes of utterances grouped

either according to grammatical or functional criteria. For functional criteria, we relied on a classification system based on speech acts to characterize the children's talk.

Finally, we were forced to consider the cognitive demands of various settings, tasks, and linguistic factors as they interacted with the presumed capacities of the children. Here our work made contact with previous research by Bloom and her colleagues (e.g., Bloom et al., 1977) and Blank (1973).

We will discuss each of these aspects of the work in turn. The most salient feature of these results is the finding that when we produced situational variability in children's talk, we did so by changing the relative frequency with which certain speech acts occurred in the corpus. The overall change in talk toward more complex, dynamic production among the three-year-olds in Study I (as indexed by MLU, number of grammatical constituents, and a variety of other features) came about because the relative and absolute frequency of descriptions increased when the children were in the supermarket rather than the classroom.

In a fundamental way, our ability to specify the locus of the change for the three-year-olds leads us to the conclusion that when we cut beneath global statements about "more and less talk" to more and less talk in functionally specified categories of talk we must conclude that the overall change is brought about by a change in the anture of the talk itself. In other words, the three-year-olds in the supermarket are not doing the same thing as the three-year-olds in the classroom.

The result is in no way contradictory to the results reported by Labov for variability in older children. Compare, for example, the following two segments of conversation, the first of which is used to exemplify the typical interview situation, and the second of which is Labov's successful demonstration of producing situational variability.

Segment 1

CR:	You never been in a fight?	RQYN
LEON:	Nope.	RSYN
CR:	Nobody ever pick on you?	RQYN
LEON:	Nope.	RSYN
CR:	Nobody ever hit you?	RQYN
LEON:	Nope.	RSYN
CR:	How come?	RQWH
LEON:	Ah 'o' know.	RSQL
CR:	Didn't you ever hit somebody?	RQYN
LEON:	Nope.	RSYN
CR:	(incredulously) You never hit nobody?	RQYN
LEON:	Mhm.	UNTP

Segment 2

CR:	Is there anybody who says your momma drink pee?	RQYN
LEON:	(rapidly and breathlessly) Yee-ah!	RSYN
GREG:	Yup!	RSYN
LEON:	And your father eat doo-doo for breakfas'!	DSEV
CR:	Ohhh!! (laughs)	EXCL
LEON:	And they say your father – your father eat doo-doo for dinner!	DSEV
GREG:	When they sound on me, I say C.B.S. C.B.M.	DSEV
CR:	What that mean?	RQWH
LEON:	Congo booger-snatch! (laughs)	RSWH
GREG:	Congo booger-snatcher! (laughs)	RSWH

The RQ–RS structure of the first segment and the shift to a mixture of RQ–RSs and DSEVs in the second segment are exactly what we found in the three-year-old corpus when we moved from classroom to supermarket.

Our "failures" to produce situational variability must be looked at in exactly the same light. While we failed to produce a difference in overall mean MLU for the four-year-olds in Study I or the three-and-one-half-year-olds in Study II, we *did* produce variability in both the frequency with which certain speech acts occurred and (in some cases) variability in the MLU associated with different speech acts.

We believe that the additional power to specify what overall language use is made up of constitutes one of the central values of this work. Our finer-grained analytic framework forced on us questions that we could not even raise when the work began: What produces the longer MLUs for responses to Wh-questions in the classroom? Why did the frequency of DSCPs drop more for the three-year-olds than the four-year-olds when we moved from supermarket to classroom? Why were four-year-olds asked more Wh-questions relative to Yes–No questions?

At the same time, we have made very clear the shortcomings of the present work. While we have been able to answer some of the new questions that we came into a position to pose, we found ourselves without the relevant observations to answer others. What is there about the behavior of the children or adults in Study II that results in the failure to produce a shift in language use? The number of participants? The role of the adult who went to the supermarket? The implicit task which the adults set themselves in the two studies? On this level, the level of the independent variables which produce variation in our newly specified dependent variables, we have little to offer but educated speculation. These questions can now be the subject of much more focused research. To this list

we would add the question of what variations in sociolinguistic, linguistic, and cognitive factors could produce differences in the four-year-olds comparable to those obtained with three-year-olds. An answer to this question will be very important in specifying general rules for the production and explanation of situational variability in langauge use.

We can now also contemplate the possibility of research focused on producing changes in one or more of the speech acts whose importance we have established in this work. For example, from the current perspective, the work of Marion Blank (1973) can be viewed as an effort to train children in responding to Wh-questions. Blank emphasizes the cognitive complexity of the content of such questions viewed from a logical point of view. To this concern we can add the need to teach children about interactional rules of appropriateness as they are related to a variety of settings. We can also urge the need to invent situations where the child can display her knowledge via DSCPs since utterances in this speech act class are generally closer to those which Blank specifies as adequate functioning.

In a similar vein, we think that the present analysis fits rather closely with the work of Bloom (1976) who has also advocated differentiating linguistic performance into components which correspond roughly to our division of linguistic, sociolinguistic, and cognitive factors. Following the general line of approach begun in her work and addressed briefly in our account of why Wh-questions vary in MLU between classroom and supermarket, we think it is now possible to conduct much more detailed studies of the factors associated with completeness of answers to this question type. A place to begin would be to vary systematically the information provided by the environment in support of RSWHs as it affects the length and appropriateness of answers by children of different ages. It seems clear to us, as Bloom suggests, that children are assumed to suffer *language* deficits on the basis of responses to Wh-questions when in fact the observed differences in performance arise from differential response to the cognitive/informational demands of the question, not its linguistic demands, per se.

These considerations bring us to the last point. If we review the voluminous literature on language assessment in early childhood, we see that the overall interactional structure of the assessment situation closely matches the circumstances we see in the classroom when the children return from the supermarket: asymmetrical power, question-asking initiated by the adult which is specifically examination-oriented in content, and so on. While these assessment situations may be extremely useful for predicting classroom performance (as Blank would argue), they almost certainly organize the assessment around an interaction that systematically *minimizes* the linguistic complexity of the child's response. Since the overt speech of the child is, we have argued, controlled by important non-linguistic features, it would seem wise for assessors to be certain to sample speech acts that reveal the full range of the child's *linguistic* competence. This means that the assessor must find a situation in which the child emits DSCPs. On the

basis of our limited experience, the development of a routine technology for producing such speech acts will be no routine matter.

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