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ABSTRACT

This report presents a summary of findings from a year-long sociolinguistic study of pupil and teacher perceptions of classroom discourse. Subjects were 164 pupils, and their teachers, in six second, third, and fourth grade classrooms in a lower socioeconomic, multiethnic elementary school. Six teacher-planned language arts lessons were videotaped in each classroom over the course of the year. In addition, videotapes were made of conversations in the families of three third-grade pupils and of six randomly selected (stratified by sex and peer status) pupils in each classroom in an unstructured play setting. Videotapes were played back to pupils and a variety of tasks were used to collect data on pupil perceptions of the "rules" of discourse, the "units" and "salient features" of discourse, and the functions of "question cycles" in each of the three settings. Comparisons were made of pupil responses over time, across settings, and in relation to pupil characteristics, including ethnicity, sex, entering reading achievement, peer status, and status with teacher. Pupil perceptions were compared to teacher perceptions, and both were compared to those of outside observers, chiefly sociolinguistic specialists. Important discontinuities were identified between children's perceptions of discourse in home and play settings and their perceptions of classroom discourse. Children's perceptions of and participation in classroom discourse, for example, appeared to be associated with differences in classroom language patterns, as identified by sociolinguists. Pupils' sex, entering reading achievement, peer status, and status with teacher were all significantly related to perceptions of classroom discourse and participation in classroom discourse, but ethnicity was not. Frequency of participation in class discussions contributed significantly to explained variance in final reading achievement. (Author/HP)

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PARTICIPANT PERSPECTIVES OF CLASSROOM DISCOURSE

EXECUTIVE SUMMARY

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ABSTRACT

This report presents a summary of findings from a year-long sociolinguistic study of pupil and teacher perceptions of classroom discourse. Subjects were 164 pupils, and their teachers, in six second, third, and fourth grade classrooms in a lower socioeconomic, multiethnic elementary school located at the southern end of San Francisco Bay. Six language arts lessons were videotaped in each classroom between September and January. In addition, videotapes were made of conversations in the families of three third-grade pupils and of six randomly stratified (sex and peer status) pupils in each classroom in an unstructured play setting. Videotapes were played back to pupils and a variety of tasks were used to collect data on pupil perceptions of the "rules" of discourse, the "units" and "salient features" of discourse, and the functions of "question cycles" in each of the three settings.

Category systems were developed to code pupil responses to each task. Nonparametric statistics, analysis of variance, and regression analysis were used to identify significant patterns of responses. Comparisons were made of pupil responses over time, across settings, and in relation to pupil characteristics, including ethnicity, sex, entering reading achievement, peer status, and status with teacher. Pupil perceptions were compared to teacher perceptions, and both were compared to those of outside observers, chiefly sociolinguistic specialists.

Important discontinuities were identified between children's perceptions of discourse in home and play settings and their perceptions of classroom discourse. There were significant classroom differences in children's perceptions of and participation in classroom discourse that appeared to be associated with differences in classroom language patterns, as identified by sociolinguists, and also apparently contributed to significant classroom differences in final reading achievement (entering reading controlled for). Pupils' sex, entering reading achievement, peer status, and status with teacher were all significantly related to perceptions of classroom discourse and participation in classroom discourse, but ethnicity was not. Frequency of participation in class discussions contributed significantly to explained variance in final reading achievement.

An explanation of pupil and teacher interpretations of how pupils learn from classroom questioning was proposed, and validated by data on pupil participation in class discussions and pupil attention to the comments of other pupils. Questions are proposed for further study.

FOREWORD

The final report is organized into five separate parts, which are:

Part I: What Did Anybody Say? (salient features of classroom discourse)

Part II: Why Do You Ask? (interpretations of the question cycle)

Part III: Rules of Discourse, Classroom Status, Pupil Participation, and Achievement in Reading: A Chaining of Relationships.

Part IV: How Do We Know? (alternative descriptions of classroom discourse)

Part V: Attending to the Discourse of Classmates in Play Settings

Copies of other parts of this report can be obtained from Syracuse University at a nominal fee.

A number of people have contributed in a variety of ways to the conduct of the study and the preparation of the final report, and we are grateful to them all. Rosedith Sitgreaves of Stanford University gave us invaluable advice on questions of statistical analysis. Roger Shuy of Georgetown University and the Center for Applied Linguistics was a major consultant on the sociolinguistic analysis of the data and was assisted in his analyses by Steve Cahir, also of the Center for Applied Linguistics. Arnulfo Ramirez of the State University of New York at Albany conducted a sub-study that provided a speech act analysis of all thirty-six lessons. Margaret Lay-Dopyera of Syracuse University conducted a sub-study that provided a description of pupil's communication patterns in play settings.

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and who enabled us to gather a wide variety of relevant data because they so quickly won the trust and cooperation of those pupils, were Susan Lytle, Kitty Norton, Stephanie Gannon, and Greg Nierman.

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Production of this final report proceeded according to schedule because of the skillful typing of Laurie Battelle and Linda Wozniak. We are indebted to them for their cheerful assistance.

Most of all, we owe our thanks to the pupils and teachers of the "South Bay School," who shared with us their thoughts about language in classrooms, to the parents, who welcomed us in to their homes to videotape family conversations, and to the principal, who provided the support and resources to make us feel at home in his school. We have learned much from all of them, and will not soon forget any of them.

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INTRODUCTION

There is a recognized need for further research on teaching as a linguistic process, particularly research which would help children and teachers, who are the participants in classroom discourse, to understand each other more fully. It is clear that the consequences of miscommunication can be bad for children, both intellectually and socially. Miscommunication can occur with regard to either referential meanings or social meanings of classroom conversation. This study has concentrated on investigating the sources and the effects of miscommunication related to the social meanings of classroom discourse.

The study was designed to investigate participant perspectives of the nature of communication in the classroom, describe pupil conceptions of the differences between discourse in the classroom, at home, and in play settings, examine the correspondence between pupil and teacher conceptions of the rules of classroom discourse, and compare participant conceptions to those of a sociolinguistic specialist in analysis of classroom discourse. In addition, the study has examined pupil acquisition of the rules of classroom discourse, with particular attention to pupil differences in cultural background, classroom status, and grade level, and to teacher-perceived differences in pupils' communicative behavior in the classroom. Finally, the study has investigated the relationship between teacher conceptions of pupil differences in communicative behavior and teacher expectations for pupil success in reading achievement.

Review of Relevant Research

The two major areas of research most relevant to this study are classroom research and research on children's language development. Classroom research has expanded within the past several years to include a variety of approaches to collection and analysis of data. At least four different approaches can be identified whose methods and findings have relevance to the design of this study. These are: classroom interaction studies, ethno-

graphic studies, sociolinguistic studies, and studies of teacher information processing. Within the field of child development research, sociolinguistic studies of language development have most relevance to this study. Each of these types of studies can provide useful information about communication processes in the classroom, and relevant findings from all of these approaches will be presented here. But special emphasis has been given to sociolinguistic concepts and methods, for it is this approach that responds most directly to the questions that are addressed by this study.

Relevant sociolinguistic concepts. The basic question that sociolinguists ask is: what differences in form, content, and sequence make one sentence different from another with regard to the kind of attitude conveyed, the kind of situation it is (e.g., intimate, formal), the kind of act it is (e.g., request, command), or the kind of person who is talking (e.g., student, teacher) (Hymes, 1972). Sociolinguists identify the social context as the most powerful determinant of verbal behavior (Labov, 1970; Philips, 1972) and point out that different cultural groups have quite different sociolinguistic assumptions about how and when it is appropriate to talk to different audiences (Dumont, 1972; Boggs, 1972). It has been demonstrated that all speakers are multidialectical or multistylistic (Labov, 1970) and that each adapts his/her style of speaking to the social stiuation (Cazden, 1970; Blom & Gumperz, 1972). An understanding of how to use language appropriately in social situations is termed "communicative competence" (Hymes, 1972). It has been suggested that children learn what is socially appropriate linguistic behavior through a process of "cultural transmission" (Bernstein, 1971), in which they acquire "symbolic orders," or ways of organizing experience. Bernstein identifies four critical socializing contexts, which are the regulative (e.g., parental scolding), the instructional (e.g., classroom discussion), the imaginative (e.g., talk during play), and the interpersonal (e.g., conversation between friends).

Sociolinguists make important distinctions between the correctness and the appropriateness of language use, and between the production and the comprehension of appropriate language (Stubbs, 1976). A major problem for speakers of nonstandard dialects in interaction with speakers of standard dialects may be the mutual ignorance of each other's language (Labov, 1970).

A problem of concern to some sociolinguists has been the fact that educational failure often appears to result from sociolinguistic differences between teachers and pupils (Stubbs, 1976). There is some evidence that dialectical differences cause educational problems only indirectly (Wight & Norris, 1970; Wight, 1971, 1975; Sinclair, 1973), that is, by affecting the attitude of the teacher toward the pupil (Stubbs, 1976). The attitudes that teachers, and many other speakers of standard English, display toward dialectical differences do not square with the facts. It is not the case that some languages or some dialects within a given language are less complex than others (Labov, 1970, 1972). It is not the case that the linguistic differences among various English dialects are extensive enough to interfere with understanding when speakers of different dialects attempt to communicate (Labov, 1972; Gumperz, 1971). It is not the case that differences in native language imply differences in cognitive ability (Cole & Bruner, 1971; Keddie, 1973).

Taken together, these sociolinguistic concepts and findings help to define the problem of investigating participant perspectives of classroom discourse. The classroom is viewed as one social situation among several in which the child participates. It can be expected that the language appropriate to each of these different situations will vary, and that the child will have some measure of communicative competence in each of these varied situations. It is also probable that children from different cultural backgrounds may have different assumptions about what is appropriate linguistic behavior in a given situation, and that pupils' assumptions may differ from the teacher's assumptions. This suggests

that the process of learning the rules of classroom discourse can be illuminated by comparing pupils' conceptions of these rules to their conceptions of the rules of discourse in the other social situations in which they participate, as well as to teachers' conceptions of classroom discourse rules. In addition, it can be expected that teachers will form judgments about pupils based on their use of language in the classroom, and it is probable that these judgments will affect teacher expectations for pupils. This suggests that teachers' observations and conceptions of pupils' communicative ability need to be examined in more detail.

Relevant sociolinguistic methods. Most classroom researchers would agree that "a major problem in studying classroom behavior is that it takes a tremendous effort to really see what is happening, rather than simply taking the scene for granted and interpreting it in terms of conventional categories" (Stubbs, 1976, pg. 70). Proponents of classroom interaction analysis have dealt with this problem to some extent by having the teacher code the interaction and make his/her own interpretations (Flanders. 1970; Parsons, 1968: Morine, 1975). Ethnographic studies, sociolinguistic studies, and studies of teacher information processing have dealt with it by making a concerted effort to gather data about the participants' interpretations of the behavior, chiefly through a variety of interview techniques. Sociolinguists particularly have emphasized the need to study participant interpretations of the social situations in which language occurs.

Hymes (1972) points out that:

> "Authority accrues to an investigator from knowledge of a wide range of relevant materials, from mastery of methods of analysis, from experience with a type of problem. But the authority also accrues from mastery of activities and skills, from experience with a variety of language, in a community. An investigator depends upon the abilities of those in the situation, whether it is a question of scientific inquiry or practical application." (pg. XV)

Stubbs (1976) argues that:

> "Research on children and classrooms is usually done by outsiders, but ultimately it is only the participants in a situation who have full access to all its relevant aspects. Ultimately, a sociolinguistic

> description of classroom language must come to grips with the values, attitudes, and socially loaded meanings which are conveyed by the language, and only the participants have full access to these values." (pg. 76)

In addition to an acknowledgement of the importance of participants' interpretations, two other methodological matters are of concern to sociolinguists engaged in classroom research or studies of language development in children. The first is the problem of studying the "natural situation," a problem for all classroom researchers, for it has frequently been noted that having an observer present in itself creates an unnatural situation. This is particularly true when the social setting is what is being studied, for it is the social aspects of the situation which may be most affected by the presence of an outside observer. Pride (1970) underscores this nicely when he points out the difficulties inherent in observing private verbal behavior, for with the presence of an observer, privacy disappears.

Studies differ widely in how closely they sample the natural language setting, and in whether they report examples of actual language used. Rather removed from the natural situation are studies where participants' retrospective reports are used as the basic data, supported by observations of a few actual communication events (e.g., Woods, 1975). Children's language in experimental or test situations has been examined in a series of studies (e.g., Heider, Cazden & Brown, 1968; Hawkins, 1969: Brandis & Henderson, 1970). Mehan (1973) has argued that a child's language ability is not an absolute quality, but rather the outcome of a social encounter, thus suggesting that the test situation itself "constructs" the child's ability, and is not a valid measure of his/her actual use of language.

A large preponderance of studies have been conducted through observation of and participation in the natural speech situation. Labov (1970, 1972) in particular has based his work on long-term intensive fieldwork and participant observation in the speech communities he has investigated. He provides detailed

analyses of the actual language recorded in these natural settings. A variety of methods are used for recording naturally-occurring discourse. Analysis has been based on paper and pencil recordings (Torode, 1974; Atkinson, 1975), transcripts of sound recordings (Bellack, 1966), the actual sound recordings (Gumperz & Herasimchuk, 1972), and sound recordings supplemented by timed photographic records (Walker & Adelman, 1972, 1975, 1976).

Some investigators observe and report on only one type of social situation, focusing primarily on the classroom or instructional setting (e.g., Bellack, 1966; Barnes, 1969; Atkinson, 1975). Gumperz and Herasimchuk (1972) varied the social situation by varying the role relationships when they compared the discourse of an adult teacher with a group of children to a 6-year-old teaching a 5-year-old child. Several investigators have compared children's language use in two different social situations, thus obtaining further insight into characteristics of classroom discourse. Philips (1972) compared school settings to community settings in her study of Native American children. Boggs (1972) recorded and observed Hawaiian children in lessons, on the playground, and in conversation with an adult observer, and identified different patterns in their speech that corresponded to these different situations. In studying the functions of silence in Sioux and Cherokee classrooms, Dumont (1972) observed children in classrooms and in the community.

Taken in their totality, these studies demonstrate that sociolinguists have made a concerted effort to observe language in natural social situations, to record it as completely and accurately as possible, and to compare classroom language to language used in other social situations in order to better understand the social meaning of classroom discourse.

The second methodological matter of concern has to do with the features of language that ought to comprise the basic data for analysis, and to some extent this appears to be based upon the "whim of the researcher" (Stubbs, 1976,

pg. 107), as well as upon the problem under study. The selected features have included silence (Dumont, 1972), children's repsonses to and uses of questions (Boggs, 1972), the topic under discussion (Torode, 1974), teachers' use of specialized terms (Barnes, 1969), talk-about-talk, or "metacommunication" (Atkinson, 1975; Stubbs, 1976), disruptive events (Atkinson, 1975), and instances of miscommunication (Adelman & Walker, 1975). Some studies have used a combination of features, such as words, syntax, and interchanges (Mishler, 1972) or words, sentence form, and intonation (Gumperz & Herasimchuk, 1972).

There are relatively few examples where researchers have analyzed classroom language as a system, rather than focusing on isolated features of the language. Bellack, et al (1966), Schlegoff (1968), and Turner (1969) are important examples of this approach. Sinclair and Coulthard (1974) have identified a hierarchical structure of classroom discourse in which acts (e.g., elicitation, prompt, nomination) build up into moves (e.g., initiation, response; frame, focus), which combine to form teaching exchanges or boundary exchanges. These exchanges combine to form transactions, and a series of transactions form a lesson.

Stubbs (1975, 1976) has roundly criticized the tendency for researchers to select as evidence any feature of language which strikes them as interesting, and urges the importance of analyzing language as a self-contained system with an inherent organization. In particular, he calls for close attention to language sequences (e.g., sequences of words, and sequences of conversational acts) as a critical feature of language organization.

The critical aspects of methodology discussed above have been aptly summarized by Stubbs (1976) in the following statement:

> "The demands which one has to make for work on language in education are therefore as follows. The work should be based primarily on naturalistic observations and recording of language in real social situations: mainly in the classroom itself, but also in the home, and in the peer group, which is the most powerful linguistic influence on children. The work must be based on a linguistically adequate analysis of what is said. This means

> both being explicit about the relation between language forms and language functions and also analysing the language as linguistic systems. It is not enough, however, for the analysis to be rigorous in a mechanical way: what is required is an analysis of the social meanings conveyed by language and an analysis of people's attitudes to language. Finally, if we are to understand the general principles underlying the sociolinguistic forces at work in schools, the analysis of language in educational settings must be related to what we know of sociolinguistic behavior in other settings.
>
> These demands are stringent, and ...no work ... yet satisfies them on all counts." (p. 112)

These requirements have been echoed in part by Robinson (1968), Hymes (1971), and Adelman and Walker (1975).

This review of methodology strongly supports the intent of this study, which was to examine the social meanings that pupils and teachers, as important participants in the classroom setting, attach to classroom discourse, to examine teacher judgements about pupils' communicative behavior, to compare pupil conceptions of classroom language to their conceptions of language in other social situations, to engage pupils and teachers as "research assistants" or informants in the analysis of classroom discourse as a linguistic system, and to compare their analyses to that of a specialist in sociolinguistic analysis of classroom discourse.

Relevant findings from classroom research. While sociolinguistic studies of the classroom are still largely "exploratory work on a relatively narrow range of classrooms" (Stubbs, 1976, pg. 90), when the full range of classroom research is considered, a number of important findings can be cited. To begin with, classroom dialogue is asymmetrical, with teachers contributing two-thirds of the language on the average (Flanders, 1970). The question-answer sequence is the most basic pattern of classroom dialogue (Bellack, 1966; Sinclair & Coulthard, 1974) and it is a pattern that has been found to be stable over fifty years (Hoetker & Ahlbrandt, 1969) and across different countries (Bellack, 1973). This recitation pattern is one of the characteristics of "direct teaching," and recent studies have provided some evidence of the effectiveness of this strategy (Rosenshine, 1977; Berliner & Rosenshine, 1976).

However, the question-answer pattern carries different meanings for pupils from different cultural backgrounds (Philips, 1972; Dumont, 1972; Boggs, 1972). Moreover, teachers characteristically use questions that are not genuine requests for information, but are "test questions" (Labov, 1970), or "psuedo-questions" (Barnes, 1969). The rules of classroom dialogue are quite distinct from those of conversation between social equals (Stubbs, 1976) and may act to inhibit children's use of language, by setting up a social situation in which they play a passive role, giving short answers to discrete questions, and seldom initiating discussion themselves (Flanders, 1970). There is evidence from several studies that teacher absence can lead to productive and complex discussion among children (Labov, 1970, 1972; Wight, 1975; Barnes & Todd, 1975), and that children follow different rules of discourse in social situations other than the classroom (Boggs, 1972; Dumont, 1972, Philips, 1972). This evidence supports the socio-linguistic thesis that the social situation is the strongest determinant of verbal behavior.

Several distinct functions are served by language in the classroom. Research has explored some of the cognitive functions (Barnes, 1969; Mishler, 1972), disciplinary functions (Woods, 1975), language control functions (Atkinson, 1975; Stubbs, 1976), status-definition functions (Torode, 1974), and socialization functions (Jackson, 1968; Snyder, 1971). The effects of pupil language on teacher judgments can be critical. Hammersley (1974) has described how the language of pupils, particularly their responses to questions, can lead to teacher judgments about the intellectual capacity of pupils. Wight (1971, 1975) has demonstrated that children's dialectical differences can also lead to negative teacher judgments about pupil ability (see also Williams, 1972; Shamo, 1970). The informal assessments that teachers make as a result of their face-to-face encounters with pupils can lead to decisions that greatly influence the school lives of children (Rist, 1970; Leiter, 1974; Mahan, 1974; McDermott, 1974).

Relevant studies of children's language development. Studies of the development of communicative competence and performance in children have not been as extensive. Several studies have examined social class differences in the effectiveness of communication in structured tasks such as two-person communication games. Lower class children have consistently been found to be less explicit in their encoding (child as speaker) and less accurate in their decoding (child as listener) than middle class children, and to use a style of encoding termed Whole Inferential in contrast to the middle class child's Part Descriptive (Heider, 1971). These studies have considered the child as speaker (Heider, Cazden, & Brown, 1968; Hawkins, 1969), and as both speaker and listener (Glucksberg, Krauss & Weisberg, 1966; Krauss & Glucksberg, 1969; Brandis & Henderson, 1970; Heider, 1971). Bernstein (1972) found some crossover of effectiveness. Middle class children were more explicit in telling stories about a series of pictures, but lower class children were more willing to role play the pictured situation, and to hypothesize about what the person in the picture might be saying. There have been questions raised about the effects of the 'test' situation on the accuracy of this picture of children's communicative ability (Stubbs, 1976), but Joan Tough (Cazden, 1972), taping children in play sessions, replicated Hawkins' results.

Some studies have examined children's communication without emphasizing social class differences. Mueller (1971) videotaped play sessions of young children and found that failure of communication was best predicted by fragmentary or unclear utterances (child as speaker), while success was best predicted by the attention or involvement of the listener. Strandberg and Griffith (1968) found that personal involvement of the speaker in photographs being described resulted in greater structural complexity of the description. Labov, et al (1968) obtained similar results in comparing children's narration of television programs and personal experiences.

Several studies have examined children's communication in varied social situations. In addition to those mentioned in the earlier section on socio-

linguistic methods, Carlson and Anisfeld (1969) and Weeks (1970) found that very young children varied their intonation and pitch to serve different functions in different social situations. Horner (1968) examined the types of language (mands and tacts) young children heard and used when interacting with their mothers and with other children. Verbal behavior appeared to be more patterned or standardized between child and adult than between child and child. The possibility of detrimental effects of peer interaction on language development has been raised by some other studies (Bates, 1975; Nelson, 1973).

Relating developmental research to classroom research. Developmental research has studied the child as speaker and as listener. Classroom research indicates that the child's principal communicative role in the classroom is that of listener rather than speaker (Flanders, 1970). We know that the child as speaker has strong effects on the teacher's attitudes and judgments (Williams, 1970; Shamo, 1970; Hammersley, 1974; Wight, 1971, 1975; Leiter, 1974; Mehan, 1974; McDermott, 1974). While correlations exist between use of nonstandard dialects and cognitive features of language, such as vocabulary (Lesser, Fifer & Clark, 1965) and language use (Cicirelli, et al, 1969), use of nonstandard English has not been demonstrated to be a causal factor in school achievement (Cazden, 1972; Stubbs, 1976). However, teacher expectations based on negative judgments of pupils resulting from language differences may have an effect on school achievement (Rist, 1970; Brophy & Good, 1969, 1974; Beez, 1968). We know a fair amount about the kind of language the child as listener hears in the classroom (e.g., Mishler, 1972; Woods, 1975; Bellack, 1966; Sinclair & Coulthard, 1974). We know very little about how the child as listener interprets the language of the classroom. What we do know has been largely inferred from a comparison of the child's behavior in school and in other settings (e.g., Houston, 1970; Philips, 1972; Boggs, 1972; Dumont, 1972). The point has been strongly made that the individual's interpretation of the social situation must

be considered if we are to understand the behavior we observe (Psathas, 1968; Hymes, 1972; Stubbs, 1976). It has also been demonstrated that it is possible to tap individual interpretations of classroom behavior using what Slobin (1971) would term "indirect" methods, e.g., having pupils identify the items of teacher behavior they observe while participating in a lesson, then group or categorize these items according to their similarities, to reveal the concepts that pupils use in organizing their observations of the classroom (Morine and Vallance, 1975).

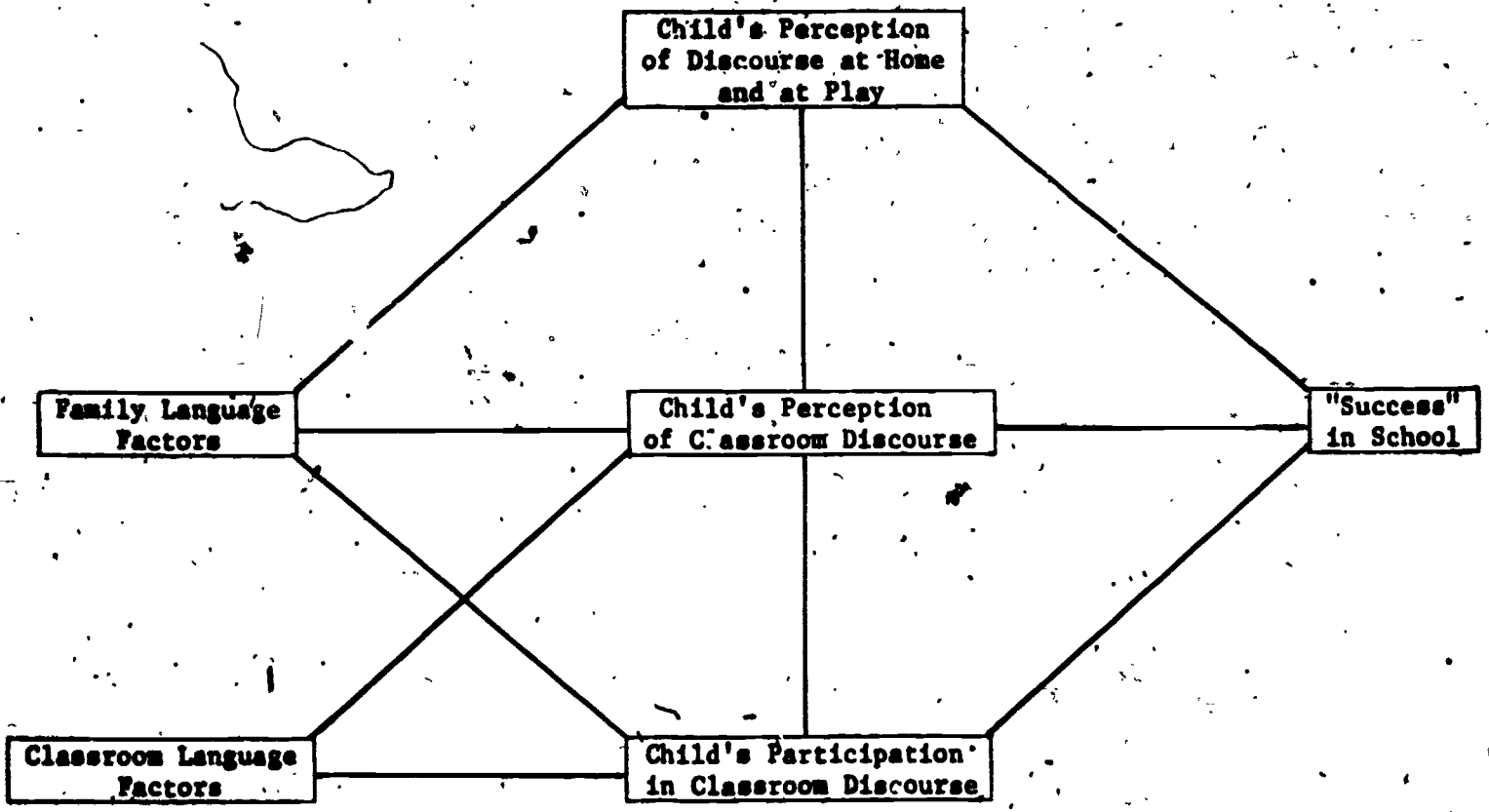
In sum, the research cited above demonstrates that we need to know more about how pupils with different characteristics interpret and develop competence in classroom discourse, about how closely pupil interpretations of the rules of classroom discourse correspond with teacher interpretations, and about how pupils' language in the classroom affects teacher expectations for pupil performance. Additional research is necessary because the consequences of miscommunication can be bad for children both socially and intellectually, and because a clearer understanding of the separate perspectives of the participants in classroom discourse can eventually help those participants to understand each other more fully. The guidelines for effective research have been clearly stated (Stubbs, 1976). The essentials are: naturalistic observation; an analysis of classroom language as a linguistic system; an analysis of the social meanings the participants attach to classroom language; and a comparison of classroom discourse to sociolinguistic behavior in other settings. The study reported here was designed with these criteria in mind.

The Research Paradigm

The general paradigm that has been used to guide this study is presented in Figure 1. In this model the child's perceptions of discourse at home/play and at school and his/her participation in classroom discourse are viewed as intervening variables between family language factors, or classroom language factors, and eventual success in school. The lines indicate the types of relationships that have been examined.

FIGURE 1

A General Paradigm for Analysis of Participant Perspectives of Classroom Discourse



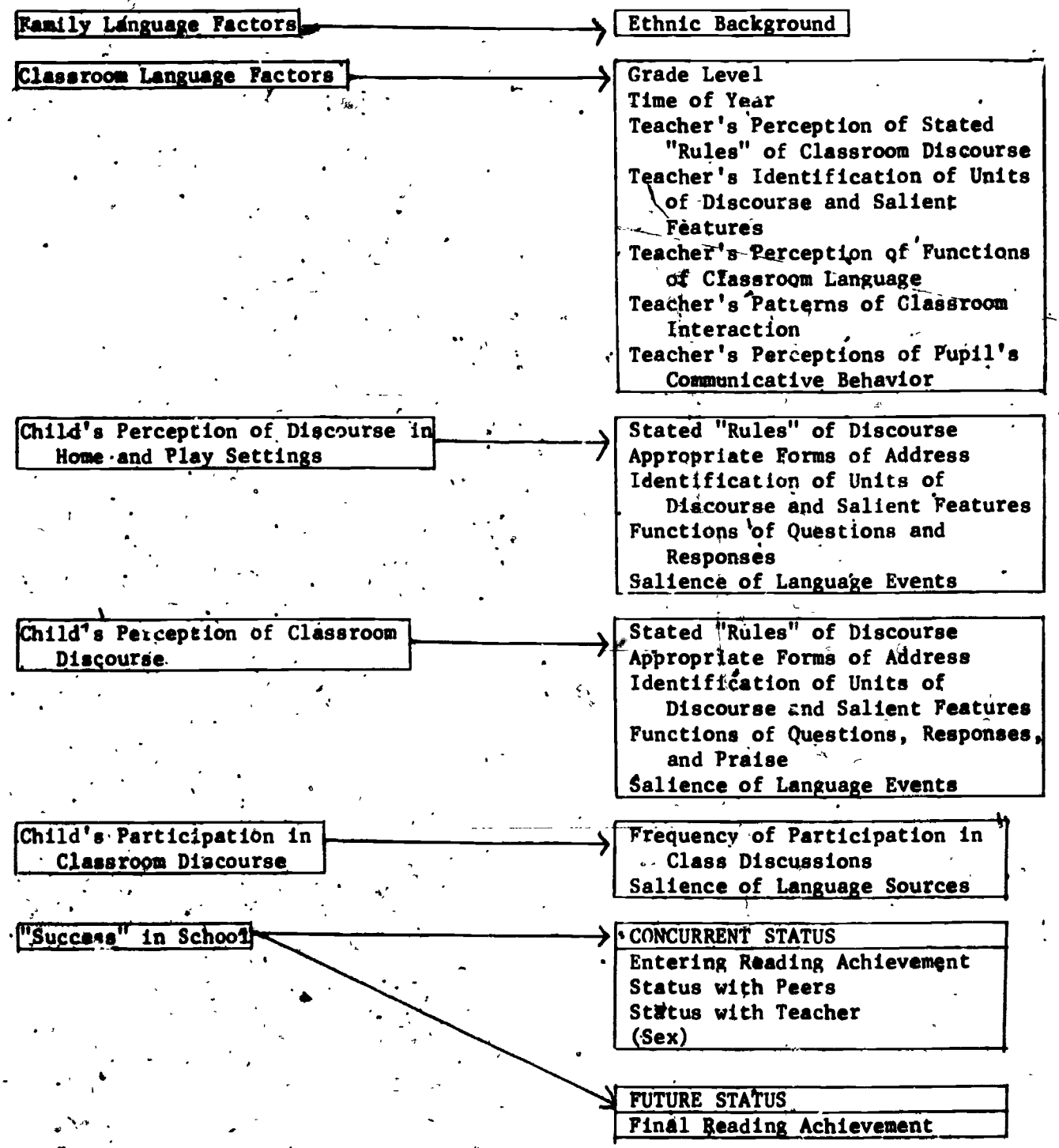
Each of the boxes in this model represents a set of variables. Figure 2 identifies these variables in more detail. Some of these variables are self-explanatory, while others will be explicated in the process of reporting on data collection procedures and findings. It may be well to note, however, that special emphasis is given here to the child's status, both social and academic, in the ongoing classroom. This is an essential factor to be considered in examining the rules of classroom discourse, since sociolinguists identify status as a key variable in understanding verbal interaction in any social setting. It would of course, be possible to restrict our consideration of status to pupils in the aggregate, and examine classroom discourse only in relation to differences between pupil status and teacher status. However, we have elected to take Barr and Dreeben's (1977) criticism of classroom research seriously and examine the differential status of individual pupils as this may affect transactions within classrooms.

Much of the research on effective teaching has focused on standardized achievement in basic skills as the single criterion of success in school. Furthermore, success is typically defined in terms of "future" status in achievement of basic skills rather than status during the period that the classroom is in operation. It is the end-of-the-year test that is most often used to determine the success or failure of the individual pupil and the effectiveness of the classroom teacher. Entering achievement, which we have termed "concurrent" status, is used mainly as a means of controlling for differential pupil ability, to arrive at more accurate estimates of the teacher's contribution to pupil achievement.

A sociolinguistic approach to the study of classroom interaction forces us to acknowledge the importance of concurrent status, and to give equal emphasis to achievement status and status in the social system of the classroom in which the interaction occurs. We believe that this kind of expansion of the concept

FIGURE 2

Identification of Specific Variables Considered



of "success" in school is essential for a clearer understanding of classroom discourse. The variables of entering reading achievement, status with peers, and status with teacher are all examples of acquired status within the school and classroom setting, and as such, are reasonably placed under the label "concurrent success" in school. The "ascribed" status variable of sex is clearly a different matter. It is not, strictly speaking, a measure of success in the school setting, but it is a status variable of importance. In Figure 2, we place it in the Concurrent Status category, set off by parentheses to indicate that it is a special instance of classroom status.

Investigative Questions

Four major questions were addressed as part of this investigation. Each major question has several subsidiary parts, as follows:

1. What do pupils conceive to be the units, salient features, functions, and rules of classroom discourse?
   a. Do these vary by classroom/teacher?
   b. Do these vary by cultural background, classroom status, or age of the pupil?
2. How closely do the units, salient features, functions, and rules of classroom discourse conceptualized by pupils correspond to those identified by teachers themselves?
   a. Does the amount of correspondence vary by teacher?
   b. Does the amount of correspondence vary by cultural background, classroom status, or age of the pupil?
   c. Is the amount of correspondence related to the features of discourse in a given classroom as identified by a sociolinguistic specialist?
3. What differences do pupils notice between the features, functions, and rules of classroom discourse and those of discourse at home or in play settings?
   a. Do these differences vary by classroom/teacher?

b. Do these differences vary by cultural background, classroom status, or age of the pupil?

4. What differences do teachers notice among pupils with regard to communicative behavior such as attentive listening, participation in classroom discussions, observance of "no talking" rules, and use of standard English?

a. Are teacher rankings of pupils on these various types of communicative behavior interrelated?

b. Are there relationships between teacher expectations for pupil success in reading and their rankings of pupils on these various types of communicative behavior?

c. Does the amount of teacher-pupil correspondence in identifying the rules of classroom discourse vary according to teacher-perceived differences in pupils' communicative behavior?

PROCEDURES

Subjects

The subjects of this study were 164 children, and their teachers, in six second, third, and fourth grade classrooms, in a single school located at the southern end of the San Francisco Bay. The six teachers were all female, and all had been teaching for many years. Four were Anglo, one was Black, and one was Portuguese. The school was located in a lower socioeconomic, multiethnic, urban area, consisting mainly of small, single family dwellings. Stable, two parent families predominated, and the school population was also remarkably stable for a lower SES community. About 45% of the pupils were Mexican-American, 35% were Anglo, 11% Black, and 9% other minority groups, including primarily children of Asian and Portuguese extraction. The school appeared to us to be remarkably well integrated, with numerous friendship choices that crossed ethnic "lines."

Data Collection Procedures

The basic data collection procedure for this study involved videotaping six language arts lessons in each classroom over the first half of the school year (September through January). Teachers selected their own content for these

lessons. We specified only that they not teach spelling or handwriting, and that the lessons should include the whole class and should involve some verbal interaction (i.e., not be comprised merely of individualized seatwork). The lessons covered a variety of topics (e.g., capitalization, nouns, poetry analysis, creative writing) and a variety of activities (e.g., pantomime, a sensory awareness exercise, textbook exercises).

The videotaped lessons were played back to pupils and teachers on the same day that they were taught. Each pupil viewed three different lessons, working individually with a data collector, and responding to a variety of data collection tasks. Each teacher viewed all six lessons, and responded to the same set of data collection tasks as did the pupils. Videotapes of conversations in three families (one Anglo, one Mexican-American, and one Black) were used to collect information on perceptions of discourse at home. Within each classroom a stratified (peer status and sex) random sample of six students was videotaped in an indoor, relatively unstructured play setting and these videotapes of play group conversations were used to collect information on perceptions of discourse at play.

The specific tasks to which pupils and teachers responded covered a rather wide variety of topics and involved several different procedures. Most tasks were carried out in relation to all three settings (classroom, home, play), but they are described here in terms of lessons. Briefly, the tasks included:

1. A sentence completion task on "rules" of discourse, constructed on the basis of pupil responses to an open-ended question about "how people talk in your classroom;"

2. Generating sentences which might be said by (or to) the pupil to "get someone's attention" or "get someone to do something:"

3. Reporting "what you heard anybody saying" after playbacks of short videotaped segments of lessons in which pupils had participated (responses were recorded verbatim on 3 x 5 cards);

4. Organizing 3 x 5 cards of "what you heard" into groups of cards that "belonged together because people were saying the same kinds of things;" and

5. Studying a set of teacher questions asked in the lesson (also pupil responses and teacher praise) and explaining who said these things, to whom, for what reason.

Additional data. Videotapes of the lessons were used to produce transcripts of each class discussion, and seating charts provided by the teacher were used to identify the pupil who made each comment, wherever possible. These data were used to derive a measure of frequency of participation in discussion over six lessons for each pupil, and within each classroom pupils were classified as high, middle, or low in frequency of participation, based on the overall patterns of participation in that class.

To gather information on pupil status in the peer group, each child (in January) was presented with an array of photographs of children in the class, given a series of scenarios, and asked to select the three children most likely and least likely to fit each scenario. The episodes involved selection of a team for a sports contest, selection of a team for a TV quiz show, identification of the children who would be likely (or unlikely) to take charge and know what to do if there were an accident in the classroom and no adults were around, and identification of the children who would probably be observed "hanging around" with the pupil if (s)he were followed for a week. Composite scores were developed for each pupil according to how frequently (s)he was mentioned under "most likely" and "least likely" categories, and within each classroom pupils were classified as high, middle, or low in peer status, on the basis of these composite scores.

Data on teacher perceptions of pupils' communicative behavior were collected by asking teachers to group children on the basis of several different language characteristics, which had been identified in earlier studies as salient features to teachers (Morine-Dershimer, 1979; Morine & Vallance, 1975). In September, October, and December teachers were presented with a set of 3 x 5 cards, each containing the name of a pupil in their classroom, and asked to sort, or

group, the pupils according to: their participation in class discussions; their attentiveness during lessons; their tendency to follow the "no-talking" rules of the classroom; their use of "standard English;" and their probability of success in reading achievement for the year. Teachers' groupings of pupils in December, when the classroom was well established, were used to develop composite scores of their ratings of pupils, and these were used as measures of pupil status with the teacher. Within each classroom pupils were classified as high, middle, or low in status with the teacher on the basis of these composite scores. In addition, the groupings were used to examine relationships among teacher rankings of pupils on the various communicative behaviors.

Pupil "entering" reading achievement scores were based on the results of the Metropolitan Achievement Test which was routinely administered by all teachers in the school in October. Within each classroom these scores were organized by quartiles, based on the national test norms, since the state-funded reading improvement program was evaluated on the basis of the number of pupils who moved up from below the first or second quartile in reading achievement during the course of the school year.

"Final" reading achievement was measured by scores on the Metropolitan Achievement Test which was administered in the fall following our year of data collection. In examining the factors that might be related to final achievement, we have used regression analysis to control for entering reading achievement.

Data Analysis

For each task administered, pupil responses were reviewed and category systems were developed to reflect the pattern of these responses. These category systems are described very briefly in the section on findings, but are presented in detail in the five-part final technical report. Intercoder reliability in use of these category systems was checked by having two separate coders code all responses for one or more classes. In all cases agreement was above .85.

When all pupil responses had been coded, these data were combined with

background information on pupils (ethnic group, grade level, classroom; etc.) and the SPSS and SAS computer programs were used to identify general patterns of responses, as well as relationships between patterns of response and other pupil variables. In addition, pupil responses were compared across the three settings of home, play, and school, and within the school setting, the pupil responses were compared to those of their teachers.

Most of the variables examined in this report are qualitative, or have been treated as qualitative in order to make comparisons across classrooms. In some instances, decriptive data are reported, but no tests of significance have been made. Where appropriate, nonparametric statistics have been used to test the significance of relationships. Regression analyses (performed by the SAS computer program) have been used to identify the factors that contribute to status with teacher, participation in class discussions, and final reading achievement. Further details on statistical analyses are presented in the technical reports.

It should be noted that this is an exploratory study, and that a large number of relationships have been examined. The reader is reminded that significant relationships which have been identified must be viewed conservatively for this reason.

FINDINGS

Rules of Discourse *

Pupils in this study perceived clear differences in expectations, or "rules" of discourse, across the three settings of home, play, and school. It may seem inappropriate to talk about "rules" of discourse in informal settings such as family conversations and play group interactions, but it is the case that there are certain expectations of appropriate verbal behavior in any ongoing social group. In comparing pupil statements about the formal rules of classroom discourse with their statements about expectations in the informal settings of home

* No tests of significance were used with these data.

and play, we have attempted to identify the classroom expectations that seem to children to be the most similar to and most different from the expectations in the other settings that are most familiar to them.

With regard to expectations for being quiet and not talking, the following items are worth noting:

1) When a teacher wants quiet, she is expected to use a signal (turns out lights, rings a bell), but mothers and playmates are expected to give commands, and they are seen as giving sharp commands ("Shut up!") proportionately more often than teachers;

2) When teachers and mothers talk, children say that they keep quiet, but when playmates talk, they listen;

3) Politeness rules for not talking are expected to operate more strongly at play than at home;

4) Pupils are expected to be more bound by politeness rules than teachers, and mothers and playmates seem to be seen as following these rules more than the children who are reporting:

5) There are few differences between home and school with regard to expectations about whom children talk to when playing or when work is done; and

6) While children are working, the expectations that they may talk to an adult are similar at home and at school, but talking to a child is a stated expectation at home more than at school, and talking to "no one" is a stated expectation at school more than at home.

With regard to expectations for asking and answering questions, it is hardly surprising that children in this study indicated they were expected to raise their hand in school if they knew the answer to a question, while at home or play, they "just answered it," but the following results are somewhat more interesting:

1) The expectation is that children will directly acknowledge not knowing the answer to a question ("I don't know") at home or play, while at school the acknowledgement is indirect ("don't raise my hand");

2) The expectation that a child will try to find out the answer to a question if (s)he doesn't know it is stronger at school than at home or play, but the tendency to evaluate ability or question difficulty, whether or not the answer is known (I'm smart, I'm dumb, that's an easy question, that's a hard question) is much stronger at home and play than at school;

3) It is expected that children ask questions at school, home, or play when they need help, but at school there is the added expectation that they do this at the "allowed" time:

4) Teachers are expected to ask questions in order to teach, while mothers ask when they want to know something, and playmates ask when they need help; and

5) Asking questions is seen as a situational activity for mothers as often as for teachers (the teacher asks a question when we're doing math, and my mother asks a question when she's cooking supper).

With regard to getting information, assistance, or praise, the following expectations can be noted:

1) Signaling to get attention before asking for information is essential at school, but surprisingly, getting attention first is important in home and play settings too ("Hey, Mom, come here" or "Hey, you guys"); and

2) Praise directed at the individual child is easier to come by at home than at school or play.

It is clear from these data that, in a general sense, children perceived definite differences in the rules of discourse at school and in more informal settings. This is hardly to be wondered at, for the reality is that differences in expectations do exist in these settings, and children could not function in the school setting if they were not aware of the differences. A more important question is whether different children perceive these settings differently. For pupils in this study there were no significant differences by either ethnic background or entering reading achievement in responses to the sentence completion task for either the school or home setting.

We cannot drop the issue of home-school discontinuities here, however. Three types of rules can be identified in relation to home-school congruency of expectations. There are rules with fairly high congruency, such as:

1. When I'm playing, I talk to ... my friend;
2. When _____ talks, I ... be quiet; and
3. _____ doesn't talk when ... someone else is talking.

There are also rules with highly agreed-on discrepancies, such as:

1. If I know the answer to a question, I ... raise my hand (school)/ say it (home);

2. My teacher/mother says "good" when ... someone gives a good answer (school)/I do something right (home); and

3. When I need help, I ... raise my hand (school)/ask my mother (home).

There is no confusion about the differences between the two settings in the above instances.

However, there are rules for which expectations are mixed, or muddled. It is these rules for which home-school discontinuities might be most apt to lead to misunderstanding and miscommunication between teacher and pupil. The expectations which appear to be most "mixed" have to do with questioning. For example:

1) If I don't know the answer to a question, I ... don't raise my hand/ say I don't know (23 congruent responses, 35 agreed-on discrepant responses, out of 143 total responses);

2) I ask a question when ... we're s'posed to/I need help (49 congruent responses, 23 agreed-on discrepant responses, out of 143 total responses); and

3) ____ asks a question when ... she wants to tell us something/ she wants to know something (32 congruent responses, 16 agreed-on discrepant responses, out of 143 total responses).

The data on pupil-teacher correspondence in defining the rules of discourse also point to classroom questioning as the area where rules are least clear. Pupils and teachers show the least agreement on rules about asking questions. Pupils say that they ask a question "when the teacher's not talking," or "when I'm s'posed to," but teachers believe that pupils ask questions when they need help or want to know something. Teachers say that <u>they</u> ask a question when they want to teach something, or (occasionally) when they want to know something, but over half the pupils responded by giving a <u>situation</u> in which the teacher would ask a question, rather than a <u>purpose</u> for asking.

The strongest pupil-teacher agreement exists for rules about answering questions and getting information/assistance, all rules that involve use of the "raise your hand" signal. Overall pupil-teacher agreement was strongest in

one class where the teacher stated the rules clearly and reminded pupils of their existence frequently.

For the most part teacher perceptions of pupils' communicative behavior (participation, attentiveness, following "no talking" rules) was not closely related to pupil agreement with the teacher in stating the formal rules of classroom discourse. That is, teacher perceptions did not reflect pupils' formal knowledge of teacher expectations, suggesting that pupils' formal understanding of the rules is not necessarily reflective of their operational understanding (their real communicative behavior).

To summarize, these findings on pupil perceptions of the rule of classroom discourse point to no direct relationships between pupil perceptions of the formal rules of classroom discourse and pupil status variables, but suggest that home-school discontinuities in the rules surrounding classroom questioning may lead to miscommunication between teacher and pupil. This deserves further study.

Forms of address. A special case of the rules of discourse involves choosing appropriate forms of address. In examining pupil perceptions of appropriate forms of address, we concentrated on two language functions that were clearly important to pupils in all three settings. These were the functions of getting attention and influencing (controlling or directing) others.

Pupils in this study generated a wide variety of sentence forms, including commands, requests, suggestions, and questions, as appropriate for serving both the attention-getting and influencing functions. Within each of the three settings of school, home, and play, the forms of address identified as appropriate varied according to the relative status of the speaker and listener in that social setting. For example, command forms were generated as instances of talk by mothers and teachers ("Do your chores now;" "Go get me some paper."), but question and request forms were generated as instances of what pupils would say ("Did you fix my bike yet?" "Please help me with my work."). Anglo pupils and pupils high in reading achievement accorded more differential status (relative

to themselves) to their teacher than did Mexican-American pupils or pupils low in entering reading achievement in the forms of address used to influence. Low peer status pupils accorded more differential status to their playmates than did middle or high peer status pupils.

In general, the teacher was accorded more differential status, relative to the child, than was the mother in forms of address used to influence. But pupils low in reading achievement, and Blacks and "other" minority group pupils (not Mexican-American) did not accord as much differential status to the teacher vs. the mother, in the forms of address used to influence her. That is, they did not display as much awareness of a home-school discontinuity, which seemed to indicate they did not understand the status rules associated with forms of address in formal settings as well as other pupils.

These findings indicate that pupils in general were quite aware of the relationships between social status and appropriate forms of address in each of the settings most familiar to them and of the very real differences between appropriate forms of address in school settings compared to home and play settings. Pupils who did not perceive the rules as different in the formal vs. informal setting tended to be those who were culturally different, and those who encountered achievement problems.

Units of Discourse and Salient Features *

In reporting what they heard "anybody saying" after viewing videotape playbacks of lessons in which they had participated, pupils in this study responded primarily by giving "simple" units, i.e., they reported actual language in sentence form, but provided no information beyond the utterance ("How many would like me to put another word up?" "I know how to spell language."). Over the course of the year, however, as the classroom became more familiar, significantly more contextual information was reported, so that more "compound" and "complex" units of discourse were reported by pupils ($p < .001$). Some examples

* Analysis of variance was used with these data.

are:

1. [Miss L.f. rang the bell.] Now to do your assignment, you have to write the sentences. There is (sic) 14 lines; and

2. Let's draw a witch. How can you describe a witch?
[She called on Rick.]
Scary.
I don't know how to draw scary, so I'll just write it on the board.

Pupils high in status with their peers reported significantly more information (actual language plus contextual information) than did middle or low peer status pupils ($p < .02$). In viewing videotapes of informal settings (family conversations and play groups) pupils reported more "events" without giving the actual language uttered, and provided less specific information (language used plus contextual information), than they did for the formal classroom lessons ($p < .001$).

In forming groups (categories) of the 3 x 5 cards containing their reports of the language they heard in videotape replays of lessons, pupils identified "contextual" and "social" features of discourse most frequently. That is, they referred to events or activities within which the language occurred and to language sources as important common (salient) features of the language. Some examples include:

1. Instances selected:

   a. Bill. Let's see what Bill can make.

   b. Gavino, come up and let's see what he can make.

   c. Robert made "mousetrap," and that's a fun game, too.

   Reason for grouping: Those people went up to make some (compound) words (on the feltboard);

2. Instances selected:

   a. Do you know what a mental picture is?
   [She asked Ysa.]
   A mental picture is something that you think in your head. (Ysa)

   b. There was a Jawa chasing me. (Ysa)

   Reason for grouping: Ysa's talking. It's about the stuff that she seen in her head (an exercise in describing).

These "embedded" features of a social and contextual nature became significantly more prominent as the classroom became more familiar ($p < .05$), in much the same way as contextual information increased in the units of discourse reported. Embedded features were as salient to pupils in videotapes of family conversations and play groups as they were in lessons. "Written" features of language were more salient to pupils in lessons than in informal settings ($p < .05$). Written features were identified when pupils concentrated on the written form of the language ("These all start with 'd.'") rather than the oral form ("They're all talking about a game."). "Abstract" (structural and functional) features of language were more salient in informal settings ($p < .05$) (e.g., "The mother was telling them to do something," a directive function).

There were no peer status or ethnic differences in salient features identified by pupils, but there were significant achievement and grade level differences, with lower achievers ($p < .002$) and second graders ($p < .05$) identifying more written features, while higher achievers ($p < .01$) and fourth graders ($p < .001$) identified more abstract features.

Teacher reports of what they heard "anybody saying" in lessons understandably tended to be in more complex units than pupils' reports. In addition, teachers tended to report a question in conjunction with a pupil response, or a series of responses, while pupils tended to report pupil responses in isolation from the question that elicited it. Contextual features of discourse were "salient" to teachers as well as pupils, but teachers focused a great deal on functional features as well. Teachers' contextual groupings were organized by lesson concept (e.g., these were the ordinary examples of compound words the kids gave; these were the unusual and interesting examples they gave), and their functional groupings tended to be related to instructional purpose (e.g., questions I asked to get out facts; questions I asked to get expressions of their opinions). Thus, teachers organized classroom language around content and instructional

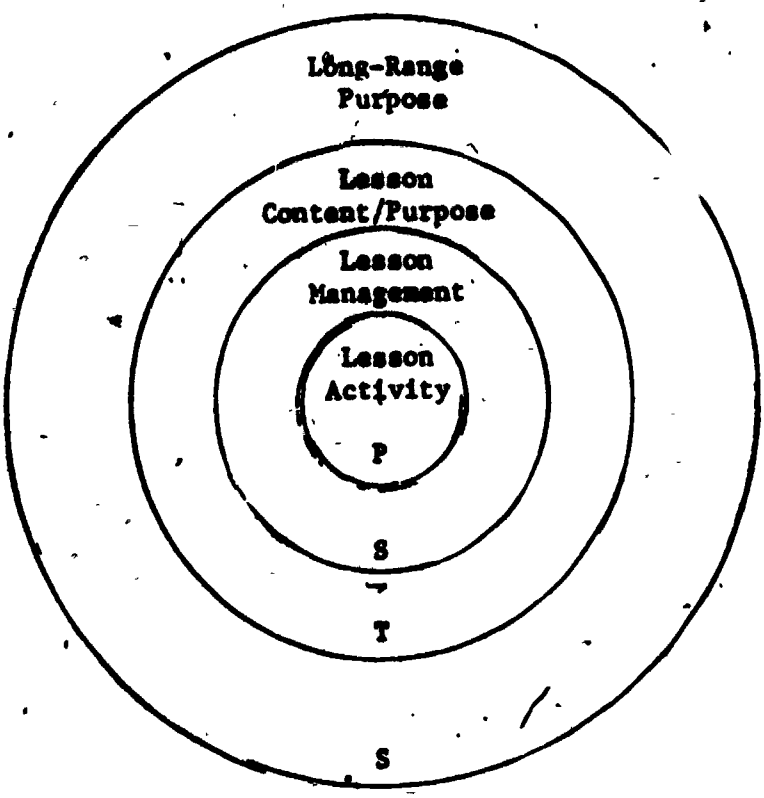
purpose, while pupils organized it around the activities of the lesson.

The sociolinguist (Roger Shuy) who analyzed the thirty-six videotaped lessons neither reported what he heard "anyone saying, nor "grouped" language units on the basis of their similar features, but he did use categories or concepts to talk about the language features that stood out for him. He identified a variety of "salient features" (e.g., topic manipulation, self-referencing, supersegmentals), but most salient for him were the ways in which these features of classroom talk contributed to or detracted from the immediate function (managing the flow of talk) and the long-range function (learning) of the classroom. He also appeared to "hear" more teacher talk than pupil talk. The instances of pupil talk presented in his report were there primarily to illustrate the ways in which teacher talk served to manage or control the flow of pupil talk.

These differences in perspective are presented graphically in Figures 3 and 4. Figure 3 can be interpreted as follows: ideally, any lesson is designed to serve some long-range goal or purpose; at the same time the lesson has a content and purpose of its own; this content or purpose determines the management procedures appropriate to the lesson; the management, in turn, is designed to facilitate the activities which occur within the lesson. The findings of this study suggest that pupil perceptions of language were organized by the "inner circle," the lesson activities. Teacher perceptions were organized from a broader or more encompassing perspective, by the content and purpose of the lesson. The sociolinguist perceived classroom language from two perspectives, one more narrow (management of the flow of talk), and one more broad (long-range purpose). In a sense, then, his perspective was at once more encompassing and more penetrating than the teacher's perspective, and indeed, this is what we should expect from an outside observer, just as we should expect the teacher's perspective to be more encompassing than the pupil's. Considered as a whole, Figure 3 illustrates the point that the fullest understanding of classroom language can

FIGURE 3

Factors that Organize Perceptions
of Classroom Language



P = Pupils
T = Teachers
S = Sociolinguist

only be achieved by the inclusion of all of these perspectives.

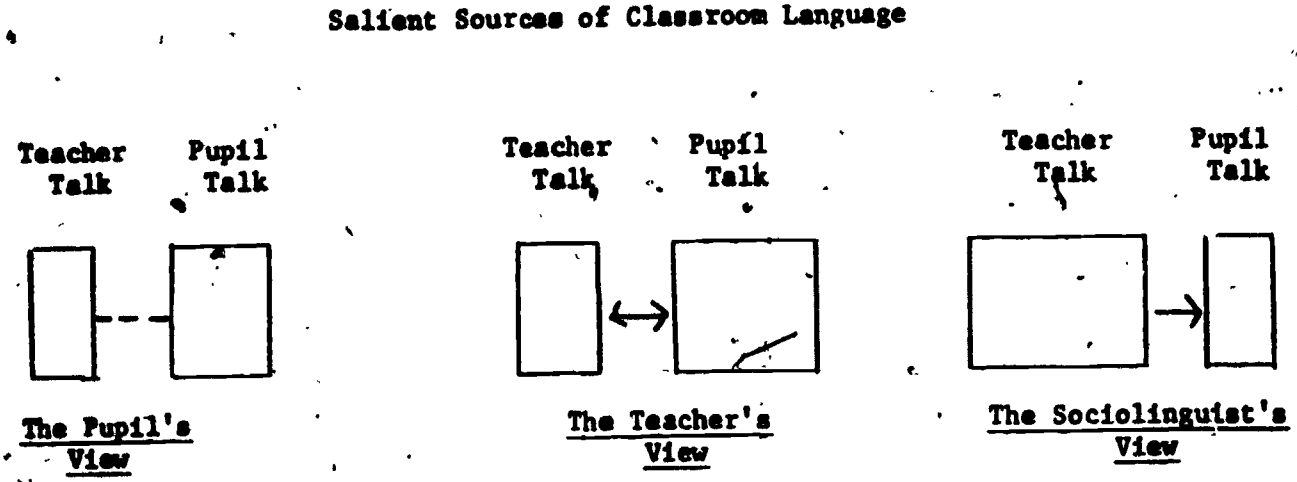
Figure 4 illustrates three perspectives of the saliency of the two main sources of classroom talk. For the pupil, pupil talk predominated and there was no clear relationship between teacher talk and pupil talk. For the teacher, both teacher talk and pupil talk were salient, with pupil talk having a slight edge, and there was a reciprocal relation between the two. For the sociolinguist, teacher talk predominated, and functioned primarily to manipulate or direct pupil talk. Here, it seems to us, the teachers' view was the broadest, or most encompassing of the three, but it is still the case that all three perspectives must be combined to provide a really complete view of classroom language.

To summarize, the findings on pupil and teacher perceptions of the units and salient features of classroom discourse all emphasize the importance of the social context in the formation of these perceptions. In particular, the role/status of the participants in the social setting, the stage of development in establishing the social system itself, and the purpose for which the system has been established, all appeared to be contributing to differences in participant perceptions of classroom discourse. Furthermore, it is clear that pupil perceptions of language shifted as the social context changed from the formal setting of the lesson to the informal settings of conversations in families and play groups.

These findings underline the need to know more about how the social system of the classroom is established, and what part language plays in that establishment. The sociolinguistic analysis of these lessons focused on the language used by teachers as a fundamental factor in the social system of the classroom, and emphasized the ways in which classroom differences were created by subtle differences in teacher use of language. We turn next to an examination of these differences, focusing particularly on the management function, and on classroom questioning.

FIGURE 4

Salient Sources of Classroom Language



Sociolinguistic Analyses of Classroom Language

Roger Shuy's sociolinguistic analysis of these lessons grew out of a particular perspective on the relationship between talk at home and talk at school. He noted that talk in the classroom is the major device for assisting in learning. Children come to school from an environment in which talk is conversational. They meet a new kind of language use which requires them to learn new rules. They have to learn that one cannot talk at will without making a bid for a turn (visual or verbal). They need to learn a new set of asymetrical interruption rules. They need to learn the subtleties of indirect language use. ("I see someone whose hands aren't folded" actually is an imperative, even though it has the form of an observation). The learning pattern may be described as follows:

Home conversation ——————→ School talk

With such a developmental pattern clearly evident, it would seem reasonable that effective classroom language would attempt to move in the learner's direction rather than to expect the learners to be immediately proficient in a language system they have not yet mastered. Such a strategy would look like this

Home language ⟶ School talk

That is, the effective teacher would attempt to reduce the mismatch of school and home talk styles by:

1) eliminating the unnecessary characteristics of school talk;

2) accepting the errors in stylistic conflict caused by the mismatch; and

3) setting a reasonable and gradual pace for acquiring those aspects of school talk which are necessary to be learned.

Some of the traps into which teachers can fall are:

1) valuing the need to control (and using language to gain this control) over the need to learn;

2) setting individual learning beneath group socializing;

3) emphasizing managing (through talk) over the learning of content;

* Friedman analysis of variance by ranks was used with these data.

4) failing to take advantage of the students' natural developmental learning by not permitting them to talk, by ignoring what they talk about, and by not capitalizing on what they do say and then steering that talk toward the content topic; and

5) failing to build on the natural conversational style with which children are familiar.

Shuy noted that some teachers do better than others at avoiding or addressing these traps. Figure 5 presents a summary of the major elements of language in these six classrooms, as described by Shuy. He pointed out that this description was not meant to be evaluative, although it certainly delved into this territory whether it intended to or not. What it should point out is that there are many dimensions to talk in the classroom, and that not all teachers work in the same way. If the six teachers studied here provide any sort of microcosm of a larger universe, it is abundantly clear that any assessment of teacher competence in using language is highly ecological rather than segmental. To isolate any one language feature from the overall task and from other language features is not possible in the usual quantitative paradigm. To say that ritualized language is bad, per se, is not possible, since such language does accomplish certain desirable goals. That a natural conversational style is more effective seems intuitively right, but it may well not be right for every child or for every occasion. What is offered here is, instead, only a set of dimensions for analyzing the use of talk in the classroom, illustrated by a set of samples of six teachers in one school.

In examining classroom questioning, Shuy proposed a model for effective use of "probing" questions, suggesting that the most useful strategy would involve moving from open-ended (Tell me about the industry of Bolivia) to "wh-questions" (What is the leading export of Bolivia?) to "Yes-No" questions (Is tin the leading export of Bolivia?) to "tag" questions (Tin is the leading export of Bolivia, isn't it?). This model is based on the supposition that teachers ask probing questions in order to find out what pupils know. In his

A Summary of A Sociolinguistic Analysis of Classroom Language Differences

Teacher A	Teacher B	Teacher C	Teacher D	Teacher E	Teacher F
1. lessons all focus on "doing school"	1. lessons focus on "doing content"	1. lessons focus on "doing school"	1. lessons focus on "form of doing content"	1. lessons focus on "form of doing content"	1. lessons focus on "doing content"
2. manages the lesson with "ritualized language"	2. skillful at managing, working on both form and content of pupil language	2. sets the ground rules for the lesson but "not with clarity"	2. "consistently informs her class about where they are in the lesson plan"	2. illustrates a technique of "management by withholding information"	2. manages with "clear sequence markers," opens with personal anecdotes, invites class to "join the conversation"
3. students are insecure about what a "safe topic" is, so they "recycle old, safe topics"	3. topics controlled by teacher, but she is "amenable to suggestions" from pupils	3. shows "weak topic shifting"	3. topics controlled by teacher, but she is "amenable to suggestions" from pupils	3. tight control of the topic	3. "adept at topic branching:" "topics flow smoothly from one to another"
4. exhibits a "slow pace" and talks in a "monotone"	4. uses shifts in intonation and pace to mark segments of the lesson; skilled at "teacherese"	4. displays "an as yet undeveloped ability to do 'teacher talk' effectively"	4. exhibits "dramatic verbal behavior;" pre-lesson activities include more "natural conversation"	4. one of the "best examples of the special language of classroom teacherese"	4. the most "natural" use of language of all six teachers

analysis of questions in these classrooms, Shuy noted that:

1) Questions were an important part of classroom talk in these lessons, comprising approximately one out of every three teacher utterances;

2) The questions asked in these lessons did not follow the proposed model of an effective probing strategy (i.e., moving from an open-ended question to a wh- question to a yes-no question to a tag question);

3) The flow of questions in these lessons did not follow the vertical downward movement of the proposed model, but appeared to be more horizontal (i.e., a series of wh- questions were asked before proceeding to a yes-no question);

4) Teachers in these lessons used mostly wh- questions and yes-no questions, with only two of the six teachers showing a strong predominance of wh- over yes-no questions; and

5) Wh- questions tended to dominate five to one over yes-no questions in the process parts of the lessons, but teachers differed greatly here, with two teachers (D and E) having a strong four to one dominance of wh- questions, two teachers (B and F) using wh- and yes- no questions in about equal amounts, and two teachers (A and C) using yes-no questions twice as often as wh- questions.

It is worth noting that the two teachers who showed dominance in use of wh- questions (D and E) were the two who focused on "the form of doing content" (see Figure 5), while the two who used wh- questions and yes-no questions in equal amounts (B and F) were the two who focused on "doing content," and the two who used yes-no questions twice as often as wh- questions (A and C) were the two who focused on "doing school." Thus we see that questioning strategies in these classrooms appeared to be closely related to whether the principle function of classroom talk was on the socialization aspects of language arts or on the content aspects.

Speech act analysis. A special sub-study was conducted to determine whether the approach selected for the analysis of language as a linguistic system would strongly affect our overall findings. In addition to Shuy's analysis, two other descriptions of these thirty-six lessons were developed.

Arnulfo Ramirez carried out a speech act analysis, using an adaptation of Smith and Coulthard's model (1975), which he had used in an earlier study of language arts lessons (Ramirez, 1979). He identified the types of acts

that occurred within the opening, answering, and follow-up moves within both teacher-intiated and pupil-initiated exchanges. Discourse was found to be dominated by teacher-initiated exchanges, with a relatively high density of speech acts occurring in the opening move. In teacher-initiated exchanges there were significant differences in frequency of particular types of acts within each of the three moves ($p < .001$ in each case). Opening moves (teacher) were dominated by speech acts categorized as "directive management" and "non-participant informatives" (stating fact, example, observation that did not include the speaker directly). Answering moves (pupil) were dominated by "non-participant reacts" (responses to teacher calling on pupil, where response did not include any personal opinion, attitude, or experience). Follow-up moves (teacher) were dominated by "accepts" ("all right," as opposed to "very good").

There were significant shifts over time in the speech act ratios of general management to lesson-related management, and participant replies and reacts to non-participant replies and reacts, with general management decreasing and participant replies and reacts increasing from September to December. This tended to support other findings related to development of the classroom as a social system.

This speech act analysis tended to support Shuy's conclusions with regard to the importance of talk as management in these classrooms. Ratios of "real" to "psuedo" questions and "participant" to "non-participant" informatives within opening moves in each lesson were examined to identify possible statistical differences in use of "natural language" from the point of view of speech act analysis, but no significant classroom differences were found on either of these measures. There were significant classroom differences in speech act ratios related to management acts, and these tended to corroborate Shuy's descriptions of Teachers C, D, and E. Teacher F exhibited no "extremes" on any of the speech act ratios which involved significant classroom differences,

which might be construed as support of Shuy's view that she used "more natural language."

Diagramming lesson structure through question cycle sequences. A third type of sociolinguistic analysis utilized an adaptation of a system for categorizing question cycles that was developed by Johnson (1979). Diagrams were developed for all thirty-six lessons, designed to display the structure of each lesson in relation to three types of question cycles: independent (two cycles are structurally separate, as a new question is introduced); conjunctive (two cycles are tied together because the same question is asked of more than one student); and embedded (one cycle is contained within another, because the react or follow-up move involves a new solicitation of the same pupil, as in the case of a probing question or a question of clarification). These structural displays showed a great deal of difference from lesson to lesson in terms of the vertical (independent cycles) development vs. the horizontal (conjunctive) development of the lesson. Much of this variation seemed to derive from the instructional strategy, or teaching procedure, being used. This was particularly evident in the diagrams of Teacher B's lessons, which are presented in Figure 6. Teacher B taught several lessons using a variety of "models" (Joyce & Weil, 1972), so differences in instructional strategy from one lesson to another were quite marked.

Using these diagrams, measures of the "conjunctive development" and "embedded development" were derived for each of the 36 lessons, and an analysis of these measures showed significant shifts over time in conjunctive development ($p < .05$), with similar shifts which approached significance ($p < .10$) in embedded development. In each case the December and January lessons tended to be ranked highest, suggesting that questions tended to be pursued in somewhat more depth as the year progressed. This also parallels findings on development of the classroom as a social system. (Note also that pupil replies to questions shifted toward more "participant" information during this period.) There were

In Lessons Taught By
Teacher B

Early September
Topic: Capitalizing Names
(Concept Attainment Model)

1
2 2
3
4
5
6
7 2 3
8
9
10
11
12_1 2 3 4 5_1 *
13
14
15
16 2 3
17
18
19

Late September
Topic: Feelings
(Synetics Model, Personal Analogy)

1
2 2 3
3 2
4 2 3 4 5 6 7
5 2 3 4
6 2 3
7 2_1 3 4
8 2 3
9 2_1 3 4
10 2_1 3 4 5 6
11 2 3 4

October
Topic: Categorizing Concrete Object
(Concept Formation Model)

1
2
3 2
4
5 2
6
7
8 2_3 3_1
9
10
11
12_1 2
13_1
14
15 2 3
16
17
18
19
20
21
22_1
23
24

* Subscripts indicate embedded cycle

November
Topic: Describing Thanksgiving Food
(Synectics Model, Direct Analogy)

1 2 3
2
3 2 3
4 2_1 3_1
5 2 3
6
7
8
9 2_1
10
11
12
13
14 2 3_1 4 5 6
15 2 3 4 5_1 6 7
16
17
18 2 3 4
19

December
Topic: Asking Good Questions
(Inquiry Training Model)

1
* 2
3
4
5
6
7
8
9
10
11
12
13
14 2
15
16
17
18
19
20
21
22
23
24_1
25

26_1
27_1
28_1
29
30
31
32_3
33
34_1
35_5
36
37
38
39
40
41 2_1
42_4
43

January
Topic: Origins of Names

1_4
2_1
3 2_3
4 2 3_2 4_6
5 2_3 3 4 5_1
6_1 2 3_1 4_1 5_1
7
8_1 2 3 4

erlining indicates student-initiated question cycle

no significant classroom differences in conjunctive or embedded development of lessons. This analysis of the sequential structure of classroom questioning presented a very different perspective from Shuy's analysis. It provided neither a specific corroboration of nor a specific contradiction of his findings.

"Salience" of language events. Earlier we noted that pupil reports of what they "heard anyone saying" in lessons tended to focus on pupil responses in isolation from teacher questions or comments. Ramirez' speech act analysis provided statistical corroboration of this pattern. Speech acts occurring in the answering move were reported significantly more often (proportionate to their occurrence) than acts in the opening or follow-up move ($p=.00013$). Thus, pupil attention was strongly focused on the comments of other pupils. The structural analysis of question cycle sequence also provided additional information on the salience for pupils of particular types of language events. Pupil responses to questions were reported significantly more often when they occurred in conjunctive cycles ($p=.0017$) and in question cycles that contained embedded cycles ($p=.00013$). This suggests that pupil comments were most salient to other pupils when they occurred in response to a teacher question that was pursued (expanded, developed) by the teacher in some way, e.g., by asking a probing question of the same pupil, or by asking another pupil to respond to the same question.

Summary. To summarize, each of three different approaches to sociolinguistic analysis provided useful information about the language in these six classrooms. The three approaches supplemented each other in very interesting ways. While they did not corroborate each other in every detail, they did not contradict each other. Roger Shuy's analysis identified classroom differences in language use. Ramirez' speech act analysis corroborated several of these identified differences. Both the speech act analysis and the analysis of the structure of question cycle sequences provided evidence relative to changes in the social system of the classroom over time and pupil attention to the responses

of other pupils. In addition, the analysis of lesson structure identified differences related to instructional strategy.

In all of these analyses particular attention was given to classroom questioning, which had been identified as a critical area by the findings on rules of discourse.

Functions of Questions, Responses, and Praise*

Pupils in this study readily identified the very real differences in the functions of questions in lessons and in family conversations. Teachers asked questions "to tell," or "to teach," while mothers asked questions because "they wanted to know." Children's responses to questions, on the other hand, were seen as serving a more or less "routine" interactive function in both settings. That is, children answered questions because "someone asked."

Questions and responses to questions occurred very infrequently in play group settings, and when they did occur appeared to serve an attention-getting function rather than an informing function. Because questions were so infrequent in the play videotapes, data on children's definitions of the functions of questions and responses in play settings were not gathered.

Teachers agreed with pupils in stating that questions served primarily an instructional function. Thus both sets of participants tended to disagree with the outside observer (sociolinguist) who suggested that effective questioning should involve a diagnostic function, informing the teacher about what the pupil knew.

Pupils reported that teacher praise was given because it was deserved, i.e., "we had good ideas." Praise occurred very rarely in the videotapes of both family conversations and play groups, so pupil definitions of the functions of praise in these settings were not obtained. Pupil perceptions of teacher praise were quite congruent with teacher statements, for teachers said they used praise for feedback to pupils that their ideas were correct or good.

* Chi square and regression analysis were used with these data.

There were no significant ethnic differences in pupil perceptions of the functions of questions, responses, or praise at school, or the functions of questions and responses at home. There were significant relationships ($p < .025$) between pupil perceptions of the functions of questions in lessons and their "composite concurrent classroom status" (a combined measure reflecting entering reading achievement, peer status, and status with teacher). There were significant relationships between pupil perceptions of praise and each of the concurrent classroom status measures separately (entering reading achievement, $p < .01$; peer status, $p < .05$; status with teacher, $p < .005$). Children of higher classroom status viewed questions as instructional and praise as deserved, while children of lower classroom status tended not to provide any definition of the functions of these language events.

There were strong classroom differences in pupil perceptions of the functions of teacher questions ($p < .001$) and of teacher praise ($p < .05$) in lessons, and these differences corresponded to differences in teachers' use of questions and praise, as identified in analyses of the classroom language. Teachers C, E, and F stood out particularly here.

Teacher C relied almost exclusively on questions presented in the teacher's guide of the textbook, and used the highest proportions of repeats of pupil responses, and the lowest proportions of actual praise. Pupils in this class were less able than other pupils to define any purpose for the questions being asked, and tended not to define praise as deserved.

Teacher E's questions, according to Shuy, did "not build vertically, toward larger knowledge... She inches forward slowly, never fully revealing the right answers." She had high proportions of repeats of pupil responses, and low proportions of praise. Pupils in this class defined questions as serving an instructional function, and saw praise as deserved.

Teacher F, said Shuy, used questions in a "natural conversational style," and reacted to pupil comments with "questions which both built on what the

student had contributed, and at the same time allowed the teacher to design where the topic could go." Teacher F's lessons almost always began with a series of "real" questions. She used roughly equal proportions of repeats, acceptance, and praise. Pupils in this class defined questions as serving an informative function ("she wants to know"), and thought praise was deserved.

These classroom differences in pupil perceptions of the functions of questions in lessons, and in teacher use of questions and praise, appeared to have some relation to final achievement, for there were significant differences between pupils in Classrooms E and F in final reading achievement, when entering reading achievement was controlled for. It is important to note here, however, that Teachers A and C, who received the most critical "reviews" from Shuy, did not have pupils who scored significantly lower in final reading achievement (entering reading controlled for).

In addition, the evidence indicated that defining questions as informative contributed significantly to the explained variance in pupil participation in classroom discussions ($p < .01$). Defining praise as deserved was also significantly related to higher participation in class discussions ($p < .025$). Frequency of participation in class discussions contributed significantly ($p < .0001$) to the explained variance in final reading achievement (entering reading controlled for).

To summarize, the findings on participants' perceptions of the functions of questions, responses, and praise related to and supported several other findings already reported. In particular, the sociolinguist's descriptions of classroom differences in use of language were reflected in differences in pupil perceptions of the functions of language in these classrooms. In addition, the findings on rules of discourse pointed to the probable importance of an understanding of the rules surrounding classroom questioning for pupil success in school. The findings reported here support this supposition, for understanding of the functions of questions and praise was shown to be related

to concurrent classroom status, and to participation in class discussions, which was in turn related to final reading achievement.

Salience of Language Events*

The language events which were most frequent in occurrence were not necessarily the ones which were most "salient" to pupils (i.e., reported as heard most often, proportionate to their occurrence). This was true in both classroom and play settings, and was particularly true for questions, responses, and praise in the classroom setting.

As noted earlier, "salient" speech acts occurred more frequently in the answering move than the opening move ($p=.00013$) in teacher-initiated exchanges. It was also the case that there were higher ratios of attention for pupil answers than for teacher questions ($p<.001$). This latter fact was true for both teachers and pupils. Thus, although teacher questions occurred somewhat more frequently, pupil responses were more salient to the classroom participants.

Similarly, with regard to teacher praise, as the intensity of praise increased from simple acceptance, to mild praise, to strong praise, it decreased in frequency of occurrence, but was reported as heard more frequently by pupils. In addition, pupil responses which drew teacher praise were reported as heard more frequently than responses which did not.

In play groups, the most frequently occurring language events were "information-giving," "attention-getting," and "directing/influencing," in that order. The most frequently reported events were directing/influencing and information-giving, in that order. It appeared that directing/influencing language was particularly salient to children in the play setting, while attention-getting language tended to be ignored, or screened out.

Thus, children in this study were involved in information-giving and attention-getting in both play groups and classroom lessons, albeit in quite different ways in the two settings. The directing/influencing language that they used so frequently in play settings was rarely used in classroom lessons. They

* Kruskal-Wallis and Friedman analysis of variance were used with these data.

attended to information-giving language in both play groups and lessons (e.g., pupil responses). They attended to the directives of peers in play settings, but did not frequently report the directives of teachers in lessons. Attention-getting language and behavior (raise your hand) were not frequently attended to in either setting.

These findings indicate that pupils in this study were using different language production and reception skills in the two settings. A further analysis was made of factors that might be affecting their patterns of attention (language reception).

In lessons, the ratios of pupil attention to teacher questions were not significantly related to the type of question that was asked. However, ratios of attention to pupil responses were significantly related to the type of question being responded to ($p < .001$). Pupils reported hearing responses to lower convergent and higher divergent questions most frequently. Responses to rhetorical questions were reported least frequently.

There were clear individual differences in pupil patterns of attention to both teacher questions and pupil responses. Fourth graders attended less than second or third graders to teacher questions ($p < .05$), and attended more than second or third graders to pupil answers ($p < .02$). High achievers in reading attended more to teacher questions than low achievers ($p < .001$). Pupils high in peer status attended more to pupil responses than pupils of middle or low peer status ($p < .05$). There were no ethnic differences in attention to either teacher questons or pupil responses.

These findings demonstrate that selective attention was occurring in both the classroom and play setting. We assume that children believed this selective attention to be functional for some purpose. We might surmise that children attended closely to directing/influencing language in play settings in order to defend themselves, or protect themselves from being controlled by their playmates. And indeed, Wilkinson & Dollaghan (1979) have provided examples

of how skillful children can be in use of indirect refusals to follow peer directives.

But how might attention to the comments of other pupils be seen as functional in the classroom? To answer this question we must consider how several other findings might be integrated with the findings on attention to other pupils. The critical perceptions of classroom participants to be considered here are:

1. Teachers' questions were asked in order to give information (to tell or teach), rather than to get information (agreed to by both teachers and pupils);

2. Pupil responses were given because the teacher asked a question (agreed to by both teachers and pupils);

3. Pupil responses were more salient (attended to more often and/or deemed more important to report as being heard) than teacher questions (agreed to by both teachers and pupils);

4. Praise was given because the pupils' responses were right, or good (agreed to by both teachers and pupils);

5. Praised responses were more salient than unpraised responses (data from pupils only); and

6. Responses which occurred in "extended" question cycles (several responses to same question, or responses which are probed by teacher) were more salient than those which occurred in "short" cycles (data from pupils only).

How might all these perceptions be integrated? We suggest that the threads might be woven together in pupils' minds (consciously or unconsciously) in the following way. Teacher questions serve to identify the things that one ought to know. Pupils repond to these questions because that is the "natural" course of events--a question is asked, an answer is given. The answers to questions inform other pupils, so that if one pupil knows what ought to be known, soon all pupils may know it. It is the pupil responses, therefore, that one must attend to, in order to know what should be known. When a pupil response is right it is praised, as indeed it should be, for not only does this response demonstrate that the one pupil knows what ought to be known, it informs all other pupils, correctly, so that they now know as well (or so that they are

confirmed in what they thought to be correct). A pupil response which is praised is probably a better (more accurate) presentation of information than one which is not praised (although an unpraised comment may not really be wrong), so it is probably useful for other pupils to make a special note of comments which draw teacher praise. A question cycle that is extended by the teacher (making it a conjunctive cycle, or embedding a new cycle within it) serves to indicate to pupils that this is a particularly important question, so that pupils should give special attention to the response(s) which it elicits.

This vision of "the way it works" fits both pupil and teacher descriptions of the functions of questions, responses, and praise, as well as pupil patterns of attention to classroom language. It seems possible, then that teachers and pupils in this study shared a common understanding of the function of the solicit-response-react cycle as an integrated unit that contributes to learning in classrooms.

To summarize, the findings on salience of language events, when combined with the findings on participant perceptions of the functions of questions, responses, and praise, suggest that pupils and teachers interpreted classroom questioning as follows:

1. Teacher questions served to identify the things that one ought to know;
2. The answers to questions served to inform other pupils;
3. Praise served to mark the pupil responses that were particularly "good;" and
4. Teacher extension of a question cycle served to indicate to pupils that this was a particularly important question.

Participation in Classroom Discourse and Success in School

If this view of classroom questioning is valid (i.e., really operated in the minds of these pupils and teachers) then it would follow that pupil responses were perceived as critical to the learning of other pupils. Teachers might operationalize this view by calling on pupils who were more apt to give

responses that would help others learn, i.e., pupils who were more successful in school. Pupils might operationalize this view by attending differentially to the responses of pupils who would help them learn -- again, the pupils who were more successful in school. We can test the validity of the view, to some degree, therefore, by noting whether either or both of these behaviors did in fact occur.

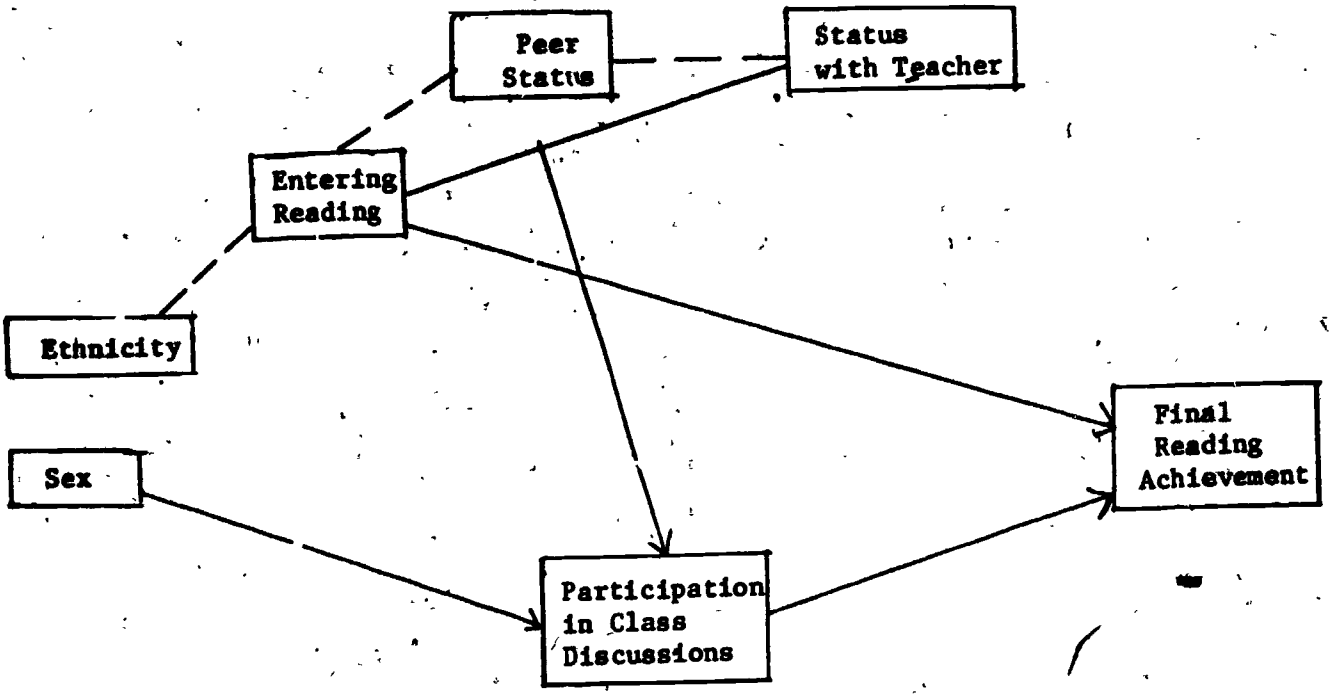
Verbal participation in class discussions.* The pupil status variables that contributed to frequency of verbal participation in class discussions for pupils in this study are diagrammed in Figure 7. Entering reading achievement was the best predictor of academic success (final reading achievement), but it is interesting to note that both entering reading and participation in class discussions contributed significantly to the explained variance in final reading achievement ($p=.0001$ and $p=.0027$, respectively). Neither entering reading nor status with teacher, two important measures of "success" in school, contributed significantly to the variance in participation in discussions by itself, but they did contribute jointly. This finding supports the proposed view of classroom questioning, for teachers did appear to be calling on pupils they considered to be more successful.

Note also that while peer status was an important measure of classroom social success, and was related to both entering reading achievement and status with teacher (entering reading and status with teacher each contributed significantly to the explained variance in peer status, with $p=.0049$ and .0004, respectively), it was not a direct measure of academic success, and it was not related to participation in class discussion. Ethnicity was also related to entering reading ($p<.05$), but it was not in itself a direct measure of success in school. It did not contribute to explained variance in peer status, or status with teacher, and it did not contribute to the explained variance in participation in class discussion. These findings also tend to support the proposed view of classroom questioning, for teachers were not calling differentially

* Chi square and regression analysis were used with these data.

FIGURE 7

Chaining of Relationships
Among Pupil Status Variables,
Pupil Participation in Class Discussions,
and Pupil Achievement



on pupils who were not clearly more successful academically.

Boys, however, were called on (participated) significantly more than girls. But boys were no more successful than girls on any of the concurrent success measures (entering reading, peer status, or status with teacher). This finding does not necessarily negate the proposed view. It does suggest, however, that teachers used guidelines other than expected academic success in choosing who to call on to participate in class discussions. Other studies indicate that boys volunteer more than girls (Brophy & Good, 1974; Potter, 1974), and that teachers interact on the whole more with boys than with girls (Meyer & Thompson, 1956; Cherry, 1975).

For teachers in this study, then, the evidence indicates that pupils who were called on and who participated most frequently in class discussions did tend to be pupils who were more successful in school, and who might, therefore, be more apt to give responses that would help other pupils learn. It is clear, however, that this was not the only factor operating in teachers' allocation of "turns" to talk. Further, it is important to note that we collected no data on who volunteered to talk, though it was a rather strictly followed "rule" in each of these classrooms that the teacher called on pupils who did have their hands raised. This procedure would put some additional constraints on what pupils the teacher called on to participate, and may account for the lower participation of high-achieving girls vs. high-achieving boys ($p < .01$).

Salience of language sources.* Attention to the comments of other pupils did vary according to the classroom status of the speaker. Overall, ratios of attention were higher for the comments of pupils who were high in entering reading achievement, and lower for pupils low in entering reading ($p < .01$). Ratios of attention were also highest for pupils who participated frequently in class discussions ($p < .01$). Furthermore, these patterns of attention varied significantly for the subgroup of listeners who were high achieving readers ($p < .001$), and for the subgroup of listeners who were frequent participants

* Friedman analysis of variance by ranks was used with these data.

($p < .01$); but not for any other subgroups within those variables. Thus, pupils in general appeared to be following strategies of attending more closely to pupils who were more successful (i.e., might help them learn), and pupils who were more successful exhibited these "strategies," or patterns of attention more strongly than other pupils.

Pupil status variables that were not directly related to academic success (sex and peer status) did not relate significantly to overall pupil variation in ratios of attention. That is, boys were not attended to more than girls, and high peer status pupils were not attended to more than low peer status pupils. This latter finding is particularly important, for if attention to the comments of other pupils were a purely social phenomenon, we would expect high peer status pupils to be attended to more closely.

Ethnicity was not a direct measure of success in school, and in general, few ethnic differences were found in this study. However, ethnicity was related to entering reading achievement, with Mexican-American pupils significantly lower than Anglos or other minorities in entering reading ($p < .05$). Overall, ratios of attention were significantly higher for Anglo pupils, and lower for Mexican-American pupils ($p < .01$). There was no significant variation in patterns of attention for any ethnic subgroup of pupils. The only two classrooms that showed significant variation in patterns of attention by entering reading achievement of the speaker were also the only two to show significant variation by ethnicity of speaker. Therefore, it appeared that the overall variation of attention by ethnicity of speaker was at least partly a result of the ethnic differences in entering reading achievement.

Pupil status with teacher was an important measure of success in school. Overall, ratios of attention to pupil comments did not vary significantly by the speaker's status with the teacher. However, there were grade level differences in patterns of attention, such that fourth graders showed significant

variation in ratios of attention based on all three of the "success" variables. Fourth graders gave more attention to the comments of high achievers ($p < .01$), frequent participants ($p < .01$), and pupils high in status with the teacher ($p < .001$). Third graders showed no significant differences in ratios of attention based on any of these variables. Neither third graders nor fourth graders showed significant variation in ratios of attention based on the three variables that were not direct measures of academic success in school (ethnicity, sex, and peer status).

When the data on ratios of attention for classrooms E and F, the two classes which differed significantly in final reading achievement, were examined, there were significant patterns of attention identified in each classroom. It was not possible to say that one class displayed more "effective" strategies of attending to pupils from whom they might learn, for each class seemed to be using some strategies that could be effective, but neither class showed significant variation on all three of the "success" variables. It was the case, however, that pupils in classroom F, the higher achieving class, showed higher overall ratios of attention to the comments of other pupils (mean ratio of attention was .224) than did pupils in Classroom E (mean ratio = .170), and this difference was significant at the level of $p=.0188$ (Mann-Whitney U).

The reader may remember that these two classrooms also differed in patterns of classroom interaction, according to our sociolinguist. Teacher F used the "most natural conversational language," and Teacher E was the "best example of teacherese." This suggests that patterns of pupil attention were related to patterns of classroom language use as well.

The data on pupil patterns of attention to the comments of other pupils in general support the view of classroom questioning presented here. Pupils were attending differentially to other pupils' comments based on the speaker's classroom status for the status variables directly related to academic success, but not in most cases for the status variables not directly related to academic

success. Fourth graders displayed these attention strategies to a marked degree, but third graders did not, suggesting that "learning how to learn" from other pupils might be a developmental process. Pupils who were more successful academically displayed these strategies to a marked degree, but pupils who were less successful did not, suggesting that those who had learned how to learn from other pupils did in fact learn more than those who had not. In two classrooms which differed significantly in final reading achievement (entering reading controlled for), pupils in the higher achieving class showed higher overall ratios of attention to the comments of other pupils, though they did not display clearly more effective "strategies" of attending to academically successful pupils.

Summary. To summarize, the view of classroom questioning presented here, which suggests that teachers and pupils in this study believed that pupil responses to questions served to help other pupils learn, was rather strongly supported by the data on participation in classroom discourse. Teachers in this study appeared to operationalize this view by calling on pupils who were more likely to give responses that might help other pupils to learn, for the pupils who participated most frequently in class discussions tended to be the pupils who were most successful academically. Pupils appeared to operationalize this view by attending differentially to the responses of pupils who might help them learn, for the pupils who were attended to most closely were the pupils who were most successful academically.

It is important to note also that the pupils who participated verbally in class discussions most frequently were the pupils who scored highest in final reading achievement (entering reading controlled for). This suggests that active participants may have learned most from classroom discussions. Perhaps active participation improves one's attention to the comments of others.

Next questions. Our data have not yet been analyzed to identify whether

those pupils who were frequent participants had higher overall ratios of attention to the comments of other pupils than those who were less frequent participants. Nor have we determined whether pupils who most closely followed the attention "strategies" which would appear to be most effective for learning from other pupils were in fact the pupils who achieved most. These are clearly the next questions to be answered in tracing relationships between participant perceptions of classroom discourse and pupil success in school.

Teachers' Expectations and Pupils' Communicative Behavior*

One important question remains to be addressed. Much has been written about how teacher expectations may be affected by language differences in pupils (Wight, 1971, 1975; Stubbs, 1976). For teachers in this study, expectations for pupil success in reading were significantly related to ratings of pupils on various communicative characteristics. Contingency coefficients indicated that the strongest relationships were between predictions of success in reading and ratings on use of standard English (.45), but relationships between predictions of success and listening attentively in class were almost as high (.43). Ratings on pupil participation in class discussions were next most closely related to predictions of success (.39), and ratings on following the "no talking" rules in class were least closely related (.25). Thus, pupils' communicative behavior did appear to affect teachers' expectations for pupils. Furthermore, the communicative behavior that would seem to have the least direct effect on pupil learning, but might be most closely associated with "annoyance factors" for teachers, (i.e., following the "no-talking" rules) was least closely related to teacher expectations for pupil success.

It was also the case that teachers' predictions of pupil success in reading had some basis in prior pupil achievement. Pupils who were low in entering reading achievement were not uniformly predicted to have low success in reading, but all pupils who were average or high in entering reading were predicted to

* Chi square and regression analysis were used for these data.

be at least average in success in reading.

It is worth noting that teacher expectations and ratings of pupils were significantly related over time (September through December). Contingency coefficients for the ratings over time indicated that the most stable teacher perception was the prediction of success in reading (.53). Perceptions of communicative behaviors were all less stable than this, with contingency coefficients for following "no talking" rules being the strongest (.46), and listening attentively (.39) and participation in class discussions (.35) being least strong. Stability of teacher perceptions of pupil use of standard English could not be tested, since several teachers declined to rate pupils on this characteristic in September, saying they did not yet know pupils well enough to make this judgment. This tendency for teacher perceptions of probable pupil success to be more stable over time than their perceptions of communicative behavior makes sense, since behavior is presumably more amenable to change than ability.

It is also worth noting that teacher perceptions of these pupils were rather heavily weighted on the positive side. For example, 94 pupils were predicted to be successful in reading, and only 30 to be unsuccessful. Similar patterns occurred for each of the ratings on pupils' communicative behavior. With such a preponderance of "highs" in each category, it was not surprising that pupils rated high in one characteristic tended to be rated high on others as well. In only one instance did a significant relationship between ratings derive mainly from a tendency for teachers to rate pupils as <u>low</u> on each of two characteristics, and that was the relationship of predicted success in reading to use of standard English. Thus it would appear that in general the significant relationships among the ratings of these teachers were associated more with a "halo" effect than with self-fulfilling prophecies about pupils who were destined to fail in school. It is clear, however, that, as the

literature suggests (Wight, 1971, 1975; Stubbs, 1976) dialectical differences were related to teacher attitudes about pupils in ways that might possibly affect pupil performance.

To examine this possibility more carefully, teacher expectations for pupils and teacher ratings of pupils' communicative behavior were combined to form a composite score, which we have called "pupil status with teacher." Regression analyses showed that entering reading achievement and peer status of pupils each contributed significantly to the explained variance in pupil status with teacher ($p=.0008$ and .0240, respectively), but ethnicity and sex did not. Thus, pupils' social competence as well as their academic competence appeared to be a factor in teacher judgments. Furthermore, stereotypes about the inabilities of minority group children in general did not seem to be reflected in the judgments these teachers made about pupils. That is, the specific factor of dialectical difference made a difference in teachers' perceptions of pupils. The general factor of minority group membership did not.

The role that teacher judgments of pupils (i.e., pupil status with teacher) played in pupil participation in class discussions has already been discussed. We reiterate it briefly here. Pupil status with teacher did not contribute directly to explained variance in either participation in class discussions or final achievement in reading. It contributed jointly with entering reading achievement to explained variance in participation in class discussions, and thus indirectly to final achievement in reading.

We also reported previously that ethnicity did not contribute significantly to explained variance in pupil participation in discussion. We add here the observation that teacher ratings of pupils on dialectical differences (using standard English) were least strongly related of all the communicative behaviors to their ratings of pupil participation in class discussion (contingency coefficient = .24). Thus, opportunity to participate was not limited by minority group membership, and teachers did not believe that children who were dialectically

different participated significantly less in class discussions.

To summarize, while teacher expectations for pupils were clearly related to pupils' communicative behavior, they were also clearly related to prior academic achievement, which was the best single predictor of "final" academic achievement. Further, while teacher judgments about pupils were clearly related to final success in reading, they were also clearly not the major contributing factor. In fact, they operated rather indirectly, contributing to variance in pupil participation in class discussions in combination with entering reading achievement, and only thereby contributing to variance in final reading achievement.

The Non-Significance of Family Language Factors

We cannot conclude this report on the various findings of this study without some comments on the apparent non-significance of family language factors for pupils in this study.

The only family language variable examined in detail in this study was ethnic background. For pupils in this study there were no statistically significant differences between Anglos, Mexican-Americans, and Blacks and other minorities in relation to any of the following variables:

1) perceptions of the rules of discourse in school, home, or play settings;
2) perceptions of the units and salient features of discourse in school, home, or play settings;
3) perceptions of the functions of questions and responses in school and home settings;
4) salience of teacher questions and pupil responses (as apparent in reports of what was heard being said in lessons);
5) frequency of participation in class discussions;
6) status with peers; and
7) status with teacher.

There were significant ethnic differences in entering reading achieve-

ment, with Mexican-American pupils displaying lower achievement than either Anglos or Blacks and other minority group children. However, when entering reading achievement was controlled for by use of regression analysis, Mexican-American children were not significantly different from others in final reading achievement (though this closely approached significance, with $p < .055$).

These findings do not necessarily contradict the assumptions on which this study was based, (i.e., that the culturally different pupil will probably perceive classroom communication from a different perspective than the teacher and other pupils; that the teacher may have negative attitudes about the culturally different pupil's participation in classroom discourse; and that both of these factors may combine to lead to poor school achievement for the culturally different child). In fact, in a rather unexpected way, these findings may support these assumptions.

What appears to be the case for our particular pupil population is that ethnic differences were not compounded by differences in socioeconomic status, family stability, parent interest in school achievement, nor even, for most pupils, by differences in mastery of English. Thus, these Mexican-American children were not socially, culturally, or linguistically different enough from the other children in their school to perceive or participate in classroom discourse in markedly different ways, or to be perceived by their teachers as markedly different. Their evident deficit in entering reading achievement was not reinforced by concomitant deficits in status with peers or status with teacher, and they did not fall significantly further behind in reading as the school year progressed.

What these findings demonstrate is that ethnic (cultural) difference, in and of itself, does not (need not) lead automatically to school failure. What they suggest is that we need to examine in much greater detail the interaction of cultural differences with socioeconomic and other differences in family background, as these relate to school achievement deficits. For now,

it is important to note that these findings regarding the non-significance of family language factors (ethnic background) are undoubtedly related to some of the unique (and, we feel, positive) characteristics of our particular school population. We would not expect to see these findings replicated in very different settings (e.g., a bilingual class, or with pupils whose parents are migrant workers).

The Possible Significance of Peer Group Language Factors: A Question for Further Study *

Margaret Lay-Dopyera conducted an analysis of language in children's play groups. Though based on a sample of only six play groups, the data point to the possible significance of peer group language factors in pupils' success in school. The most frequently occurring language events in the play settings we observed were Information-Giving, Attention-Getting, and Directing/Influencing. This corroborated children's reports pointing to attention-getting and directing/influencing as important language functions in play settings.

How different were these patterns from the patterns of classroom discourse? In these classrooms as in most, the predominant pattern was: teacher asks a question (Information-Seeking); children raise their hands (Attention-Getting); a child answers the question (Information-Giving); and the teacher may or may not react (possibly Approving). Frequently the teacher's opening move in this question cycle involved several speech acts that were appropriately called managing (Directing). Clearly, attention-getting, information-giving, and directing/influencing were important language functions in both classroom and play settings. But this is not to say that they operated similarly in both settings.

Attention-getting was primarily nonverbal in classrooms. "Raise your hand" was the most universally understood rule of classroom discourse. Attention-getting in these play groups was very verbal. The most frequently used words and phrases were: "Lookit;" "Hey, you guys;" "Kevin (or calling another

* Regression analysis and analysis of variance were used with these data.

child by name):" and "See what I'm making." These devices certainly did not guarantee the desired attention of playmates, and when attention was gained, it was fleeting. No one monitored the bids and distributed the attention among participants, as an effective teacher might. Each child dispensed his/her own attention to others, rarely in any equal fashion. The differences in attention-getting in the two settings are clear.

Information-giving by pupils was largely reactive in classroom discourse, i.e., it usually occurred in response to a teacher's question. One of the consequences of this was that pupil responses were rarely given in what teachers call "complete sentences." The information-giving in these play groups was rarely in response to questions, for few questions were asked. Rather, children volunteered information that they wanted to share with others. It is interesting to note that most of these utterances were "complete sentences," (and were reported back as such by children who observed the videotape). For example:

I'm gonna make a bridge.
I'm finished.
I'm building a trap for Bugs Bunny.
I'm going to make a colored snake.
This is the Lincoln log ride.
This is how the log ride goes.
It's my birthday tomorrow.
"Jade" starts with a J.
My mother's name isn't Karen.
These pipe cleaners are good for making bracelets.
It looks like a tower.
It's so high I can't reach the top.

In addition, much of the information shared was in the form of "participant informatives," i.e., the speaker included him/herself in the statement. This was in contrast to discourse in these children's classrooms, where "non-participant informatives," (talking about objects, events, or concepts without personal reference) predominated. Clearly, information-giving was also very different in the two settings.

Directing/influencing was almost exclusively the teacher's prerogative in classroom discourse, but in the play setting everyone got into the act.

Children typically get a good deal of practice in this language function while interacting with peers, and as Wilkinson & Dollaghan (1979) note they are adept not only at "softening" the forms of their directives, they can also be skillful at indirect refusals to follow peer directives. Opportunity for pupils to use this communicative skill is not often present in teacher-directed lessons.

In sum, it would appear that while the types of language events that predominated in these play settings were also frequent events in the classroom discourse the children experienced, the carrying out of the associated language functions was very different in the two settings. The communication skills which children might develop in the play setting were rarely exercised in the classroom lesson.

This finding is not very surprising. However, many prior studies that have compared children's language in these two settings have focused on minority culture groups, suggesting that the differences found resulted from differences between minority and dominant cultures, and contributed singularly to the academic difficulties of minority group children (e.g., Philips, 1972; Boggs, 1972; Dumont, 1972). These data suggest that a more pervasive difference exists, the difference between the subculture of childhood and the dominant culture of adulthood. Most importantly for educators, perhaps, is the fact that the communicative competencies which these children appeared to be practicing and developing in play groups were rarely built on or utilized in the classroom setting

The fact that there were important similarities in these children's patterns of language reception (or processing of sociolinguistic information) in classroom and play settings was the most interesting finding from our own point of view. These children had learned certain skills of screening out language events which predominated in frequency of occurrence but were apparently perceived as less important for purposes of effective functioning in the setting (e.g., teacher questions in lessons, and attention-getting of playmates in

play settings). At the same time they had developed skill in attending to language events which occurred less frequently, but were apparently perceived as quite important for effective functioning in the setting (e.g., pupil responses to questions in lessons, and directing/influencing attempts of playmates in play settings).

Peer status and sex were related to patterns of processing information in both lesson and play settings. Participants of higher peer status reported back more total information (language and social context) in both settings ($p < .02$ in lessons; $p < .01$ in play groups). Girls appeared to be more alert than boys to the source of language in both settings, reporting back more comments of other girls than of boys in lessons ($p < .01$) and citing more playmates as sources of language in play settings ($p < .05$).

These findings suggest to us that while the language production skills which children practiced in play settings were not frequently used in classroom lessons, the language reception skills which they practiced were being used. Certainly, children are called on to be receivers of language in classroom lessons more frequently than they are called on to be producers of language. The question is, were these reception skills productive or effective in classroom lessons. The answer would seem to be in the negative, at least with regard to final reading achievement.

Findings indicated that pupils successful in the peer group (high in peer status) tended to "screen out" teacher questions, but academically successful pupils (entering reading achievement) did not ($p < .001$). Higher "information load," which was characteristic of information processing in both play and lesson settings for children who achieved social success in the peer group, did not contribute significantly to final reading achievement, when entering reading was controlled for. Girls' alertness to language sources in both settings was apparently not an academically effective strategy either, for girls were significantly lower than boys in final reading

achievement, when entering reading was controlled for ($p < .02$).

The data from this study thus suggest that while children appeared to be applying language reception strategies which they practiced in play groups to the classroom lesson setting, these strategies were probably not information processing strategies which led to effective learning in the classroom setting. In fact, reception strategies which were effective in peer group settings might even have been counterproductive in lessons. The possibility of detrimental effects of peer interaction on the language development of young children has been raised by other studies (Bates, 1975; Nelson, 1973). Clearly, this is a matter which deserves further study.

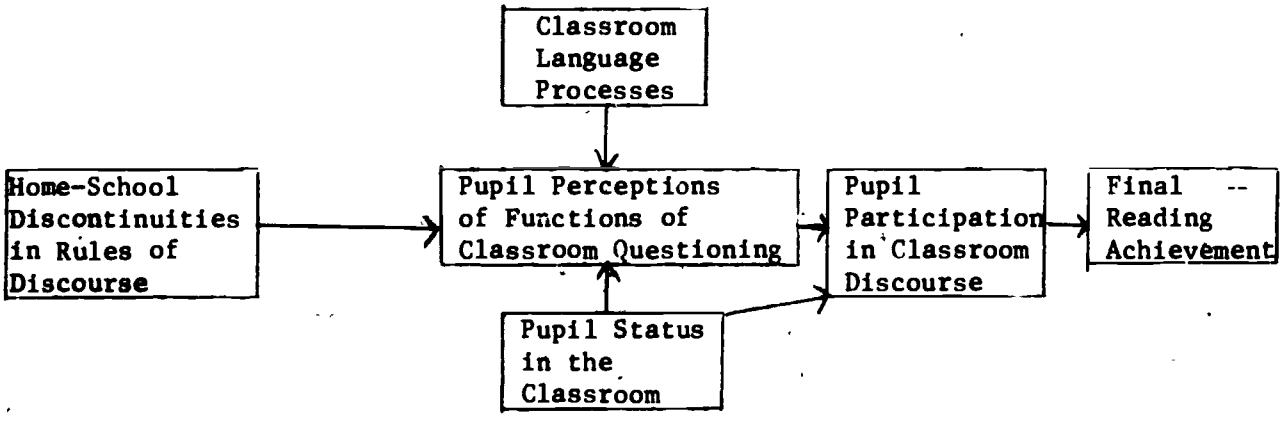
We have one final observation. All of our findings seem to lend strength to Stubbs' (1976) statement that the peer group is "the most powerful linguistic influence on children." There has been much interest in recent years in comparing home and school settings in order to identify "discontinuities" which may exist, and may contribute to children's difficulties in learning to read. In fact, several of the eight sociolinguistic studies funded by NIE, of which this is one, were designed to address that question. The findings presented here suggest that we should not limit our attention to, or even, perhaps, concentrate our attention on, adult-child interactions in the out-of-school setting. Interactions among children in play groups can provide us with valuable information about how communication skills learned in informal settings may affect communicative competence in the classroom. In particular, we need to learn much more about how language reception operates in these two settings. Such research could make it possible for us eventually to help teachers to build classroom discussion processes on children's communicative competencies.

CONCLUSION

In conclusion, we return to our original paradigm to examine the overall pattern of relationships among the variables considered in this study. Figure

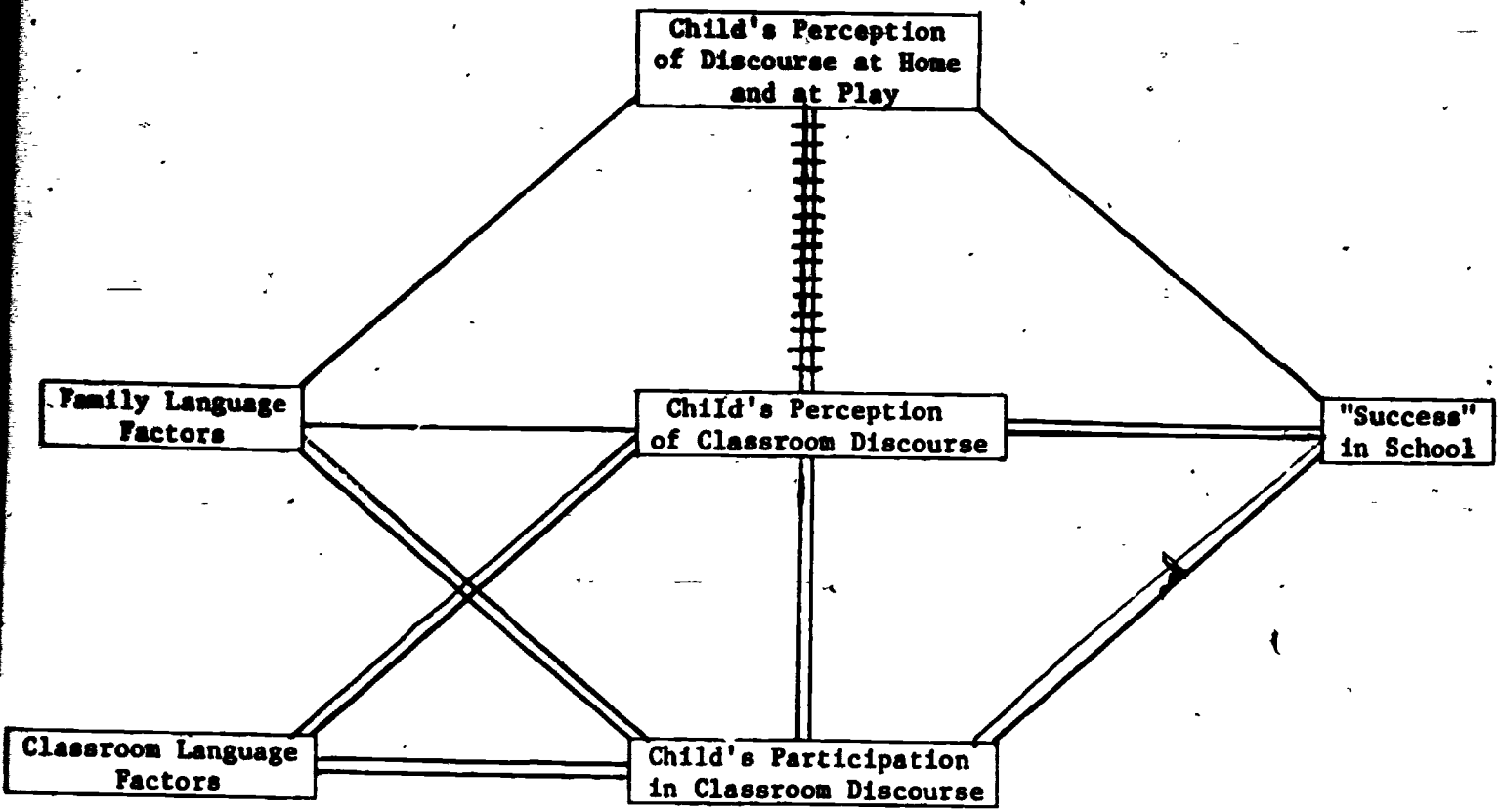
8 presents this paradigm. The single lines indicate relationships that were examined in this study. The double lines indicate relationships that were found to be significant. The "laddered" lines indicate that discontinuities as well as similarities existed between pupil perceptions of discourse at home and play, and pupil perceptions of classroom discourse. While pupil perceptions of discourse at home and play did not relate directly to pupil success in school, they appeared to relate indirectly, through these discontinuities. Family language factors (ethnic background) were only minimally related to any discourse variable, for ethnic differences only showed up with regard to status differentials expressed in forms of address used to "get someone to do something" in home and school settings, and no tests of significance were run on these descriptive ratios. There were significant differences in pupils' patterns of attention to comments of other pupils (a "participation in classroom discourse" variable) which appeared to be tied to differences in entering reading achievement.

Taken together, the findings presented here suggest that we would be well advised to search for indirect relationships between home-school discontinuities in the rules of discourse and pupil success in school. From the data presented here, the chain of relationships to be investigated would appear to be:

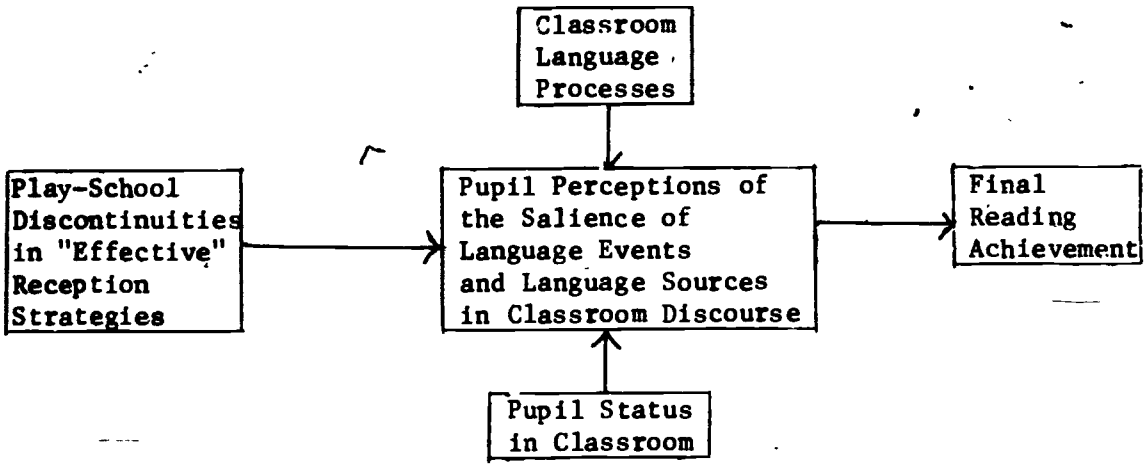


The findings on play group interaction also suggest that further research could focus productively on indirect relationships between play-school discontinuities in children's participation in discourse, and children's success

Relationships Among Variables in the Study of Participant Perspectives of Classroom Discourse



in school. Here, the chain of relationships to be investigated would appear to be:



It is important to note that the relationships among variables that have been identified in this study are not generalizable, since they are based only on data from 164 pupils and six teachers in six classrooms in a single elementary school. However, the purpose of any in-depth, small sample, descriptive study is primarily to generate concepts and hypotheses for further investigation. We submit that this purpose has been achieved in this study, and that important questions for future research on teaching have been identified. We earnestly hope that they can and will be pursued.

A POSTSCRIPT:
COMMENTS ON THE "TRIANGULATION" METHOD

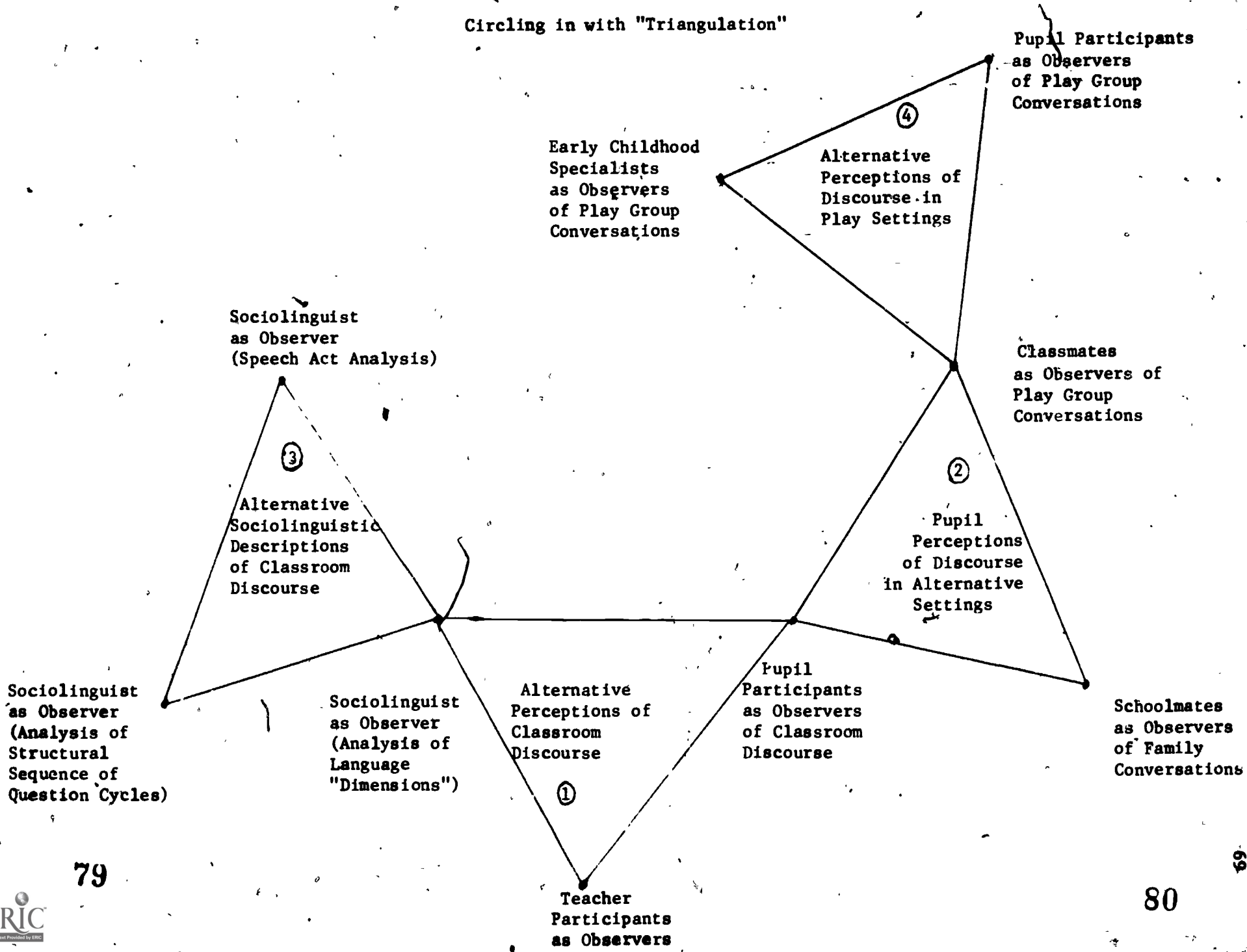
The principle method of analysis used in this study derived from Stubbs' (1976) comments about the necessity of using interpretations of participants in the social setting, as well as outside observers, in arriving at any accurate understanding of the social meaning of language. Adelman and Walker (1975) coined the term "triangulation" to refer to this integration of several perspectives. We have, perhaps, carried the method of "triangulation" to extremes in this study, but we have found it to be an extremely fruitful procedure.

Figure 9 illustrates the various ways in which triangulation of perceptions has been used in the analysis of data for this study. We began with the first "triangle," integrating alternative perceptions of classroom discourse to get a more complete picture of the social meaning of language in lessons. As each successive "triangle" was added, our picture grew and developed. Gradually, we "circled in" on the problem.

Clearly, there is much more research to be done before we can begin to believe that we have most of the pieces of the puzzle in place. The method of triangulation is a valuable tool, and can contribute a great deal in the continued search. It deserves particular attention, which is why we highlight it here. The method is described in more detail in the technical reports.

FIGURE 9

Circling in with "Triangulation"



All of the findings summarized here are reported in considerably more detail in the five-part final report, and in a supplementary paper on pupil attention patterns (Morine-Dershimer, Galluzzo & Tully, 1981). Copies of these reports are available from the Division for the Study of Teaching at Syracuse University for a nominal fee. The reports are listed below.

Tenenberg, M., Morine-Dershimer, G. & Shuy, R What did anybody say? (Salient features of classroom discourse). Part I of Final Report of Participant Perspectives of Classroom Discourse Study. Hayward, California: California State University at Hayward, 1980. 95 pp.

Morine-Dershimer, G., Tenenberg, M. & Shuy, R. Why Do You Ask? (Interpretations of the question cycle). Part II of Final Report of Participant Perspectives of Classroom Discourse Study. Hayward, California: California State University at Hayward, 1980. 119 pp.

Morine-Dershimer, G., Galluzzo, G. & Fagal, F. Rules of discourse, classroom status, pupil participation, and achievement in reading: A chaining of relationships. Part III of Final Report of Participant Perspectives of Classroom Discourse Study. Hayward, California: California State University at Hayward, 1980. 117 pp.

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Morine-Dershimer, G., Lay-Dopyera, M. & Graham, P. L. Attending to the discourse of classmates in play settings. Part V of Final Report of Participant Perspectives of Classroom Discourse Study. Hayward, California: California State University at Hayward, 1981. 27 pp.

Morine-Dershimer, G., Galluzzo, G. & Tully, H. Who hears whom: Classroom status variables and pupil attention to the comments of other pupils. Paper presented at meeting of the American Educational Research Association, Los Angeles, 1981. 33 pp.

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