

# *What is Said and What is Meant in Speech and Writing*

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This paper advances and experimentally evaluates the argument that in ordinary oral language the intentions of the speaker (what is meant) has primacy over the actual expressions used (what is said). In reading and writing this relationship is reversed. The cognitive consequences of attention to linguistic form (what is said), a form of metalinguistic competence, and the possible origins of this competence are discussed.

Reading and writing are, in the last analysis, linguistic skills. An improved understanding of them in the past decade has come in part from pursuing the relations between oral and written language and from examining their differences. These are the relations I shall examine in this paper.

The most obvious parts of language, it seems, are the most difficult to formulate adequate theories for. Clearly, language consists of a string of noises or marks on paper which expresses the meaning or intention of a speaker. We use language to express ourselves and to recover the intentions, ideas, and feelings of others. That, it seems to me, is the obvious part. Yet this shared intentionality, these meanings, have proven to be the most obscure and most difficult strands of language to unravel theoretically. We all, in some sense, know what meaning is, yet meaning remains one of the most obscure and yet critical issues in psychology, in philosophy, and in education. As Gilbert Ryle (1956) pointed out, "The story of twentieth-century philosophy is very largely the story of this notion of sense or meaning" (p. 8).

But is it possible that our understanding of *meaning* is more apparent than real? What has meaning? Do these sentences I speak have meaning? Or do I as a speaker have meaning? Do you as listeners have meaning? Do words have meaning? What does it mean to understand me as opposed to understanding my sentences? More importantly, how are the two, what sentences mean and what people mean by them, related?

As an aside, we may note that the study of reading has been blessed (one could almost equally well say cursed) with both theories which are sensitive to the structure of language — giving rise to theories of decoding, word and letter recognition, and with the mental processes involved in recovering a linguistic form from written symbols — and with theories which are concerned with meaning and with comprehension, with reading for meaning,

and so on, where meanings are thoughts, ideas, intention of speaker/writer and listener/reader. Theories of the first sort handle meaning as intention poorly while theories of the latter sort tend to underestimate the importance of linguistic structure or linguistic form and the processes involved in processing those forms. These days the talk is more of interactive “top down” and “bottom up” processes; certainly a step in the right direction but still problematic in that so-called “bottom-up” processes involve knowledge and expectancies in much the same way as the so-called “top-down” ones do, the difference being only whether one is analyzing subordinate structures such as letters or words or superordinate structures such as meanings and intentions. I think we may do better by reconstruing the problem in terms of the nature of the relation between *what is said* and *what is meant*, where “what is said” could be thought of as the bottom-up process and “what is meant” could be

Grice (1957) was among the first to pursue this distinction and I shall develop it here. By “what is said” I mean the linguistic form of an expression; the very words employed and their syntactic relations, or what may be called the semantic structure. By “what is meant” I mean the speaker’s intentions in uttering that sentence. Now what is their relation? The simplest notion is that “you say what you mean,” and perhaps ideally that is so. When you say “Snow is white,” that sentence expresses the speaker’s meaning or intention to assert as true the proposition that snow is white. And some have suggested that we may have a set of implicit linguistic rules that go directly from intentions to sentences.

But we need not go far afield before we encounter sentences which are perfectly comprehensible, that is, from which we can derive appropriate sets of intentions but the intention or meaning is not fully expressed by the sentence. Winograd (1980) provides one example: Suppose a child is reading the following text: “Tommy had just been given a new set of blocks. He was opening the box when he saw Jimmy coming in.” Winograd continues: “There is no mention of what is in the box — no clue as to what box it is at all. But the person reading the text makes the immediate assumption that it is the box which contains the set of blocks. We can do this not because of any property of the sentence but because we know that new items often come in boxes, and that opening the box is the usual thing to do. We derive an intention, in other words, not merely from sentences but from prior knowledge of the world” (p. 214).

To give another simple example, consider the following sentence spoken of a shared acquaintance, John. “John went to the theatre last night but he forgot

his ticket and they wouldn't let him in." How do we know who "they" are; there is no antecedent for the pronoun in the text. Where does it come from? From the same place as Winograd's antecedent came from. On the basis of what we know about theatres, tickets, doormen, and the like, we infer that "they" are the ticket takers at the theatre. But the sentence per se gave no indication that such was the case. Clearly we must expand our notion of how sentences are related to intended and recovered meanings to include at least three constituents: sentences (S), possible worlds (PW), and intended meanings (M). Figure 1 shows this relationship and provides some synonyms for these terms.

About semantic structure or linguistic form, the S column of Figure 1, I shall have little to say although knowledge of the structure of language is critical to both oral and written language and great progress has been made in the analysis of these structures (Chomsky, 1980) and their acquisition by children (Brown, 1970; de Villiers and de Villiers, 1978). About possible worlds, PW, I shall have somewhat more to say. A possible world is simply an imaginative world; the real world is one such world but our imagination is not bounded by actuality. We may say (or think), for example, "If only I hadn't bought a Pinto . . ." or "I wish that this was Friday" and on that basis we now live in a possible world which is basically like the real world except in the specified aspects (Kripke, 1970). Note that sentences can be the key to alternative possible worlds just as the key to the real world. Most importantly, possible worlds may be built up or stipulated on the basis of language. Sentences may be considered as recipes for building possible worlds. That indeed, is what most reading is and all study is: building imaginative, conceptual, possible worlds on the basis of linguistic forms. These entertained possible worlds are, these days, talked about in terms of schemata, scripts, cognitions, beliefs, and the like, and a good deal of progress has been made in describing the structure of this knowledge and its role in comprehension and production of language (Rumelhart and Ortony, 1977; Rumelhart, 1980).

But it is meaning, intended meaning, that requires more analysis and consideration. What do we mean by "meaning"? by reading for meaning? by understanding? We have a clear sense of understanding or of failure to understand, but we lack a clear and explicit theory of understanding and meaning.

"Understand," like "mean," is a basic or undefined term. Read a story to a child. If we see signs of pleasure or excitement we assume the child understands. If the story is greeted by puzzled looks or questions such as "What?" we assume he or she has not understood. We judge understanding through indirect means — what the child says or does. We cannot access "under-

standing” directly. Even worse, we cannot explain the concept by appeal to simpler concepts: “understand” means “to make sense of.” But that is even worse. The expressions *to mean*, *to understand*, are members of a class of verbs which are sometimes called “intentional predicates” (Dennet, 1981; Fodor, 1975) along with such verbs as *know*, *believe*, *remember*, *forget*, *notice*, *think*, *perceive* (cf. the speech act verbs *say*, *assert*, *tell*, and *promise*; Carole Chomsky, 1969). They are verbs which express “propositional attitudes” or psychological states or mental states. Together they make up what may be called a commonsensical theory of mind. They are concepts which, it is assumed, every child will acquire informally in the process of growing up and hence, are not the focus of instruction in the schools. On the other hand, they are, if we take a behavioristic attitude, mere mentalistic concepts which are irrelevant to human behavior and hence are as well forgotten; to quote Leonard Bloomfield: “Scientific description requires none of the mentalistic terms” (1939, p. 13). Rather, as I shall argue, they are the basic concepts for the intentional management of our minds. To the extent that these concepts are absent or fuzzy, to that extent a child or an adult is not in a position to manage voluntarily their mental activities of knowing, meaning, intending, believing, guessing, or understanding.

Although important, concepts such as *mean*, *understand*, *know*, and the mental activities they express are not well understood for three related reasons. First, they are indirectly inferred from other more observable activities such as talking, commanding, arguing, telling, requesting, and the like and hence they are more difficult to access. Secondly, as aspects of language and language comprehension they require more abstract theories than such observable surface structure properties as phonology, syntax, and lexical structures. Although in modern linguistics there is great interest in the structure of meaning, and in linguistic philosophy there is a great interest in the structure of meaning intentions, there remains a Bloomfield legacy in our attitudes to written language. Reading is more easily thought of as the perception and analysis of aspects of surface structure such as letters, words, and sentences than it is to the deeper levels of structure, namely, meaning, intention, understanding, and comprehension. Thirdly, Venezky’s previous observation that historically the teaching of reading had very little to do with comprehension — the *McGuffey Readers*, for example, being concerned with oral reading for an audience — again suggests a lack of understanding of, or concern with, comprehension, meaning, and the like.

What I propose to do is to elaborate somewhat upon the structure of intention and meaning, its relation to “saying” and then consider some of the ways

that relation may be altered by writing. These relations are also displayed in Figure 1. Notice first the relation between what was said and what was meant; there is no direct mapping from saying to meaning. That relation is established only through a third term, namely, a possible world or context. As an aside, I would point out that the central question as to this relation between language and thought, like the question of the relation between sentences and meanings, has proven recalcitrant for just this reason; there is no direct relation between language and thought. All language is related to thought or meaning only through an agreed upon or presupposed possible world.

To return to our theme of the relation between “what is said” and “what is meant,” we may say that a sentence meaning (S), together with a context or possible world (PW) specifies an intended meaning (M). Some of the implications of a three-term theory of the relation between what is said and what is meant are indicated in Figure 1. I shall mention briefly two of them. First, whether the sentence or the PW is taken as invariant determines whether we arrive at a casual meaning or a literal meaning. Angela Hildyard and I have elsewhere (Olson and Hildyard, in press) provided some evidence that children most readily compute a casual meaning rather than a literal meaning and that the latter is at least associated with literacy. Secondly, it suggests that metaphor is difficult because one must preserve both linguistic form and the stored prior knowledge of a possible world, and children have difficulty in doing both.

But my more immediate purpose is to examine how literate adults and pre-literate children manage these constituents in speaking and in understanding the speech of others. Clearly, children have some knowledge of the relation between sayings and meanings. Even very young children have some intentions and they express them through language (among other things). Furthermore, there is no doubt that children recover intended meanings of others. Three examples are shown in Figure 1. Children, hearing the sentence “I hear talking” spoken in the classroom, know that the teacher means “Be quiet” (Sinclair and Coulthard, 1975). Similarly, “Where’s the salt?” asked at the table means “Pass the salt,” and in an argument over shared goods the sentence “You have more than me” means “Give me some,” and so on. Hence, children appear to know how to derive intentions from expressions, even when the relation is somewhat indirect.

It is also the case that pre-school children know something about the terms expressing these constituents; they have some understanding of the predicates *say* and *mean*. One of the earliest language games parents play with their language-learning children is one in which the adult points to

S	+	PW	→	M
“Said”				“Meant”
semantic structure		knowledge of the world		intended meaning
or		or		or
linguistic meaning		knowledge of context		speaker’s meaning
or		or		or
sentence meaning		possible world		utterance meaning
“I hear talking”		in school		Be quiet
“Where’s the salt?”		at table		Pass the salt
“You have more than me”		in dispute over shared goods		Give me some

*Varieties of M*

Casual meaning.

(W is invariant)

$S \rightarrow S'$

$S' + PW \rightarrow M$

Piaget:  $S$  : Are there more ducks or animals?

$\rightarrow S'$  : Are there more ducks or rabbits?

Literal meaning.

(S is invariant)

$PW \rightarrow PW'$

$S + PW' \rightarrow M$

Are there more ducks or animals

$PW$  ducks/rabbits  $\rightarrow PW'$  ducks/animals

Indirect speech act and metaphor.

(S and PW are invariant)

$M \rightarrow M'$

$S + W \rightarrow M'$

John is a chicken.

You have more than me.

I hear talking

Figure 1. Some relations of sentences and contexts in determination of meaning

some object, names it, and tells the child to "say it." This "saying" game is found, as well, in some nonliterate societies (Schefflin, personal communication). In a recent study Angela Hildyard, Elaine Minsky, and I asked kindergarten, grade one, and grade two children the questions: "What did x say?" or "What did x mean?" following statements in a story which had either a direct literal meaning or an indirect sarcastic meaning. The "say" questions were answered appropriately with a verbatim answer for both direct and indirect questions more than 65% of the time by kindergarten children and above 90% by the grade two children. The *mean* questions, on the other hand, were answered by giving an intention by only 39% of the kindergarten children and only 56% of the grade two children. The grade one children fell in between. Children appear to have difficulty computing the intended meaning when it is not congruent with what was said. Although most of the children realized that something more than the words were called for when asked the *mean* questions, several of the youngest children either failed to answer or gave a literal interpretation of sentences which in context should have been interpreted sarcastically.

Even if children are beginning to sort out the relations between what is said and what is meant when these are explicitly elicited by the adult, they seem to have little or no awareness, in their own ordinary comprehension and production, of both what was said and what was meant and their interrelations; they have, it seems, little or no awareness of the sentence meaning in its own right. Two other studies have shown that this lack of awareness has important consequences on children's recall and on their judgements of the adequacy of messages.

In one of these studies Angela Hildyard and I read a story about two children named Kevin and Susie who go to a movie, buy and share some popcorn, and concludes with Kevin complaining "You have more than me." When asked what Kevin had said, more than half of the kindergarten children replied "Give me some." By grade two the majority reported verbatim what had been said and when asked, indicated that they knew what was meant as well.

The more recent study was carried out by Elizabeth Robinson in Bristol and by Hillel Goelman and me in Toronto. In some of her earlier studies, Elizabeth Robinson, in collaboration with Peter Robinson (Robinson and Robinson, 1977a, 1977b), had discovered that in cases of communication failure in which responsibility could logically be traced to the speaker and his or her inadequate message, children invariably "blamed the listener." To illustrate, an example is provided in Figure 2. If the child in a communi-

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A child and an adult, separated by a screen, each have in front of them a collection of objects. The task is to tell the other what to pick up.

Blue flower	Red flower
Blue hat	Red hat
Blue lollipop	Red lollipop

Child: (Holding a blue flower) Pick up the flower!

Adult: (Picks up the red flower) This one?

Child: No, you got the wrong one.

You made a mistake. You didn't try hard enough  
(*Listener-blamer*)

Adult: Did you say the blue flower?

Child: Yes. (*Conflation of said/meant*)

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Figure 2.

cation game intends to say "blue flower" and inappropriately says just "flower," and the listener picks a red flower, the child *blames the listener* for not picking the right one. As Robinson points out, it seems not to occur to the child that the speaker or his message may be at fault. This tendency disappears in the first year or two of schooling.

Our collaborative study (Robinson, Goelman, and Olson, in preparation), was designed to determine if the pattern of "blaming the listener" was the result of the inability to differentiate what was said from the intentions of the speaker, what we may call a conflation of the said/meant distinction. To this end we (Robinson in Bristol and Goelman and I in Canada) repeated the game but this time on each occasion that the child inappropriately blamed the listener, we asked the child what the speaker had said. This question was asked only when, by looking (on the sly) at the object in the speaker's hand, or when the adult was speaker, at his or her own hand, it was clear what the actual intended object had been. Hence, we have independent evidence both of what was *said* and what the speaker *meant*. The hypothesis was that the listener blamers are not aware of the difference between what the speaker said and what the speaker meant or of the possible discrepancy. If he conflates what was said with what was meant, he should answer the *say* question with a correct description of the intended object rather than with a repetition of the original sentence. If he differentiates the two, he has the option of saying something of the form "I (you) said x but I (you) meant y." Specifically, we looked at cases in which there

was a discrepancy between what was said and what was meant. Figure 2 shows the course of these exchanges. To take one such case, if the child says "flower" while holding (intending) a *blue flower*, and is then asked "What did you say?", the child tended to reply "the blue flower." That, of course, was what he *meant*, not what he had *said*. In the Bristol part of the study almost every "listener blamer" made the error described above; the child reported the intention when asked "What did you (I) say?". In the Toronto part of the study, 75% of the time when kindergarten children were speakers and their inadequate descriptions led to an error on the part of the listener, they both blamed the listener for the failure and claimed, wrongly, that they had said or given an adequate description. That is, 75% of the time the children gave back their intention when they were asked what they had *said*. Even when they were listeners they still adopted this pattern over 50% of the time, while, if they made the distinction, they should have used it not at all. In sum, these studies indicate that children assume that they have said what they meant and they assume that adults meant what they said, but until they have been in school for a year or more, they do not make the differentiation in their own thinking or use that distinction in blaming the speaker for his inadequate message.

It appears, then, that children are not well aware of the difference between the linguistic form and its intended meanings and their possible interrelations. I will conclude by pointing out why that awareness is associated with the acquisition of literacy.

The differentiation of what was said from what was meant is associated with literacy because writing preserves the surface structure, what was said, independently of the intention it expresses, what was meant. In oral language, what was said is ephemeral; what is preserved is the meanings and intentions of the speaker. This new sensitivity to what was said is shown both in cross cultural studies and in ontogenetic studies of children growing up in a literate culture. Several anthropologists including Lord, Parry, Goody, and Finnegan, have noted that in the oral societies they studied, there was no word equivalent to our "word." There is a term for any unit of speech varying from a single sound to a whole discourse, but the notion that utterances consist of sentences decomposable into words, each with distinctive labels, along with such concepts as syllable, word, sentence and the like, appear to be a literate invention.

Correspondingly, prior to attending school, children in our societies have only rudimentary knowledge of the terms referring to words, sentences,

letters, and as we saw meanings. The acquisition of these terms, usually described as metalinguistic awareness, is generally associated with the acquisition of literacy skills. Francis (1974), for example, found that most beginning readers thought a word was a unit of print rather than a unit of speech.

But it is also possible that some children acquire a knowledge of these distinctions prior to learning to read. Once such concepts and their corresponding linguistic expressions are part of the ordinary language of a society, one can, by simply learning to speak the language, begin to make the distinctions we have discussed herein. Once the terms, know, believe, say, mean, sentence, and the like are part of the language, the concepts which were originally tied to literacy, may be acquired through the acquisition of an elaborated oral language. This appears to be the case in a study reported by Robinson (1980). Some adults used the expression "What do you mean?" in their requests for clarification in talking with their children. These children in fact, came to differentiate what was said and what was meant, and they were the children who were able to recognize the inadequacy of messages and so blamed the speaker rather than the listener for communication failure. And they acquired that distinction between sentences and intentions quite independently of learning to read and write. Yet the concepts themselves and the terms expressing those concepts may have, historically, been based upon the invention of a written form of language.

In either case, written language appears to be the basic source of the distinction between what is said and what is meant; for some children it appears to be the immediate cause while for others it is only the indirect cause.

And the concepts of "say" and "mean" may be just the tip of the iceberg. Vendler (1972) and Searle (1979) have noted that "say" is merely one of a whole set of speech act verbs including *assert*, *ask*, *tell*, and *promise* and "mean" is the merely most obvious of the intentional or mental state verbs including *believe*, *want*, *know*, and *intend* verbs that children master about the same time as the concepts of say and mean (Astington, 1981; cf., Chomsky, 1969). These conceptual differentiations may be the key to unlocking the world of intentionality. And it all begins, I have suggested, with the attention to language an attention fostered by literacy, whether through children's encounters with books and learning to read, or through the speaking practices of literate adults.

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## DISCUSSION

### *Carman St. John Hunter*

I sat here thinking about adults because there were some fascinating questions raised about what people do with all those levels. It would be interesting to do some of the same experiments with adults. It is so much a linguistic problem having to do with the English language. So many of the adults who are in remedial programs, or whatever we call them, do well if they get the meaning of the words, but what do they do when literal meaning slips around a bit more?

### *David Olson*

I think that's very important too. Actually we have tried to do some studies on Canadian adults who are nonliterate. Generally it seems that they don't make the distinctions I've described very well, but they have some sensitivity to them. However, it's difficult to get an adult population that is merely non-literate. Usually the samples we get are people in job retraining and so on, and about a third of them are perfectly normal, but there's always a subgroup of them that have other severe problems.

### *Carman St. John Hunter*

There's a wonderful story about a group in Brazil. The project had to do with health and avoiding disease and so forth. The leader showed a picture of people following a little coffin, a child's coffin. The leader said, "How many times have you seen this?" People looked sort of puzzled and then one man said, "Not ever." And the teacher said, "But, doesn't this happen very often in your village?" Answer: "Oh yes, but we've never seen the picture before."

### *Richard Venezky*

David, I was a little confused about where you stand on certain issues. I saw the relationship between language and cognition as central to everything you were talking about. But when you arrived at the communication game (which I take to be a variation on the Glucksburg-Kraus paradigm) and you concentrated on language forms, especially in quoting Elizabeth Robinson and the "listener-blamers," I began to suspect a difference between the way others have treated the developmental stages in performance with that paradigm and what you're talking about. Glucksburg and Kraus have, I believe, looked at the issue from a Piagetian standpoint, related to decentration: at what point can the child who is giving directions place him or herself in the

context of the listener? The issue is not that there is something wrong with the language used when the child says, “Pick up a rose”; clearly the child at the ages represented can say, “Pick up a red rose” or “Pick up a pink rose.” Nor is the issue the ability to produce the language forms; instead, it’s an inability to realize that the other person doesn’t know which rose you’re thinking about.

*David Olson*

That’s a very interesting issue and I think it is possible to sort those alternatives out through research, but it hasn’t yet been done. My bias certainly is that the domain of so-called social cognition — namely, that you can’t visualize the world of the other — is not a good theory. In other words, I prefer my explanation. But I suppose having strong feelings one way or the other won’t actually answer the question.

It is possible that what others have called egocentrism is simply not that they have no feelings for the position of the other person, but that they don’t realize that there is this discrepancy between the structure of language and the structure of intentions. So they’re in no position to modify their language or even see that it is inadequate for their own purposes. The children will assume that they’ve said what they meant. So it’s not just that the listener is having trouble. They’re both having the same trouble; namely, realizing the relation between intentions and expressions. The basis of the problem is that they don’t even realize there are two things to be coordinated.

*Richard Venezky*

Is there any real difference between those two viewpoints? Both viewpoints assume that the other person reads your mind.

*David Olson*

But the linguistic theory says the other person has read your mind on the basis of a convention; namely, a linguistic form. Whereas the other theory says that you can handle your linguistic forms when you have this audience awareness and sensitivity. There is something to that, but I don’t think it goes far or even in the right direction.

*Richard Venezky*

Well, I’m not sure how far this theory goes in explaining children’s behavior. I recall a film done by a group at Ohio State University that shows subjects at three different age levels playing the communication

game. Each member of a pair had a set of blocks with an unusual shape drawn on each, and one person was to explain to the other how to arrange the blocks in a particular configuration. What's so interesting in relation to the conversation here is that, the first thing that is shown in the film is a kindergarten child, a little girl, very busily picking up the blocks and looking at the picture she had to duplicate. Finally, when she gets finished she says, "Okay, Candy, now you do it." I'm not sure exactly how to handle that, but I can't see that directly as a language problem.

*David Olson*

No, I agree with that. At some point the child probably not only has difficulty recognizing sentence meanings and intentions, but may have the additional problem of not realizing fully what's visible from another perspective. If you take even a two-year-old and blindfold him, or blindfold the person he's talking to, they suddenly talk differently than if the listener wasn't blindfolded. So they do know; they take the audience into account in some way. Catherine Snow could probably tell you about those studies better than I could. So it is an open question, I would say. There are competing lines of argument and some must have to do with egocentrism as Piaget suggested.

*Richard Venezky*

It is interesting to think that there are paradigms whereby you could start to tease out these characteristics.

*Jay Featherstone*

If you had to relate your point of view with actual practice in the schools, what would it start to look like? What are the implications of looking at things that way?

*David Olson*

Well, it is a dilemma, because on the one hand I am sensitive to the fact that this kind of language play is comfortable to a particular cultural group and a particular cultural orientation. You play language games, you start to make fine distinctions between things like "know" and "believe," and "say" and "mean," and things of that sort that people in other cultures might not make. But I don't see any way to get into this kind of analysis of meaning except through starting to make those kinds of distinctions.

In other words, I guess I would have some cultural imperialism in my views about literacy. There is a kind of thinking and a kind of interpretation that can be encouraged through reading and writing. I would try to find occasions for letting kids learn these things. They would acquire many of the same skills orally simply through learning how to make their views clear, learning how to defend their views against counter arguments with other people, and things of that sort. Schools can provide opportunities for speaking and writing and, as well, give some attention to making clear the kinds of lexical choices for expressing ideas, repairing utterances, editing within text, and things like that.

*Richard Venezky*

What would be the implications of your position for teaching adults and children how to give better directions? That is, what would you concentrate on?

*David Olson*

It certainly won't do to just say "pay attention to what you said as opposed to what you meant." I see the dilemma in this. One could set up a crash course for teaching all these speech act verbs and intentional predicates. And once they are labelled and explicitly taught, everyone may come to know the difference between "think" and "believe" and that knowledge would be rather trivial. However, unless people can discriminate "think," "know," "intend," "predict," and the like and use them appropriately in their discourse, they're in conceptual trouble. The only way to make those concepts meaningful is probably the way one makes any other concept meaningful: children must relate them to their own perceptions and actions. That doesn't go very far. We do have programs in schools for teaching everything else; we may as well add these concepts to the list of things that are worth learning in school and that may be taught.

*Richard Venezky*

I strongly agree with your opening statement about the importance of sentence level comprehension. I think that many comprehension problems stem from higher level understanding.

*David Olson*    Rather than word level, you mean.

*Richard Venezky*

Yes. Clearly there are vocabulary problems, but in a sense we know something about dealing with vocabulary. We don't know much about dealing with sentence level problems. We see lots of cases where the words are clear but the sentence is not.

*Carman St. John Hunter*

Often what is described in a piece of writing is fantasy. The experience of the people who read it varies, and the whole question of dealing with what is actually the intention of the sentences is to describe a world that doesn't exist. It's really a fantasy world. When you try to look at that piece of writing (granted you don't do it with little kids) you don't have to go far before you can begin to enable people to see that in some writing the intention is to describe an America that is what we would like it to be. The reality of the people reading is that they know it's not like that. At what stage do you begin to deal with the differences between a created fantasy and reality? For instance, I have always been grateful that I was brought up in a dual nationality household in which it was all right to laugh about what Americans said because we were really Canadians, and vice-versa. With one parent of each nationality, I learned to analyze the fact that people say things about their reality that have to be taken with a little grain of salt.

*Audience Participant*

You seem to be suggesting that part of the reason children are not reading as well in American schools as they once did is because of things that go on in departments of psychology in universities. You suggested that we do have adequate psychology to teach reading to children. Dr. Olson and other people today are certainly providing a type of cognitive theory and addressing the question of comprehension. How would the kind of work they're doing inform teachers in schools around this country what they can do to help children read better?

*Richard Venezky*

I'll try to answer that, but I'm not sure that I have any wise words of wisdom, as Pogo would say. Let me qualify one thing. I don't think I said (if I did, I did not mean to say) that we're not doing as well today as we once did. I'm not exactly sure how one goes about comparing literacy

today to any earlier stage. My own view happens to be that it's meaningless to compare on an absolute level. It's only meaningful to compare literacy abilities in relationship to literacy needs. Now obviously that raises all kinds of problems. How do you decide what literacy needs are? But I realize that was not the basis of your question. There are, I believe, from a didactic standpoint two extremely different views of how research affects practice. One viewpoint can be drawn from Geraldine Clifford's article in the *Second Handbook of Research on Teaching* about the relationship between research and instruction. There she laboriously, and at times tediously, but always informatively, probes curriculum area by curriculum area, looking for cases where research led directly to changes in practice. It's in general a futile search. After dozens of pages and hundreds of references, she finds few clear examples of direct research into practice; instead, she finds a stronger case for cultural diffusion. That is, she finds research results that have become accepted in general society, believed in, and incorporated into everyday conversation. From there, because teachers and school administrators are part of society, the practices enter the schoolhouse in a sense through the basement door. Clifford points to, for example, Freudian psychology as an example of this. Freudian psychology never got through the front door of the schools, at least not in the world I know. But it certainly entered in the vocabulary and in the thinking of the clinical psychologists and the classroom teachers who used Freudian terms in everyday life.

Computers are also entering the classroom, through cultural diffusion. In the sixties they were pushed in by engineers, computer scientists, and some psychologists, but their promise never materialized. Today parents, PTA groups, and teachers are scraping up funds for buying classroom computers. But they're not doing this because they've read of recent research on the value of computer-aided instruction. Once microcomputers became relatively cheap and accessible to the average citizen, the schools assumed that they were desirable and they began to diffuse into the classrooms.

The other view—and the view I think we preach in most of our educational psychology courses—is based on the belief that once you discover something in the laboratory, you should put out a booklet for teachers explaining how it's to be used. The National Institute of Education believes in that paradigm and has given many grants to do research, to reduce that research to a form that teachers can understand, and to disseminate it to teachers. Now, I suggest that you ask the NIE what they

think teachers should do, for example, with results from studies on story grammars. I don't believe this avenue has been very fruitful in the past. For example, asking teachers to come to conferences where people talk about research and end up saying, "It seems obvious what the implications are for instruction," creates high anxiety or frustration, but not much else.

What we need is a position between these two views. Research such as we've been talking about here, and a lot of other cognitively based research, has strong implications for immediate redesign of instruction. But teachers, in general, cannot translate these results into new instructional designs, and we can't wait for cultural diffusion.

*David Olson*

I would like to respond somewhat along the same line, but maybe a little less despairingly. I agree with Richard completely that there is no simple solution to the application of implications from research. But the thing I notice is that, in a sense, we are all in this together. It's very interesting that cognitive psychologists got interested in comprehension in the last few years. As Richard pointed out, in the last twenty years or so there's been a lot of talk about comprehension. It seemed important if we were to understand what's going on in schools, and psychologists got interested in it about the same time. Psychologists make some contributions to our understanding, but teachers are already trying to come to grips with problems in comprehension and interpretation by bringing background experiences into classroom discourse. We're all in this together; we just pursue different aspects of it. Maybe some of the things that are tried in schools feed back to laboratories and some things from laboratories feed out to schools. But for some problems you have to actually make a particular program for changing things if you want to achieve particular goals.

*Richard Venezky*

To ensure further that nobody goes home too happy, I would like to point out that a study of the history of reading research leads to two seemingly contradictory conclusions. One is that the best work by far in the study of reading has been done by experimental psychologists who studied reading problems. Large numbers of school psychologists, ophthalmologists, electrical engineers, and the like have studied reading, but our theories about reading are derived primarily from the work of such experimental psychologists as J. M. Catell, Raymond Dodge and Rudolf Pinter.

The other conclusion is that it is difficult to find an experimental psychologist who has studied reading for the purpose of improving reading instruction. In fact, through the whole history of the study of reading psychologists have, for the most part, touched on reading research only in pursuit of a more general understanding of human information processing. Catell, for example, had little interest in improving reading instruction; he was interested in the speed of mental events, in human variability, and other hard-core psychological issues. The story grammar people today, in spite of pretenses about obvious implications for instruction, are interested in a much broader model of how information is processed. Throughout the last 100 years one can find experimental work that looked particularly important for reading practice. As soon as this work reached a point where practical implications were ready to be worked out, however, the experimental psychologists moved on to other problems. So, while the best work comes out of experimental psychologists, I'm hard pressed to name very many who did their work with the interest of following through to assist in applications.

#### *Audience Participant*

I'm curious about what people's expectations are in terms of research. When I go to conferences or conventions like this I have the feeling that people expect that there is going to be some great answer. I'm wondering whether or not we really need any more research in reading. I'm wondering if we don't know enough to solve problems. I'm wondering if comprehension really can be improved. I don't think you can teach it. So what are people looking for in terms of practical applications from research done by cognitive psychologists in the area of comprehension?

#### *Richard Venezky*

All I'm saying is that people are going on, doing further research with the hope of proving that you're wrong. It happens to be that there are a good number of people who believe as you do. I don't know any research that shows you're wrong on this point, but I think the kind of work that David and others talk about is really oriented towards exploring that question. Can we learn something that would allow us to teach comprehension better? Basically, that is the sole motivation.

*Jeanne Chall*

Instead of taking time for conclusions, let me have a little time to answer now. I agree with both of you. Basically teachers know pretty much, and much of the current research, much of what is coming out of Illinois and other centers, is a beautiful confirmation of what they know. Your point, David, is marvelous on this; I love the words you use — “possible worlds” or “p. w.’s.” How could any third grade or fourth grade teacher ever teach anything without knowing that that is what is happening with their children? Because in building their worlds (whether or not she was told or alerted to it by Illinois or by Delaware or by OISE) she knows that they must read information and content. Richard made the good point in suggesting, “Let us look at what 90% of the children in this country are doing every day for at least  $\frac{1}{2}$  or  $\frac{3}{4}$  of an hour a day in basal readers.” You may not like basal readers, they may not be participatory in your view, but that’s what children do. And what is in those books makes a difference. I want to say that the issue of fiction versus non-fiction is an important issue. It sounds so small, so common-sense.

Another point made is very important. We know a great deal that we could apply right away. But why don’t we do so? When Richard was talking, there were so many different interpretations. The people in the audience seemed to understand differently because of a simple thing: deep down everybody knows that we’re teaching something very, very profound. It makes a difference that each person learns to read. The parents know it, the teachers know it, the publishers know it, and I think everybody is trying to do something about it. There are many reasons why there is so much fiction in the basals, and so much not-so-good fiction. I don’t think it’s related much to behaviorist psychology; I think it’s related more to other things — to good intentions of reading educators, school people, and publishers. And that is the desire that children be happy, they should love reading, they shouldn’t have it too difficult. So stories are easier; they have a lower readability level. They should be more relevant because when you start reading about science or about history, there are more concepts and previous knowledge to build up. It is harder. And that is why the question of what should be in basal readers is a very difficult one that needs serious study.

### *Audience Participant*

I have a question for Olson. It concerns the works that you cited from Sylvia Scribner as one example of how the logic of written language contrasts sometimes very dramatically with the logic of conversations. Do you think that kids acquire this logic? I am asking you to make a sweeping generalization to the direct experience of texts. Did you say that school-type tasks which require close attention to linguistic forms also play a very important role, but that the experience with the text itself is not sufficient?

### *David Olson*

I think that the experience of written texts drives you toward that anyway. I think that you wouldn't even have to teach these school-like tasks if children read enough primers, especially if the primers started to get a little more into "possible worlds." Kids would be perfectly set up for those "logical" questions which appeal to wording.

There is a big argument about whether test questions are valid or not. In a sense they're valid because they appeal to a particular type of discourse and to a particular orientation to language, an orientation which is the school's business to pass on to children. But on the other hand, these test questions are not fair, because if a child's more ordinary uses of language predominate and if he or she still hasn't learned to cope with the logical aspects of text, then he or she will try to treat texts as if they're ordinary conversational questions as did A. R. Luria's traditional subjects. So, it is both a matter of learning to deal with school-type questions and of learning to deal with written texts. But those things are very much of a piece.

### *Audience Participant*

I think there's a question of real issue from Venezky's discussion. In his paper the issues are not between fiction and non-fiction, the issues really are not between whether students are learning something that is directly applicable to adult life or not; they are really issues of quality. The issue that Professor Chall brought up, the quality of what's in a basal reader, and the quality of the way the teacher teaches, as Olson discussed, are the real issues. How do you learn to deal with different kinds of sentences, different kinds of prose in the material that's in the basal reader? The next question would be, is it expository or narrative, not fiction or non-fiction or are students going to read different kinds of text? I think the real question is "How bad is literature that is bad literature?"

My other question concerns academic learning versus training: the issue of a two-track education system that was brought up earlier. If all students are reading high quality material and there is high quality teaching of how to think about what they're reading, it seems to me that they're all getting an academic education and there's not really any argument about that.

*Richard Venezky*

What's in the reading texts is basically narrative fiction, with very little expository writing. My own views are that there are high level (from a cognitive standpoint) comprehension problems that come from non-narrative, non-fiction texts that are hard to find represented well in narrative fiction. The information density and some of the structural forms of science writing today, for example, are somewhat hard to find in fiction. If we want to teach students how to deal with high density informational materials, we're going to have to find high density information materials. Furthermore, there is a type of reading that tends to be taught, whether it's with good or poor fiction, that's a one pass, forward-going form of reading. You read a story, we're told, by starting at the beginning and reading straight through. Regressions, we're told, reflect reading failure. But you can't read a science article that way and you shouldn't. You will not comprehend it.

In 1925 a study committee on content area reading appointed by the NSSE made a distinction between *recreational reading* and *work type reading*. Recreational reading is what you do when your goal is mainly to enjoy yourself, to get something interesting, to live in another world, in a "p. w." That's a good part of what we're teaching in the schools. But there's also a need to teach people a type of reading where you have to work at understanding a text. You may have to restructure the text or draw diagrams to figure out the logic of certain sentences, or look things up in a dictionary. Because of the needs created by work-type reading, we can't solve the reading problem just by placing better fiction in the schools. What we need, as I've said before, is a balance. We need to look at the underlying structures that we have to deal with: the if-then-else clauses that are so difficult at certain age levels, the ways to deal with complex sentence structures in social studies or science texts. We have to find ways to teach these things regardless of where they are found. These are not trivial skills. They should not be looked at like running a lathe or jumping on pogo sticks. They are representative of the highest level of cognitive functioning that we've ever

tried to teach in the elementary and secondary schools. So my response basically is that I don't see just better fiction as the answer.

*Carman St. John Hunter*

I'm glad you answered that question because to me that was a clearer statement of the point you made this morning. It was very helpful to me, and I would only add that I feel that way too. I have problems sometimes when people use the word "quality." It often means the teaching of an elitist literature and I'd like to combine quality with life reality. By that I mean not just what we've always read as quality literature, and not stories that come out well in the end with tragedy and suffering screened out, but a combination which can mean quality from the past and contemporary quality and it should be grounded in reality.

I think it is extremely important to broaden the scope of the literature we read, beyond the literature of our English ancestors. It should spread out to some of the good translations that exist in the literature of the world which deals in different ways with the total reality of human experience.

*Jay Featherstone*

There are two separate issues which I think should be kept distinct. One is the issue of whether English teaching and other language teaching, broadly speaking, in American schools will do justice to the variety of peoples and traditions that exist in the country. An old order is crumbling. We are a country of differing people. In cultural terms, the shocks of this are beginning to be felt. Whose stories about America get included in the curriculum, and whose heroes and whose legends? All are up for grabs, in a sense, and the culture is shifting toward a more pluralistic culture. I don't think that shift is the same thing as not insisting on high quality literature. Whatever we do has to be good. I want black kids, for instance, to have access to Ralph Ellison. Although quality is a value laden word — indeed, you were uncomfortable raising it for discussion — it's a very important concept for us as teachers. What we try to get students into is a tradition. When Ralph Ellison writes, he's writing out of his particular experience, out of black experience in America, albeit Oklahoma and the South. He's drawing on Mark Twain, on Faulkner, on that stream of English. Among our many complicated roles touched on here, we are representative of that tradition. As teachers now in America we stand as representatives trying to make that tradition more pluralistic, but it's still the English language. That's what we are teaching.

My wife recently finished a book about a family with disabled children. There were some very sad stories and grim material, and the first person she showed it to in a publishing house said, "We won't publish this book. In fact, we won't even handle it unless you can make the ending more upbeat." It's not just a problem for the schools or the kids. It's a relentlessly upbeat culture that doesn't like to talk about the sad things and the grim stories.

*Richard Venezky* It's like doing Hamlet without the prince.

*Jeanne Chall*

With regard to quality and difficulty, some of the research shows that perhaps textbooks have gotten too easy and that this has contributed to the decline in SAT scores. The fact that fiction predominates in the readers also means that the books are easier. Richard mentioned that textbooks are two grade levels below the grades for which they are written, and still they have trouble doing the content.

A theme that kept running through the discussion concerned content versus technique. I should like to propose that reading instruction suffers without the content. You've got to pick the proper content in order to have the proper arguments with a child. How do you get a main idea if the composition doesn't even have a main idea that is worth getting at? It seems to me that increasingly more difficult, ever more challenging books are needed so that the children will learn by grappling with them. Is technique necessary? Are exercises necessary? Sentences may be selected to teach well certain aspects of reading and language. They can probably help, but sentences and exercises alone will fall flat if they are not put back into reality, into context. Thorndike used to call it "transfer." You've got to build for transfer.

*Universal ability to read and write !  
It is perhaps strange that so many who today accept this objective without question should forget how recently it received social approval, and forget too the enormous inertia, and indeed active opposition, which the pioneers of the idea had to overcome in the nineteenth and early twentieth centuries, even in so-called advanced countries. Perhaps these pioneers erred in believing that this ability alone would liberate from ignorance, disease and poverty; perhaps, as a consequence, they erred too in concentrating on this ability without relating it to welfare, social progress and democratic growth.*

William S. Gray  
*The Teaching of Reading and Writing:  
An International Survey.*  
UNESCO Monographs on Fundamental Education, X.  
Paris: UNESCO, 1956, p. 9.

intu his'n. Sez he, 'That jis' makes four munths, an' mos' a half, don't hit, Missis McKildrin?' She never sed one word. Wat reached fur the hath, an' got a dead fire-coal; then he made a mark clean acrost a floorplank. Sez he, 'Aprile,' a-holdin down the coal ontu the aind ove the mark, like he wer fear'd hit mout blow away afore he got hit christened Aprile. Sez he, 'May'—an' he marked across the board agin; then he counted the marks, one, two, a-dottin at em wif the coal. 'June,' an' he marked agin, one, two, three; counted wif the pint ove the coal. He scratched his head wif the littil finger ove the han holdin the charcoal, an' he drawed hit slowly acrost the board agin, peepin onder his wrist tu see when hit reached the crack, an' sez he 'July,' es he lifted the coal; 'one, two, three, four,' countin frum lef tu right, an' then frum right tu lef. 'That haint but four, no way I kin fix hit. Ole Pike hissef cudn't make hit five, ef he wer tu sifer ontu hit ontill his laigs turned intu figger eights.' Then he made a mark, haf acrost a plank, spit on his finger, an' rubbed off a haf inch ove the aind, an' sez he, 'Mos' haf ove August.' He looked up at the widder, an' thar she wer, same es ever, still a-holdin the flask agin her bussum, an' sez he 'Four months, an' mos' a haf. *Haint enuf, is hit mammy?* hits jis' 'bout (lackin a littil) *haf enuf*, haint hit, mammy?'

"Missis McKildrin shuck her head sorter onsartin like, an' sez she, 'Take a drap more sperrits, Watty, my dear pet; dus yu mine buyin that ar rar ripe seed, frum the peddler?' Wat nodded his head, an' looked 'what ove hit,' but didn't say hit.

"This is what cums ove hit, an' four months an' a haf am rar ripe time fur babys, adzackly. Tu be sure, hit lacks a day ur two, but Margarit Jane wer allers a pow'ful interprizin gal, an' a yearly rizer.' Sez Wat,

"How about the 'taters?'

"Oh, *we* et 'taters es big es goose aigs, afore ole Missis Collinze's blossomed.'

"How 'bout co'n?'

"Oh, we shaved down roasin years afore hern tassel'd—'

"An' peas?'

"Yes son, we hed gobs an' lots in three weeks. Everything cums in adzackly half the time that hit takes the ole sort, an' yu *knows*, my darlin son, yu planted hit waseful. I tho't then yu'd rar ripe everything on the place. Yu planted *often*, too, didn't yu luv? fur fear hit wudn't cum up.'

"Ye-ye-s-s he—he did,' sed Mary a-cryin. Wat studied pow'ful deep a spell, an' the widder jis' waited. Widders allers wait, an' allers win. At las, sez he, 'Mammy.' She looked at Mary, an' winked these yere words at her, es plain es she cud a-talked em. 'Yu hearn him call me *mammy twist*. I'se got *him* now. His back-bone's a-limberin fas', he'll own the baby yet, see ef he don't. Jis' hole still my darter, an' let yer mammy knead this dough, then yu may bake hit es brown es yu please.'