ED 248 542 CS 208 591

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TITLE Language Development in Young Children and in the

Composition Class: The Role of Pragmatics.

PUB DATE 29 Mar 84

NOTE 21p.; Paper presented at the Annual Meeting of the

Conference on College Composition and Communication

(35th, New York City, NY, March 29-31, 1984).

PUB TYPE Information Analyses (070) -- Speeches/Conference

Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Higher Education; *Language Acquisition; Language

Usage; Literature Appreciation; *Pragmatics; *Social

Influences; Sociolinguistics; Teacher Role;

*Theories; *Writing Exercises; *Writing Instruction;

Writing Processes

IDENTIFIERS *Theory Practice Relationship

ABSTRACT

Studies in developmental pragmatics have demonstrated that language learning is a fundamentally social (rather than fundamentally cognitive) phenomenon. It would seem, then, that teachers of writing need to find ways to create situations in which written language serves purposes the students see as real and is supported by an authentic, pragmatic structure of intentions. One pedagogical approach might be a course with its own "subject matter," in which written language is introduced in a functional way into the communal learning situation. Some of the characteristics for this situation in an introductory literature course might include the following: (1) assignments in which students report to the other students--via photocopied and distributed short exploratory writing assignments—on segments or aspects of a common subject; (2) assignments in which students construct precis of articles or literary works for the use of the rest of the class who have not read those particular works; (3) situations in which spontaneous exploratory writing is circulated and responded to; (4) situations in which students respond in writing to comments on their work or their ideas by the instructor, and in which the instructor uses writing to respond in turn; and (5) situations in which the instructor does not merely describe what sort of rhetorical stances are possible or what organizational strategies might be useful in a specific situation, but actually models them by participating in the writing community--by performing the same tasks for the same purposes. (HOD)

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AND IN THE COMPOSITION CLASS: THE ROLE OF PRAGMATICS

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

Conference on College Composition and Communication New York, 29 March 1984



"Fragmatics" is a much-wexed term, and it's probably worth beginning with at least a thumbnail description of what I mean by One reason I suspect that a definition may be necessary is that the term itself got lost from the short title of/my paper in the program -- suggesting, I think, that it wasn't particularly significant to at least one person. In other words, this paper is not a treatment of "the cognitive development of the college writer." In fact, it might be argued that one of my aims is to attack the view that the term "cognitive development" is, finally, a very helpful one. Putting it as baldly as possible, I think the widespread adoption of the term "cognitive development" among composition theorists and writing teachers -- however useful it may have been at first -- has tended to lead us to a sterile conception of learning, and thus to the development of educational practices whose effectiveness is radically limited. Under the influence of this dominant metaphor, we have come to conceive of learning as something that occurs in the individual learner, in isolation, as a sort of accumulation of individual capital. This has been particularly damaging in the case of



language learning, precisely because language is in its very nature so profoundly social, intersubjective and transactive.

I should make clear at the outset, as well, that one basic assumption of this paper is that there are important analogical relationships between all language learning situations, and that it is usually illuminating to consider the application of what has been learned in one context to the parallel process as it unfolds elsewhere. I want to make a case for rethinking our ideas about writing development (and teaching) in the light of a set of analogies with what is often called "developmental pragmatics," the study of early language development taken as a fundamentally social (rather than fundamentally cognitive) phenomenon. I begin with a thumbnail history of this network of ideas and hypotheses, partly because (as Vygotsky [1962, 1978] and Luria [1982] have insisted) an idea's genesis is always important, but more immediately because I believe such a history has resonance for anyone concerned with the teaching and learning of writing.

"Pragmatics" is a term drawn originally from the work of Charles Sanders Peirce, the weirdly neglected nineteenth-century polymath who has a claim to be the father not only of semiotics, but also, among other things, of psychology and computer science. Peirce used the term in a slightly broader sense, one in which it became assimilated to pragmatism, or (as Peirce [1958] sometimes called it, to make the distinction clear) pragmaticism, a philosophical position whose influence on William James and John Dewey is well known. Here, however, I'm primarily interested in the narrower issue of its linguistic application. Peirce's disciple



Charles Morris defined pragmatics as the study of the relations between signs and their users, and identified it as one of three main areas of language study, along with syntactics (the study of the relations among signs) and semantics (the study of the relations between signs and their referents) (Morris, 1946). Another way to characterize and distinguish among these three areas is to say that syntactics is concerned with the structure of language itself, considered as an isolated phenomenon; semantics is concerned with the structure of the relationship between language and the physical world; and pragmatics is concerned with the structure of the relationship between language and the social world.

In recent years, the crucial importance of that broader context has become increasingly clear in virtually all fields concerned with the study of language. The developmental psychologist Elizabeth Bates, who has written some of the most useful reviews of the literature in these areas, has observed (1975: 412) that over the past two decades research in linguistics and psycholinguistics has steadily broadened the definition of lan-The governing conception of what language is has evolved guage. from one in which syntactics was seen as basic, to one based on semantics, and most recently to one founded on pragmatics. even within pragmatically-centered research there has been a similar broadening, as the focus has moved from the connections between the sign and its individual user (the speaker or the audience) to the whole social structure in which signs exist, and in which they enable and embody relationships. This pattern is



particularly clear in the way the study of language development in children has come to take an increasingly pragmatic perspective.

developmental pragmatics seems to have arisen largely in response to (and often in rejection of) the ideas of Noam Chomsky. It was Chomsky's (1959) convincing demolition of the behaviorist model of language acquisition — the idea that children learned language by imitating models provided with "meticulous care" by adults and being reinforced for imitating closely — that made it possible (and indeed, made it necessary) to look for other explanations which would be more capable of coping with the unimaginable complexity and sophistication of what a child apparently had to learn in order to achieve competence in his native language.

Unfortunately, one of the problems that surfaced very quickly was that the miracle of language development — what Chomsky
termed "a remarkable type of theory construction," occurring in
"an astonishingly short time" (1959: 57), seemed so dazzling as
to defy explanation. It seemed that language (in the view of
classical transformational grammarians language is, of course,
equivalent to grammar, or syntax) must somehow be "built in" to
the child, that "human beings are somehow specially designed" to
learn language. The process might, Chomsky suggested, "be largely innate," developing "through maturation of the nervous system"
(1959: 43) — at any rate, it seemed unlikely to be explicable
through study of the learning process.



with the benefit of hindsight, it's not hard to see that part of the difficulty was the way Chomsky's terms posed the problem. If what we had to study was syntax, we could hardly begin studying before syntax existed — that is, before the child began putting words together — even though important linguistic events were clearly happening before that. Moreover, if language were indeed a self-contained structure we had little basis for studying the semantic relations between the words the child began with and the objects and ideas to which they referred.

It was not long before those semantic connections between the world the child perceived and the language he developed to deal with it began to seem increasingly central, and research began to focus on earlier periods of development. As Bates (1975) points out, syntactically-oriented research tended to begin with children about two years old, at the point when syntax begins to appear; in contrast, semantically-oriented work tended to start around 10-12 months, about the time the first words And as the concerns of research began to move further toward developmental origins, it became increasingly necessary to take into account more than semantic relationships between words and objects; what began to seem more and more crucial was the child's discovery (or construction) of connections between signs and human actions, social relationships and pragmatic contexts. In other words, as we became more and more concerned with accounting for meaning, it became clearer that meaning developed out of, was in a sense laid over, a prexisting structure of social transactions, and so was often -- perhaps always -- not



only dependent on, but primarily determined by, the larger situation.

This perception was reinforced by the growing importance, during the same period, of speech—act theory in the philosophy of language, particularly the work of J. L. Austin (1962) and H. P. Grice (1968) on such matters as illocutionary and perlocutionary acts and the rules of conversation. Such work dramatized (and, perhaps equally important, "legitimized" as an object of study), the fact that language does as well as means. For instance, a sentence like "it certainly is drafty in here" might well, in a certain context, be a request to close a window— in spite of anything syntactics or semantics might have to say about the "structure" or "meaning" of the utterance. The contribusion that such contextual pressures might override syntactic and semantic "rules" in many more than just a few "special cases"—— that, indeed, they might be more important than the traditional structural elements of language— became inescapable.

The further research paddled upstream toward the developmental origins of language, the clearer it became that infants and parents mean and understand long before there is either syntax or semantics. There has been a virtual gold rush of explorations in these headwaters in the last decade or so, and there are many studies with particular significance for anyone concerned, at any level, with language learning and development. I cannot here, of course, give even an indadequately superficial review of the research methods and findings in these fields — not merely because there isn't space, but also because I don't know enough. What I can do is indicate some of the areas of



investigation and some of the hypotheses that have seemed to me most heuristically powerful as I think about my freshmen and their language learning.

The area in which one might expect it to be least likely that we would find ideas useful for teaching composition is perhaps the study of patterns in the interactions between nursing mothers and their infants. Consider, for instance, the work done by Kenneth Kaye and others (see especially Kaye, 1982). 'Among other things, they have videotaped nursing and play sessions and then coded and timed the various actions of the mothers and their infants, and identified patterns in the relations of those actions. Their analysis makes it clear that the patterns which underlie the development of "dialogue" are prefigured in the complex transactions between mother and infant, transactions in which the mother clearly imputes motives to the infant which are not -- at least at the outset -- "really there." In Kaye's words (Kaye and Charney, 1980: 228), "mothers use their newborn infants' pauses in sucking as occasions for jiggling the infant, creating a turn-taking structure. Mothers quickly learn to keep their juggling brief so that it fits into the pauses and receives an 'answer' in the form of the next burst of sucks." The argument of Kaye (and of many others who have worked in this area) is that this pretended dialogue is a sort of "scaffolding" (the word is, I think, Jerome Bruner's) within which the infant begins to build an actual role/as a participant in dialogue, and that "the infant's assumption/of full partnership in dialogues is a process recapitulated on each new plane" (1980: 229) of social and lan-



guage development.

Similar patterns have emerged from studies (a good introduction is Snow and Ferguson, eds., 1977; into the kinds of language which caretakers use in dealing with young children -- what Newport (1976) has named "motherese." There is abundant evidence that, virtually universally, those who interact with small children use a special language for doing so -- but a language which is special not so much in its syntax or vocabulary (though, of course, it is special in those ways as well) as in its pragmatic structure. That is, it is a matter of the structure of the transaction -- the pragmatics rather than the syntax or semantics of the language. Regularly, adults impute purposes and intentions to children for which which an "objective" analysis might find little evidence; regularly, for example, they treat pauses. as though they were meaningful, interpret utterances which an observer might think random as relevant, and so forth. Often neither they nor the children -- nor the casual observer -- is aware of this process.

An example may make this point clearer. Roger Brown (1980) records an extended exchange between a child and an adult in which had seemed at the time "an unbroken episode, a long communicative conversation" (207). Later analysis discovered, however, that the conversation was in fact an almost entirely onesided construction. That is, the adult involved provided virtually all the coherence, consistently imputing motives to the child, and relevance to his responses, that — it can be seen by very close attention to two or three clear breakdowns — simply weren t, from the child's point of view, "there." It becomes



very clear, in fact, that the child never did see the point of the exchange. As Brown points out, the child "held up his end" of the conversation by following "just two very 'local' rules: (1) respond to Yes-No questions with 'yeah' and (2) express compliance with every directive" (1980: 207). Brown's main point is that the situation is much more complex than might be seen at first glance, and that it is only by looking very closely at two or three specific irrelevant responses that one can see how vast the gulf is between the adult who is playing a very sophisticated game involving constructing symbolic objects with playdough and the child who is playing another, completely separate game involving responding to (mostly incomprehensible) adult utterances in ways that serve the child's strongest motive — to keep the social relationship going.

It is equally clear, however, that two other important points could be made about this exchange — and, indeed, about most of the recorded exchanges between children and adults that I know of. One is that adult interlocutors are very, very powerful meaning— and coherence—makers, and that such abilities work in dramatic ways to foster what Kaye calls a baby's learning to become a "person." More generally, it is obvious that the cent—ral purpose which language serves in its earliest appearances is not to carry information; it is a vehicle for relationships.

The most well known kinds of studies of language development in children, of course, are close, accurate longitudinal observations of one child at a time, or a very small number of children -- for instance, Roger Brown's influential A First Language



(1973). Many such investigations, of course, began with the assumption that the child's language could be studied as an individual, cognitive development within the child — at first, the notion was that one might be able to trace patterns of development in children's syntax; rapidly it became clear that syntax simply could not be separated from semantics, and it was not long before researchers discovered that the growth of language was simply not a phenomenon which could be isolated from a broader context — in the way that, for instance, the growth of a plant might. What was "there" in a child's language, for example, clearly depended on who the child was conversing with, and under what circumstances.

Perhaps the classic such case study is that of the linguist M. A. K. Halliday, who observed his son Nigel's early language development with a consistent and unflagging intensity that I think can hardly have been exceeded by any observer of a child, and recorded what he learned about the onset of language in a book titled Learning How to Hean (1975). This is a particularly interesting document because it is almost as exciting an account of what Halliday himself learned as it is of what Nigel learned. Implicit in the book is a movement in Halliday's own thinking from a more traditional linguistic or psycholinguistic model of what language is and how it's learned or how children develop it to what he calls a "sociolinguistic" model. Three ideas Halliday develops are, it seems to me, particularly important to the concerns of teachers of older language learners.

One is his strong evidence that language and its development is a phenomenon which is most fundamentally and centrally an



interpersonal and transactive social process, rather than an individual, private, cognitive one. Nigel and his father, like Kaye's infants and mothers and Brown's children and adults, are engaged first in a process of creating and maintaining social contacts; and language develops, secondarily, out of those purposes.

Perhaps equally important is the related observation that language s function as a carrier of information develops very late. In the process of describing Nigel's development, Halliday creates a conceptual framework in which any instance of language may serve one or more of a number of functions. He observes that what he calls the "informative" function is much less central, and much later in developing, than those of us who are used to thinking about language as a device for transferring information from one mind to another might have anticipated. In Halliday's summary, "what does emerge as some sort of developmental sequence, in Nigel's case, is (i) that the first four functions listed clearly precede the rest, and (ii) that all others precede the informative" (1975: 40).

And finally, what seems to me the most basic insight of all, one which arises inevitably out of a consideration of any work in these areas, but which many people have learned from Halliday — the observation which, like looking-glass house, seems to be arrived at no matter where you start from or which direction you set out in — is that the miraculous achievements of language learning are accomplished when language is in use, when we are attending not to language itself but to something else; that it



is by endeavouring to accomplish our own genuinely felt pragmatic and interpersonal purposes and intentions that we are moved to create a language for ourselves and to adjust it to the languages of the people around us.

There are many other names and studies and germinal ideas one might describe here, but, as Humpty Dumpty said, "That's enough to begin with." I have indulged myself in describing the evolution of these ideas at such length in the belief that the description would have resonance for people concerned with later (though perhaps not more complicated) stages of language development. Let me indicate where some of the loudest gongs ring in my head, and what the vibrations have suggested to me about my own teaching.

As I have said, the most important insight for me has been that language learning is strongly dependent on a rich and genuine pragmatic context. Human beings learn oral language so well, perform what seem to be such miracles of learning, because all their early encounters with language — with meaning in general — are so richly and complexly supported by a web of genuine pragmatic intentions. Moreover, they are embodied in verbal and non-verbal signals which arise from the pretence — or, more likely, the belief — of the people around the learner that he knows more, and is capable of more, than some outside, objective observer might conclude he "really" is.

In the light of this idea I find it much easier to think clearly and coldly about why it should be that students whose writing has comprised virtually nothing other than texts serving someone else's purposes -- examinations, term papers, reports



with no audience other than the teacher as examiner — should be uncomfortable with written language, and less than fluent writters. And nothing could be clearer than the often-noted fact that "school writing" is so denuded of pragmatic motives; even where such motives are nodded to, they are normally invoked only by inviting students to pretend that they have some genuine communicative or pragmatic motive for the writing.

This is true even of those kinds of strategies and assignments which we usually call "enlightened." Such "expressive" writing as journals and diaries is fragmentary, unsupported by a real network of social intentions and pragmatic purposes, and thus unlikely to constitute a powerful experience of language. learning for students — the majority — who cannot synthesize a pragmatic context in the absence of a real one.

What I find particularly difficult about the rethinking I propose is that it casts doubt on virtually every strategy that I have used as a teacher of writing. It casts them all into crisis — traditional essay writing, freewriting and related exercises, journals and diaries, sentence combining and fluency drills and exercises. None is supported by the kind of pragmatic network in which successful language learning occurs; all, I suspect, are successful only with students who have, somewhere, already learned the trick of what Joe Williams calls "imagining themselves up into a pragmatic situation." The others — among my students, they are the vast majority — sometimes learn some specific skills in areas like rhetorical strategies, organization, sentence structure, and so forth, but regularly — this is,



I think, the writing teacher's universal lament — the skills don't transfer into other areas and they don't last. They don't transfer and they don't last because they haven't been learned the way we learn language for use and for keeps — in the service of our relations with others.

It seems to me, then, that what we need to do as teachers of writing is to try to find ways to create situations in which written language serves purposes our students themselves see as real, and is thus supported by an authentic pragmatic structure of intentions, embodied by peripheral written and oral and nonverbal signification. Once the problem is posed in this way, it is not difficult to begin thinking of ways of achieving this, at all levels of literacy learning. What can go some way toward solving it, for example, is the creation of a situation in which writing is the medium of a dialogue, in service of a collaborative attempt to learn and as a way of exploring ideas and establishing relationships. We need, in other words, to create a new kind of situation, one in which written language regularly arises directly out of a social context, not merely a new kind of assignment or exercise. If the focus is clearly and unequivocally on the exchange of ideas, information, and values rather than on the text as object and as evidence of skill levels, then exploratory writing shared round a classroom or photocopied and distributed can begin to serve such functions.

What is, however, crucial here is the establishment of overriding purposes other than the mere production of discourse. This means inevitably, I think, that we must be prepared to consider the abolition of writing courses as such. It is diffi-



cult -- perhaps impossible, and arguably dishonest -- to teach a course whose aim is to produce improved discourse and simul-taneously to create the impression that there is another, over-riding purpose.

On the other hand, "writing across the curriculum," at least as it is usually practiced, doesn't solve the problem either. The kinds of writing assignents regularly used in courses with "their own subject matter" do not lend themselves to what we can call "pragmatic wholeness": their aim, like that of traditional "comp course" assignments, is regularly to produce text for evaluative purposes. Sometimes their aim is exclusively to evaluate the student's grasp of the subject matter; occasionally, the more "responsible" teachers in other subjects will evaluate papers for "writing" as well. But in neither case is there a genuine purpose or audience for the writing, nor is there likely to have been reading out of which, and in response to which, the student's utterance genuinely arises -- or writing to which it will in turn give rise. Note-taking and journal-writing, even when they are part of the curriculum of such courses, do not solve the problem of pragmatic wholeness and coherence.

I should make clear, by the way, that I am not arguing that written language should be or remain, like the early language of infants, directly tied to immediate context. After all, one of the central reasons we believe written language and writing has a peculiar value is precisely its potential to move among specific contexts and yet retain its own coherence and power. What I am suggesting is that it makes sense to think of its development as



potentially parallel to that of oral language, which also begins as dependent on, and determined by, its context and whose development on be described as a process of increasing potential for more complex -- and more abstract and distanced -- relations to contexts.

Nor am I arguing that all written language ought to be "audience-oriented" and thus that "expressive" writing is inappropriate. What I would maintain, however, is that we need to remember Vygotsky's argument (1962, 1978) about the development and function of "inner speech." In his insistence that language begins as a pragmatic, social, intersubjective activity, and only secondarily "goes underground" and becomes a tool for conscious thought — in other words, his argument that cognition is social in its origins — Vygotsky gives us strong reason to suspect that even "purely expressive" writing needs to grow out of a situation in which writing is and has been in use for pragmatic purposes.

How, then, to solve the problem? Here's one possibility. Suppose one selects a course whose avowed and genuine aim is the learning of something other than language — some course with its own, autonomous "subject matter" — and introduces written language in a genuinely functional way into that communal learning situation. It seems reasonable to expect that, at the very least, the pragmatic web which will be operative will support the student's language the way the parallel web around an infant supports his language — that is, it will form a scaffolding for language development, and for the establishment and flourishing of that pragmatic imagination which allows fluent and accomptished writers to produce text which seems pragmatically whole



even in the absence of such a web. Let me quickly sketch a situation which, it seems to me, constitutes a more fruitful context for the development of written language. I have attempted to create such a situation recently in my introductory literature and eighteenth century literature courses, and have worked out some specific kinds of assignments and situations which, it seems to me, have begun to accomplish these aims.

Some of the characteristics of this situation include the following: (1) assignments in which students report to the other students -- via photocopied and distributed short exploratory writing assignments -- on segments or aspects of a common subject; (2) assignments in which students construct precis of articles or literary works, etc., for the use of the rest of the class, who have not read those particular works; (3) situations in which spontaneous exploratory writing is circulated, and mously or not, and responded to, anonymously or not; (4) si\use tions in which students respond in writing to comments on their work or their ideas by the instructor (or others), and in which the instructor (or the others) uses writing to respond in turn, a process which quickly becomes a sort of dialogue (or multiloque) in writing; (5) situations in which the instructor doesn't attempt merely to describe metalinguistically what sort of rhetorical stances are possible or what organizational strategies might be useful in a specific situation, but actually models them by participating in the writing community -- by performing the same tasks, for the same purposes -- both anonymously and not.

There are many other possibilities. I have only begun to



explore this way of thinking about using and developing student writing. What is important is not, as I suggested at the outset, the specific kinds of assignments, but rather the model of the learning and teaching situation which will allow a teacher to invent them as necessary. A pragmatic perspective has the power to change our thinking and our teaching at least as dramatically as did the cognitive perspective which grew out of Chomsky's original work, and I think it's time to start exploring it in earnest.

REFERENCES:

- Austin, J. L. How to Do Things With Hords. [The William James Lectures Delivered at Harvard University in 1955.] Ed. J. O. Urmson. Cambridge, Massachusetts: Harvard University Press, 1962.
- Bates, Elizabeth. The Emergence of Symbols: Cognition and Communication in Infancy. New York: Academic Press, 1979.
- ----- "Pragmatics and Sociolinguistics in Child Language." In Normal and Deficient Child Language, ed. Donald M. Morehead and Ann E. Morehead. Baltimore: University Park Press, 1976. Pp. 411-463.
- Brown, Roger. A First Language: The Early Stages. Cambridge, Massachusetts: Harvard University Press, 1973.
- "The Maintenance of Conversation." In The Social Foundations of Language and Thought: Essays in Honor of Jerome S. Bruner, ed. David R. Olson. New York: Norton, 1980. Pp. 187-210.



- Chomsky, Noam. [Review of B. F. Skinner, Verbal Behavior] Language 35:1 (1959), 26-58.
- Grice, H. P. "Utterer's Meaning, Sentence Meaning, and Word Meaning." Foundations of Language 4 (1968), 225-242.
- Halliday, M. A. K. Learning How to Hean: Expiorations in the Development of Language. London: Elsevier North-Holland, 1975.
- Kaye, Kenneth. "Toward the Origin of Dialogue." In Studies in Hother-Infant Interactions: Proceedings of the Loch Lomond Symposium. Ross Priory, University of Strathclyde, September 1975. Ed. H. R. Shaffer. London: Academic Press, 1977. Pp. [89]-117.
- ----. The Mental and Social Life of Babies: How Parents Create Persons. Chicago: University of Chicago Press, 1982.
- with Two-Year Olds." In The Social Foundations of Language and Thought: Essays in Honor of Jerome S. Bruner, ed. David R. Olson. New York: Norton, 1980. Pp. 211-230.
- Luria, Alexandr Romanovich. Language and Cognition. New York: Wiley, 1982.
- Morris, Charles. Signs, Language, and Behavior. Englewood Cliffs, New Jersey: Prentice-Hall, 1946.
- Newport, E. "Motherese: The Speech of Mothers to Young Children," in *Cognitive Theory*, Vol. II, ed. N. Castellan, D. Pisoni and G. Potts. Hillsdale, New Jersey: Lawrence Erlbaum Associates, 1976.
- Peirce, Charles Sanders. Philosophical Writings of Peirce, ed. Justus Buchler. New York: Dover Publications, 1955.
- ----- Values in a Universe of Chance: Selected Writings, ed. Philip P. Wiener. Stanford, California: Stanford University Press, 1958.
- Snow, Catherine E., and Charles A. Ferguson, eds. Talking to Children: Language Input and Acquisition: Papers from a Conference Sponsored by the Committee on Sociolinguistics of the Social Science Research Council (USA). Cambridge: Cambridge University Press, 1977.
- Vygotsky, L. S. Mind in Society: The Development of Higher Psychological Processes, ed. Michael Cole, Vera John-Steiner, Sylvia Scribner, and Ellen Souberman. Cambridge: Harvard University Press, 1978.
- and Gertrude Vakar. Cambridge: M. I. T. Press, 1962.

