

# The Structure of Written Communication

Studies in Reciprocity  
between Writers and Readers

**Martin Nystrand**

The University of Wisconsin  
Madison, Wisconsin

With Contributions by

**Margaret Himley  
Anne Doyle**

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errors," including restarts and repairs, are really functional in the terms of conversational interaction (cf. Goodwin, 1982). This is true, for example, of conversational beginnings, where, in the absence of her conversant's gaze, the speaker will pause and restart until mutual gaze has been established. In this instance, the restart serves to elicit mutual gaze, thereby synchronizing the conversants and initiating the talk. In other studies of language acquisition (e.g., Ninio and Bruner, 1978; Wertsch and Hickmann, 1985), researchers explain that key aspects of language development are explained by making special reference to the joint activity of child and caregiver. Findings such as these underscore the need to examine key aspects of discourse as interactions in their own right "with properties that cannot be deduced from an examination of the characteristics of individual participants [Schaffer, 1984, p.8]."

The set of studies in this volume extends this line of research by demonstrating the central importance of reciprocity as a principle of written discourse. It shows that all aspects of writing—from the formation of individual letters and words to the composition of whole texts—are subject to the requirement for common categorizations and mutual understandings between writer and reader and can therefore be considered within the powerful conceptual framework of reciprocity theory, which is more typically applied to the give and take of talk and language acquisition than to the sustained expression of writing.

## Reciprocity as a Principle of Discourse

### INTRODUCTION

In the previous chapter I argued that contemporary views of the composing process as recursive, goal-oriented language production interpret ancient themes of rhetoric in terms of the concepts and methods of modern experimental cognitive psychology. I noted many problems with this characterization of writing, including inadequate distinction of writing from other modes of discourse and trivialization of the linguistic aspects of writing. As we have seen, the crux of these problems is a confusion of competence and performance which results from seeing writing as the surface encoding of "deep" elements such as propositional content, genre rules, and so on. In this chapter, I will take the position that an adequate account of performance is indeed the chief challenge of a principled account of writing, but that such an account requires a radically different and far more social approach to language production. In particular, we must view the text not as a "natural" result of expression—the "garb of thought"—but rather as an integral part of a communicative process involving the writer and some readers. When we examine writing and texts in this way, we find striking patterns and regularities in the way people write. This chapter and the next formalize these patterns and regularities in one axiom and seven corollaries.

### LANGUAGE AS INTERACTION

Communication requires the interaction of two participants, usually called a *producer* and a *receiver*. This interaction is obvious enough in the give and

ke of talk. But it is true of writing too. When readers understand a text, an exchange of meaning has taken place. The writer has spoken to the readers.

Writers and readers obviously do not interact in the sense that they take turns as do speakers and listeners. But then speaking and listening are not interactive simply because the conversants conspicuously take turns. Turn taking is merely one of the many ways speakers exchange meanings and understand one another. Other ways include furtive glances, quizzical looks, and so on. On occasion, it is a conspicuously absent turn that provides critical information to the listener. This is why turn taking is not interaction *per se* but merely the way conversants *accomplish interaction*. The interaction of interest is what the turn taking accomplishes, namely *an exchange of meaning or a transformation of shared knowledge*. In this sense, writers and readers interact everytime the readers understand a written text. Conversely, the failure to comprehend means an absence of interaction.

Throughout this chapter, in my discussion of "meaning" and "exchange of meaning," I shall mainly be concerned with the problem of reference and predication, what Rommetveit (1974) calls the speaker's problem of making things known," and what Halliday (1978) calls the "ideational function of language."

Statisticians have a technical definition of "interaction" that is useful in this discussion. In statistics, **interaction** refers to the particular manner in which two independent variables combine to influence behavior, not one another. For example, in studying the effects of combined alcohol and coffee consumption on driving, the interaction has to do not with what the alcohol and coffee do to each other, but rather how the combination uniquely and adversely affects driving. Also, because of their significant interaction in this case, the effects of coffee and alcohol on driving manifest themselves not simply in terms of the main effects of each one. Each contributes to a joint effect. In other words, interaction refers not to the influence of two independent factors on each other but rather on the result of their combination, or "interaction," to produce something different from the respective contributions of each.

Discourse is interactive in just this way. When each conversant does certain things (e.g., takes turns), the result is intelligible, meaningful communication. Similarly, when writers do certain things and readers do certain other things, the result is lucid, comprehensible text. Writing is no less interactive than speech in either principle or practice. As discourse, writing is nonetheless an interactive medium even if the reader does not know the writer and indeed even though the writer may be long deceased when the reader finds the text. As long as writers and readers collaborate in their complementary and reciprocal tasks of composing and comprehend-

ing, or as Rommetveit (1974, p. 63) puts it, as long as writers write on the premises of readers and readers read on the premises of writers, the result is coherent communication.

## THE PACT OF DISCOURSE

The interactive character of language has been characterized in a number of important papers representing a variety of theoretical orientations. The fundamental premise in this literature is that discourse presumes a joint "contract" between producer and receiver. For some, this contract specifically obligates speakers to use language structures appropriate to effective social action. An important example here is Grice's (1975) communicative maxims, especially his **Cooperative Principle** ("Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged [p. 45]"). From the point of view of this means-end view of language production, successful communication requires speakers' finding expressions that appropriately effect their purposes. This interpretation of language as social action in terms of the effects that speakers have on listeners reflects ancient concerns of rhetoric (cf. Nystrand, 1982a) and is represented in contemporary work in the philosophy of language of Austin, Searle, Grice; the psycholinguistic research of H. Clark; and the artificial intelligence research of Schank and Abelson. It has recently been the dominant paradigm for research on the writing process. This work, surveyed in Gregg and Steinberg (1980), is best represented by the work of Flower and Hayes (1981) and Steinmann (1982).

In contrast to this view of language production is a social interactive position in which the text is interesting less as the means whereby speakers act on listeners and more as the functional, interpretive link between what writers have to say and readers need to know. In this view, communication is less a matter of speakers' transmitting their intentions to listeners and more a matter of operating on and transforming a shared knowledge base. Hence, discourse involves "negotiating" understandings and meanings, and the mutual expectations the conversants bring to the exchange define the terms of the "contract" by which they may negotiate. Psychologist R. Rommetveit (1974) argues that any given text or utterance has meaning only with respect to what is tacitly and jointly assumed by the conversants, assumptions normally established in previous discourse. Linguist M. A. K. Halliday defines both spoken and written texts as

a sociological event, a semiotic encounter through which the meanings that constitute the social system are *exchanged*. The individual member [both speaker

potential meanings, and precisely the one or ones that speakers actualize in discourse (i.e., bring into focus), Rommetveit contends, will depend on "what at the moment of utterance is taken for granted by both conversation partners [1983, p. 18]." The interpretive context of any text is the necessary, tacit ground upon which the figure of meaning is finally cut and known.

Tierney (cited in Guthrie, 1985) notes, moreover, that context of use is essential not only to meaning in conversation but also in written communication. Two different readers (or indeed the same reader on different occasions) may approach the same text with different purposes. The meaning derived from the text in each case (or on each occasion) will largely be determined by the particular needs of the reader. If we consider the ways in which texts mediate the intentions of the author and the needs and expectations of the reader, Tierney argues, then we see that stable singular meanings of texts are not easily established. As we shall see in Chapter 3, the speaker's/writer's role in these negotiations is to set in motion certain possibilities of meaning, possibilities which are fully realized only by the reader. Texts are like electric circuits in this respect: There is potential but no arc of meaning till some reader completes the circuit.

The negotiation of meaning is also especially obvious in exchanges between individuals who have very different understandings of the discourse topic. Rommetveit, for example, gives the example of teaching modern French history in a culture, e.g., rural Africa, where the concept of "president" is utterly meaningless. For the purposes of such instruction, the teacher may explain this concept with a compromised yet functional reference to Charles de Gaulle as a "powerful king of France." Rommetveit explains: "And the teacher's reason for employing that particular expression may be by no means malevolent or cynical: The fact may simply be that in that particular situation he can hit upon no better means of bridging the gap between what the students already know of relevance to the topic and what at such a stage of pre-knowledge can be made known to them about de Gaulle and his political role in France [1974, p. 34]." Hence, though "powerful king of France" is not a valid definition of de Gaulle's role, it nonetheless "anchors" the topic by establishing a mutual frame of reference in terms which allow discussion to proceed so that teacher and students can discuss modern French history in this setting.

Bruner (1981) describes a similar kind of negotiation of meaning in adult-child discourse. He gives the following example (p. 170) of book reading between one mother (M) and her child (C) at age 23 months:

and listener, writer and reader] is, by virtue of his membership, a 'meaner', one who means. By his acts of meaning, and those of other individual members, the social reality is created, maintained in good order, and continuously shaped and modified [1978, p. 139].

Russian psychologist Lev Vygotsky (1962; 1978) views language as internalized dialog and social, group behavior. For Vygotsky, the power of speaking and writing lies in their capabilities to mediate and transform shared definitions of experience.

As often as not, of course, discussion leads to different rather than common perspectives. Given this fact, what sense does it make to argue categorically that discourse is a negotiation of meaning? This important issue, raised by Bennett (1976) and Stubbs (1983), hinges on how *negotiation* and *meaning* are defined. If negotiation is viewed as a kind of bartering or debate over issues, then clearly all discourse is not negotiation. And if meaning is defined in terms of signification (i.e., signification to external or conceptual realities), then not all discourse is a negotiation of meaning since conversants are not categorically required to construe the things signified in discourse the same way, or indeed even at all, as a goal of the discourse.

However, if we examine discourse, not in terms of conversants' goals and not in terms of the content of any particular discourse, but rather in terms of the rules and constraints that bear on the conduct of discourse, then discourse clearly involves a negotiation of meanings. Discourse involves negotiating meaning in the sense that, to begin, the conversants must first establish a mutual frame of reference. They must furthermore sustain this mutual frame of reference, and where it is weakened by new or unclear contributions, they must restore it through renegotiation ("Whadya mean?" "Hmm?"). The function and importance of such negotiating is nowhere more apparent than on occasions when conversants hurriedly begin talking only to realize after several unproblematic turns that they are talking about altogether different things. Realizing this, the conversants quickly and explicitly reestablish the topic of their discourse, which is to say, they renegotiate the start of the talk.

What then determines the meaning of such talk? Following Wittgenstein (1968), Rommetveit (1974; 1983) argues that the meaning of any text ultimately depends on its interpretive context. Wittgenstein argues that reality is not fully determinate (i.e., just waiting for us to describe and refer to it) but has meaning only to the extent that we construe it, especially in language. Hence, language has meaning, Wittgenstein argues, not because it refers to a fully determined present-tense reality but rather *its very use constitutes the meanings we assign*. Any word typically has a multitude of

- M. What's that?  
 C. Ouse.  
 M. Mouse, yes that's a mouse.  
 C. More mouse (*pointing to another picture*).  
 M. No, those are squirrels. They're like mice but with long tails. Sort of.  
 C. Mouse, mouse, mouse.  
 M. Yes, all right, they're mice.  
 C. Mice, mice.

One day, of course, the mice will be "mice" and the squirrels will be "squirrels," but the significance of this negotiated settlement in which squirrels shall be called "mice" is that, like Rommetveit's example of de Gaulle as "a powerful king of France," it establishes a mutual frame of reference from which meaningful discourse may proceed.

The idea of negotiating such compromised linguistic references might seem extraordinary—limited to such extraordinary circumstances as extreme cross-cultural communication and adult-child discourse as a communication strategy of last resort. However, philosopher H. Putnam (1975) argues that it is the normal method of reference in discourse. As a joint enterprise between producer and receiver, he notes, reference is established not so much by signifying an unequivocal aspect of reality as "by tracking back how the term was used in the historical chain whose last link is the present speaker [Bruner, 1981, p. 170]." Hence, "a speaker may 'have' a word in the sense of possessing normal ability to use it in discourse, and not know the mechanism of reference of that term, explicitly or even implicitly [p. 278]." For example, we regularly and successfully use "gold," "language," "God"—literally thousands of words—without knowing the criteria for their valid definitions. The point is that what we know about gold is one thing, and what we know about using "gold" in discourse about gold is quite another. From this analysis, it follows that discourse is not so much the encoding and transmission of what the speaker knows as it is a set of procedures whereby the conversants focus jointly on various aspects of what they know for the purpose of examining and perhaps transforming this knowledge. Bickard (1980) makes this important distinction when he notes that "the objects of communicative interaction constitute representations, and thus have truth values, but the communicative interactions themselves are operators on, functions on, such representations. They are not representations themselves, and, thus, have no truth values themselves [p. 118]."

We shall look more closely at just how producers interact with receivers when we examine the structure of discourse. I shall show that there are discrepancies between what the producer has to say and what the receiver needs to understand that can be resolved only if the producer carefully

balances these respective interests. But there is one example that can be given without technical detail to illustrate the interactive skills of the speaker in producing discourse. The problem is this: In conversation when the listener interrupts the speaker and says "What?" how does the speaker know exactly which part of the previous statement to repeat or rephrase? In this situation, the speaker never starts at the beginning of the conversation, nor does the speaker ever rephrase a complete assertion unless it is called for. More typically the speaker replies precisely with the single word or phrase that the listener needs. How does the speaker know what this expression is? The listener obviously cannot explain what he or she missed, and the speaker certainly cannot read the listener's mind to find out (even if this might help). This puzzle can be solved only if the speaker has a keen sense of what needs to be said in terms of what the listener understands, i.e., *if the speaker knows what to say in relation to what is already known*.

#### CONTEXT OF PRODUCTION VERSUS CONTEXT OF USE

In both speaking and writing, communicative interaction takes place in a context of use, i.e., the situation in which the utterance or text functions and has meaning. It is important to note, however, that context of use (or **context of situation** [cf. Firth, 1957]) is not the same as context of production (or **context of utterance** [cf. Lyons, 1977]). **Context of production** refers to the occasion of the text's creation by speaker or writer whereas **context of use** refers to the occasion on which the text is actually processed by the hearer or reader. In speech, this distinction typically has no practical meaning since the context of production and the context of use are inevitably identical. Hence, when I shout, "Watch out, it's going to fall!" the context of production and the context of use are one and the same, in this case the dangerous situation of a wobbly ladder which my addressee is obliviously climbing.

The failure to distinguish context of production from context of use has led many (e.g., Olson, 1977; Dillon, 1981; Hirsch, 1977) to conclude wrongly that writing is a "decontextualized" mode of discourse, necessarily more explicit than speech. For example, psychologist David Olson argues in a much-cited passage that speakers can circumvent the ever-present possibility of ambiguity in speech "by means of such prosodic and paralinguistic cues as gestures, intonation, stress, quizzical looks, and restatement [Olson, 1977, p. 272]." Since writers have no recourse to linguistic and paralinguistic means, Olson argues, written texts must stand on their own and be far more explicit than spoken utterances. Olson concludes by

asserting that because meaning must be “preserved in sentences which have to be understood in contexts other than those in which they were written,” writers “must guard against possible ambiguity with only the resources of the text [p. 272].”

The fact that writers do not converse with readers face to face or that their texts speak independently of their actual physical presence does not mean that the texts are work independently of context. Rather, it means that unlike speech, written texts are composed for a **context of eventual use** (cf. Nystrand, 1982a). Similarly, the fact that writers cannot express themselves through intonation and gesture does not mean that written language is devoid of expressive, nonlinguistic resources. Rather, it means that writers show emphasis and mark boundaries, as well as suggest tone and attitudinal color and so on through paragraphing, punctuation, genre conventions, and other devices which work in conjunction with the actual words of the text to produce a coherent communication. But unlike intonation and gesture in speech, these devices of written language do not fully function at the time they are produced. Rather, the writer builds them into the text as it were so that they will function appropriately in a context of eventual use.

The context of use impinges as much upon the writer as the reader. As they write, writers pause often to review and frequently to repair what they have already composed. When done, they sometimes survey the results from the vantage point of their intended reader or readers. In so doing, the writer momentarily becomes a reader, and the context of production temporarily becomes a context of use. As the writer “tries out the text” in this way, the text comes to have meaning and import. The writer decides that she has used enough examples or needs more reasons or a different reason or another paragraph or another beginning, and so forth and so on. Making the appropriate revisions and repairs, the writer, of course, returns to work in the context of production. Hence, we see that even during the composing process, ostensibly solitary and private, the writer is continuously negotiating and balancing what she wants to say with her own expectations as a reader, either real or imagined. Throughout the process, the context of use is the key factor in arbitrating these negotiations and regulates production at every turn.

Clearly, explicitness bears no relation to how long the text is: A long text is not necessarily more explicit than a short text. A STOP sign is utterly unambiguous and explicit despite its brevity whereas legal contracts, despite their comprehensiveness of text, are notoriously ambiguous to many readers. A text is explicit not because it says everything all by itself but rather because it strikes a careful balance between what needs to be said and what may be assumed.

Writers are no more at expressive loss because they are unable to resort to intonation and quizzical looks than speakers are at expressive loss because they are unable to resort to italics, paragraphing, quotation marks, and parentheses. Intonation, gesture, and gaze resemble turntaking in this regard: They are the ways speakers accomplish interaction, but they are not the interaction itself. This book is largely about contexts of eventual use and specifically about writers' involvement with them.

In the remainder of this chapter, I argue that writing and reading are collaborative, social acts which obligate writers and readers to particular kinds of tasks. More specifically, I argue, and seek to show in subsequent chapters, that all elements of text—from the segmentation of individual words to the adequate development of paragraphs—are in large measure structured by the essential requirement that the text must strike a balance between the expressive needs of the writer and the comprehension needs of the reader. This is not to say, of course, that the aim of discourse is always substantive agreement, only that the character and conduct of discourse are governed by the expectations of the conversants that they should understand one another.

### THE RECIPROCITY PRINCIPLE

Social phenomenologist Alfred Schutz (1967) analyzes mailing a letter as the quintessential example of a social act. Although mailing a letter is ostensibly a simple individual act, it is nonetheless premised on a host of assumptions about what other people—none of whom the writer need ever meet—will do. Suppose, for example, that I deposit into my corner mailbox a letter along with a check written to purchase a book. In so doing, I assume that some uniformed stranger will pick up the mail and do whatever such uniformed strangers typically do to forward it to my addressee, most likely another stranger. I furthermore assume that this addressee will read my letter as a particular sort of letter (as a mail order and not some peculiar act of trivial philanthropy) and will respond in a particular way (i.e., will not rob me blind but will indeed send me the book I have ordered).

Clearly, mailing a letter is not a simple individual act. It is a highly contextualized act requiring, indeed *assuming*, considerable social knowledge on the part of the letter writer. By dropping my letter irretrievably into these public boxes—even into one I have never seen before—I take for granted a complicated set of actions by other people.

The tools and artifacts involved in my correspondence—the letter itself plus the envelope, the mailbox, the mail truck, and so on—are ultimately social in nature too. We experience these tools and artifacts not as mere

things in the world but rather “in terms of the purpose for which [they were] designed by more or less anonymous fellow-men and [their] possible use by others [1967, p. 55].” We need only find in an attic some obscure widget from a bygone generation to appreciate this insight. We understand such widgets only when we learn about their purpose and use, i.e., when we can situate the widget in its appropriate context of use. This is why blue metal boxes with painted eagles found on corners are not just any boxes in the USA and why my letter and enclosed check are not mere scribbled pieces of paper tucked inside other pieces of paper. Like all of the many complicated things I take for granted when I drop my letter into a mailbox, each of these artifacts is implicated in an intricate social web involving many people and their relationships to one another. In all these affairs, as Schutz puts it, it is “assumed that the sector of the world taken for granted by me is also taken for granted by you, [and] even more, that it is taken for granted by ‘Us’ [1967, p. 12].”

This key assumption is the **Reciprocity Principle**, which is the foundation of all social acts, including discourse: *In any collaborative activity the participants orient their actions on certain standards which are taken for granted as rules of conduct by the social group to which they belong.* In learning to collaborate in this way, the collaborators develop a *mutual co-awareness* “not only of what the other is doing, saying and so on, and of what I am doing, but also of how what I am doing appears to the other, and even what I must do to communicate more clearly [Cox, 1978, p. 21].”

The expectation for reciprocity in discourse is important because it means that the shape and conduct of discourse is determined not only by what the speaker or writer has to say (speaker/writer **meaning**) or accomplish (speaker/writer **purpose**) but also by the joint expectations of the conversants that they should understand one another (producer-receiver **contract**). Of these three forces that shape discourse, moreover, the contract is most fundamental: Without a contract between writer and reader, both meaning and purpose are unfathomable at best and untenable at worst. We may consequently view discourse generally as a social act based on the premise of common categorizations and mutual knowledge (cf. Sperber and Wilson, 1982). Both speakers and writers must fashion texts that will establish and maintain this mutual knowledge and so effect an exchange of meaning. In talk this negotiation is comparatively conspicuous, manifesting itself in turn taking, querulous glances plus rephrasings, etc. In writing, however, this process is more subtle. The writer must skillfully treat potential troublesources such as the start of a text or the introduction of complicated terms or ideas which might threaten reciprocity in a context of eventual use such as future reference, personal communication, etc. This is not to say, of course, that the aim of discourse is always substantive

agreement, but only that the character and conduct of discourse are governed by the expectations of the conversants that they should understand one another. To repeat Rommetveit, we write on the premises of the reader and read on the premises of the writer (1974, p. 63). In making this point, I am making a distinction between the *practical purposes* of discourse and the *principles* which govern its functioning.

## THE ORIGINS OF RECIPROCITY IN DISCOURSE

One area of language research that has investigated reciprocity as a fundamental principle of discourse is language acquisition. Collaboration between parent and child is important first because it provides the setting in which children experiment with and discover the significant differences and regularities of their language (cf. Smith and Miller, 1966). But the more important contention of this research is the conjecture that this collaboration lays an essential foundation for language long before actual words and sentences emerge.

There is some research to suggest that the expectation for reciprocity may be present from birth. Indeed, Condon and Sander (1974) report that “the movements of 1-day-old infants is precisely synchronized with the articulatory segments of human speech (whether English or Chinese, live or taped) but not with disconnected vowels or tapping sounds [Goodwin, 1981, p. 28].” Parents, moreover, begin attributing intention to their children’s gestures well before the infants are 2 months old (Stern, 1974). Whether these gestures are actually intentional is not nearly so important in terms of the infants’ development as the parents’ *attribution of intention*. By 3 to 4 months, infants’ cooing and gazing show clear elements of turn taking (Stern, 1977; Brazelton, Koslowski, and Main, 1974; Trevarthen & Hubley, 1978). By 4 to 6 months infants follow their parents’ gaze when the parents look away from the child to another place or person (Scaife & Bruner, 1975), a clear suggestion that, contrary to Piaget’s research on egocentrism, children learn very early on to take the point of view of the other (Donaldson, 1978). By 6 to 7 months they respond to their parents and regularly show them things by picking up things themselves and bringing these things to their parents’ attention (Clark and Clark, 1977, p. 312). And before 1 year, they master indicating by pointing in return to show things to their parents (Bruner, 1981; M. Lewis and Freedle, 1973).

Many researchers view infants’ pointing as a prelinguistic form of reference because in so gesturing the child draws into focus selected objects for comment. As Bruner (1978) notes, such acts mark the child’s entry into “transactional dialog”—necessarily nonverbal, of course, but

communicative nonetheless. Parents and their children understand each other by means of such elementary social interactions. The important role of the adult in this social interaction is to “orchestrate” these encounters, systematically albeit unconsciously providing a “scaffolding” of increasingly mature dialog with carefully structured “privileges of occurrence” for the child’s participation. The child not only learns to participate appropriately but also to initiate procedures—including gesture, utterance, and gaze—that the parent will interpret appropriately (Bruner, 1981).

Gradually, as these routines become established, the relationships between the two partners become predicable (“scripted [Nelson, 1978]”) for both, and the communicative procedures themselves become conventional. The character of the utterances the child learns is significantly shaped by their potential use in the established social order of the family. Much of this research on the prelinguistic roots of language has been influenced by the work of Vygotsky and his followers, who argue that “once a child develops the social uses of language, he becomes able to turn them back to his own private, or reflexive, use—he learns to use language to regulate his own behavior . . . [Gundlach, 1982a, p. 2].” Language acquisition is an important step—though hardly the first—in the progressive “integration of the child into a social world [Richards, 1974].”

Clearly, the collaboration of parent and child is important to this development. For example, Bruner argues that, in learning reference, the child’s task is as much socially interactive as it is cognitive, i.e., in addition to matching the semantic features of signs with critical features of objects, the child faces the problem of “developing a set of procedures for constructing a very limited taxonomy to deal with a limited set of extralinguistic objects with which he traffics jointly with adult members of the linguistic community [Bruner, 1978].” Similarly, Weinrich (1963) argues that in learning predication, the child’s task is as much semiotic as it is syntactic. That is, predication involves the differentiation of given and new information, which, in turn, develops out of an increasingly astute sense on the part of the child of what in dialog can reasonably be taken for granted as known (and hence is shared and given information) and what is not known (and hence is unshared and new information). This distinction is consistent with research reported by Wall (1968, 1974), who found that children quickly learn to elaborate more for strangers than for parents with whom the extent of shared knowledge allows for comparable abbreviation “with little or no loss of information [Wall, 1974, p. 233].” The general significance of parent–child collaboration as a prerequisite to actual dialog and talk is, in Bruner’s terms, that it allows participants in discourse “habitually to find each other [p. 22].” As important a milestone in language

development as the first word spoken is another, much earlier one—the shared word.

## RECIPROCITY AS A PRINCIPLE OF CONVERSATION

Other research that has examined the role of reciprocity in discourse is the study of conversation. A fundamental fact of conversation, as Sacks, Schegloff, and Jefferson (1974) point out, is that neither the content nor the conversational turns of a conversation can be specified in advance by either conversant. These things can be negotiated only in the process of talking; they result from the conversants’ mutual needs respectively to express themselves and understand one another. This is why conversation researchers determine the structure of conversation by focusing not on the behavior of either the speaker or the listener alone but rather on that of the conversants *vis-à-vis* each other. For example, considerable empirical evidence (e.g., Goodwin, 1981) shows that many of the pauses and hesitations of speakers engaged in conversation are inadequately explained either as performance errors (Chomsky, 1965) or as complications due to the demands of cognitive processing (Goldman-Eisler, 1961, 1972). Rather they have to do with the competence of the speaker in synchronizing her talk with the needs of her conversant. To be more specific, the speaker’s restarts often function to request the joint attention of the listener. Once this gaze is secured, the speaker typically completes her turn quite fluently.

In effect, these initial pauses, hesitations, and start-up queries (“Do you remember that note I received last week?”) function to “calibrate” the discourse. They do this by establishing a mutual frame of reference in terms of which subsequent comments are made and interpreted. This functional aspect of restarts is not apparent, of course, in research focusing solely on the speaker’s behavior. Rather, it is an interactive phenomenon which implicates the participation of each conversant in an underlying social order.

Sometimes after securing the gaze of their conversants, speakers nonetheless hesitate and rephrase something they have said. Some of these rephrasings involve recycling segments of talk that the speaker senses the other conversant has not understood (Erickson, 1979). Sometimes the listener makes the speaker aware that there is a problem by asking “What?” or “Hmm?” But in many instances the listener doesn’t say anything; the speaker just seems to know. Even when a listener does say “What?” the speaker must still solve the puzzle of determining just what word, phrase, or term is the troublesource. As with restarts, the critical mechanism here is gaze, specifically the use of mutual gaze to synchronize what the speaker has



to say with what the listener needs to know. The speaker knows what the troublesource is because the listener actually precedes "What?" with a glance that pinpoints the problem for the speaker quite precisely. But because competent conversants carefully synchronize utterance and gaze—which are the behavioral manifestations of reciprocity in talk and which the conversants use in managing their coparticipation—the speaker may often know that rephrasing is appropriate without the listeners verbally saying anything.

Sometimes speakers "repair" their utterances even when there has been no breakdown in communication or any apparent error (Schlegloff, Jefferson, and Sacks, 1977; Jefferson, 1978). The most obvious example is a word search on the part of the speaker. When this occurs—in contrast to most phrasal breaks (e.g., restarts which listeners usually interpret as requests for gaze)—the listener typically does *not* glance at the speaker. Mutual gaze is restored only when the speaker completes the repair and is ready to continue the conversation.

To summarize: Speakers request the gaze of their conversants by restarting. They recycle material to clarify points that the gaze of their conversants marks as troublesome. But when they initiate repairs to refine a point they want to express (rather than to clarify a point the listener did not understand), the listener normally suspends gaze until the speaker has completed the repair. On the surface, this behavior might seem inconsistent, e.g., with restarts, phrasal breaks secure the gaze and joint attention of the listener whereas with repairs, phrasal breaks result in suspended gaze. But this inconsistency is only apparent. The structure of conversation has to do with the synchronization of what the speaker wants to say in terms of what the listener needs to know. Mutual gaze marks joint focus for both conversants; and restarts, recycling, and repairs respectively are essential ways in which conversants establish, maintain, and reestablish this focus and mutual orientation, which is the foundation of all communication.

### MUTUAL KNOWLEDGE VERSUS MUTUAL FRAMES OF REFERENCE

Clearly, reciprocity involves mutual, shared knowledge. For example, along with all other users of the postal system, I have a common and mutual knowledge of how to write and mail a letter. Everything I take for granted in these activities is by definition mutual knowledge. I shall define these key terms as follows:

(a) **Mutual knowledge** is knowledge that two or more individuals possess in common. When such individuals communicate, of course, the

extent of their mutual knowledge is an important factor because it defines the possibilities for establishing a mutual frame of reference. For example, to the extent that conversants are mutually knowledgeable, they are able to take for granted much that they would otherwise need to explain to someone else not privy to the same knowledge. Nonetheless, whether or not such mutually knowledgeable individuals ever communicate with each other does not in itself affect the status of their knowledge as mutual. Experts in the same field (e.g., optometrists) or witnesses to the same event (e.g., all people who watched television coverage of the Kennedy assassination) have a high degree of mutual knowledge even if they never discuss it.

(b) **Shared knowledge** is the result of people exchanging whatever knowledge they have, mutual or not. Individuals need not be mutually knowledgeable, of course, to share knowledge. It is a mutual frame of reference, not mutual knowledge, that is the precondition for communication. Hence, parents who vividly remember the Kennedy assassination (and thus have a high degree of mutual knowledge about the event) may nonetheless share this knowledge with their children (who are not privy to the same mutual knowledge as their parents). Once knowledge has been shared, of course, it becomes part of the common stock of knowledge between or among the conversants. That is, knowledge once shared becomes mutual knowledge.

(c) **Reciprocity** is not knowledge at all. Rather, it is *the principle that governs how people share knowledge*, specifically their determination of *what* knowledge they shall exchange when they communicate, plus how they choose to present it in discourse. As long as the terms of reciprocity are upheld, communication and texts are coherent. Conversants do not typically share everything they know with each other; mutual knowledge is not a goal of communication. Rather, they share only that knowledge which is relevant to the purpose of the discourse and to their needs as conversants. In so doing each conversant speaks and listens, writes and reads in terms of what he or she expects the other to know. Hence, parents will discuss the impact of Kennedy's assassination differently with each other than they will with their children and grandchildren. In particular, they will elaborate certain details for children and grandchildren that they may take for granted with each other. In any case, the reciprocity principle governs the participation of the conversants. Whether speaking to each other or to their children or grandchildren, reciprocity guarantees only that speakers will share relevant knowledge at the same time that it warrants the relevance of each conversant's contribution.

A number of scholars have argued that true mutual knowledge is impossible. In particular, Bach and Harnish (1979), Harder and Kock

(1976), and Johnson-Laird (1982) note that, as a psychological reality, mutual knowledge introduces a problem of infinite regress. If A and B are individuals having mutual knowledge of C, then it must follow that A knows that B knows about C, that B knows that A knows about C, that A knows that B knows that A knows about C, that B knows that A knows that B knows about C, et cetera ad infinitum. Since this state of affairs introduces an endless subroutine into cognitive processes, many psychologists and linguists conclude that true mutual knowledge is impossible.

No doubt mutual knowledge in this sense is impossible; no two individuals ever have completely identical, mutual knowledge. But there is no practical reason why they must; communication does not depend on it. As we have seen, mutual knowledge is neither prerequisite to nor necessary for communication or social acts. Mutual knowledge affects *what* knowledge conversants can share and *how* they can share it, not *whether* they can share knowledge. In order to communicate, it is essential not that knowledge be identical but only that the conversants find a frame of reference which encompasses and relates their respective perspectives. As Sperber and Wilson (1982) note, "The fact that some knowledge is considered mutual is generally a result of comprehension rather than a precondition for it [p. 62]."

Reciprocity, unlike mutual knowledge, implies a clear and specific social relationship with other knowers. For example, people distinguished by substantial mutual knowledge, e.g., experts such as optometrists or baseball fans, are not bound by reciprocity until they actually collaborate in some joint activity, such as the physicians' attending a medical convention or the baseball fans' attending a game or both mailing a letter. Conversely, individuals who share little or no expert knowledge (e.g., doctors and patients) are nonetheless bound by the terms of reciprocity as soon as they become partners to some particular act (such as doctor-patient consultation). Mutual knowledge alone is neither necessary to nor sufficient for communication though appropriate knowledge is inevitably shared as the conversants uphold their respective ends of the reciprocity principle through communication and comprehension.

In discourse, conversants work from the assumption that they should understand one another. For example, speakers take for granted that their conversants will attempt to make sense of what they say. Indeed conversants depend on each other to do just this. Conversation would be impossible, for example, if the conversants could not depend on each other to mean what they say and interpret each other's comments in the same spirit. This expectation for mutual sense is so fundamental to discourse that, whenever conversants sense it is in jeopardy, they take appropriate actions to restore balance to the exchange: They ask for clarification, they rephrase

troublesome comments, they pause regularly to monitor their conversant's understanding, and so on. Conversants continue attributing sense to each other's comments only so long as it remains uncontradicted. In this sense, reciprocity is a fundamental principle underlying discourse—not just because it initially prompts the discourse but also and especially because it regulates the discourse once the conversants begin talking. For comprehensive reviews of reciprocity as a principle of discourse from various theoretical points of view, the reader is referred to Grice (1975), Haviland and Clark (1974), Sperber and Wilson (1982).

The concept of equilibrium or homeostasis has relevance to discourse in much the same way that Piaget has shown that it has relevance to cognitive development. Piaget argues that intelligence is a process of cognitive adaptation to the environment in which the individual constructs a series of cognitive representations, or schemata, which, through experience, the individual tests for fit. The individual continues to use these cognitive representations to interpret experience so long as they do so adequately and are not confounded by new experience which challenges their validity and usefulness. In the event that a cognitive representation does prove inadequate, the individual then adapts by revising the representation in such a way as to accommodate the anomalous event, seeking once again to make sense of the world. In this way, the individual achieves equilibrium between reality and her construction of it.

Reciprocity operates in a similar way in discourse. Each conversant assumes, until evidence to the contrary, that the other conversant's comments will sustain a balance of shared knowledge, i.e., will clearly relate to an established frame of reference. As Sperber and Wilson (1982) argue, "In ordinary circumstances, the hearer assumes that the speaker has not only tried to be as relevant as possible, but has also succeeded. The hearer therefore selects, from all the propositions . . . that the utterance could express, the most relevant one, and assumes that it is the one intended by the speaker [p. 75]." I shall call this expected balance in discourse **communicative homeostasis**, which is the normal condition of coherent discourse. Whenever this balance is threatened or upset, the conversants will take corrective measures to restore it. As long as conversants' comments make sense in terms of an established frame of reference, these comments will be meaningful ("uh huh . . .") and the discourse will proceed smoothly. But if anyone should introduce anything anomalous or problematic ("huh?"), the conversants must accommodate this information by discussing it and in so doing establish a new mutual frame of reference.

### READING AS A PROCESS OF ELIMINATION

In the office where I work there are two kinds of mailboxes. One kind is private and locked, and the other kind—a sort of pigeonhole—is public and open. All correspondence that is actually mailed (via either the U.S. Post Office or campus interoffice mail) is delivered to the locked box, and everything else—dittos, miscellaneous papers, general announcements, etc.—ends up in the pigeonhole. Knowing this, I know quite a bit about my mail even as I collect it. I know, by where it ends up, quite generally what sort of text to expect. Very rarely will anything important end up in the pigeonhole. The locked box, by contrast, is more complicated. It includes personal and professional correspondence, mass computerized mailings, and sealed campus memos. The sealed campus envelopes are always more important than fat packages with cheap postage and computer mailing labels; the latter inevitably contain unsolicited textbooks—the junk mail of the academic world.

The point of all this is that even before I open my mail I know something about it. Once the envelope is open, the trail of clues which precedes the text continues. My expectations are progressively set and fine-tuned by such details as logos, letterheads, typeface, and mode of production (handwritten, typed, or dittoed); the identity of the correspondent, what I know about the subject, previous correspondence (if any), who if anyone is copied (*cc:*), and on occasion even why the communication was done in writing rather than by telephone or in person. I know quite a bit about my mail even before I get to the text. These many layers of context which envelop the text provide important clues to the text's meaning. The skilled reader uses these clues systematically to eliminate what the text might be about. In the jargon of information theory, these clues are essential to reader comprehension because they reduce the reader's uncertainty about the text's meaning (cf. Smith, 1971).

With experience, readers learn to use these clues to set a course through the text as surely and skillfully as any yacht captain reads the tides and winds and currents to set his sail. And indeed as the reader narrows the semantic field, each new level of understanding constrains the interpretation of the next.

When the reader actually begins reading the text, this process of elimination continues. Each statement, every bit of information narrows the field of semantic possibilities further and further to the point where the reader has no uncertainties about the meaning of the communication. From reaching for one mailbox rather than the other, noting one sort of envelope rather than another, one letterhead rather than another, one typeface rather than another, one topic rather than another, one comment rather than

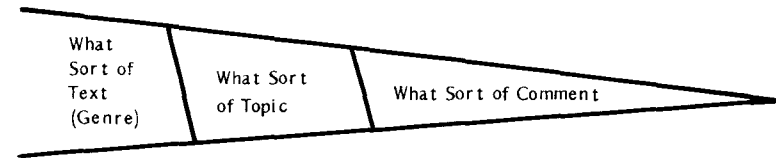


Figure 2.1. The wedge: Hierarchic constraints on the comprehension process.

another, the reader systematically works his way through the many layers of context in which the text itself is embedded to the point where he understands what the writer says. The act of reading is a great wedge which the reader drives through the text in opening up and probing its possibilities for meaning (see Figure 2.1).

Discourse analysts often discuss this organization of the comprehension process in terms of “top-down effects.” That is to say, instead of first processing letters in order to understand words, and instead of processing words in order to understand sentences, and so on up to the very text itself, readers proceed in just the opposite direction. Texts make sense in terms of context and the nonverbal context in which they are situated, sentences take on meaning in the context of adjacent sentences, words take on meaning in the context of sentences, and letters have value in the context of words. Parts have meaning with respect to wholes.

The effects of context on comprehension of various text elements have been much studied. Cattell (1886) first observed experimentally that subjects tend to remember letters better when they are presented in words than when they are presented randomly. Huey (1908), Miller (1956), and others have replicated these results in various ways. More recently, Rommetveit and his associates report research using stereotachistoscopic techniques to test the effects of context on word perception. Each of the experiments introduces a binocular rivalry of letters, which involves presenting two different words or strings of letters separately and simultaneously to the left and right eyes. Because the words are presented so quickly (a matter of microseconds), only the dominant member of the pair is perceived. The technique has been used to test a number of hypotheses about comprehension. For example, Kleiven and Rommetveit (1970) found that when subjects are presented simultaneously with a meaningful string of letters and a competing nonword string, they invariably see only the meaningful string. This is true even when the meaningful string occurs less frequently in the language than the nonword string (e.g., as part of another word). Rommetveit, Berkley, and Brøgger (1968) found that when subjects are presented with two nonword strings (e.g., *sbap* and *sbar*), they often perceive a real word that results from combining the two (e.g., *sharp*).

Rommetveit and Kleiven (1968) found that when rival pairs of words are presented (e.g., *soup* and *soap*), subjects will see the word more closely related in meaning to the word which immediately precedes it (e.g., *towel* or *spoon*). The conclusions in all these studies and many others (e.g., Reicher, 1969; Tulving & Gold, 1963; Wittrock, Marks, and Doctrow, 1975; Bransford and Johnson, 1972) are the same: Comprehension is always affected by previous text and expected text, as well as the nonverbal context in which the text is situated. Comprehension is the process whereby words emerge as meaningful constructs from otherwise empty perceptual forms.

From such research, we have learned that reading is a process whereby, ironically, the reader gains information by eliminating possible meanings (cf. Smith, 1971). Readers gain knowledge by discarding possibilities, not adding them. Any term out of context (*war*, *cousin Matilda*, *winter*) has numerous if not infinite possible meanings and interpretations. But rarely, of course, do readers and listeners encounter such terms in isolation. Instead they find them associated with other words in some context of use. And their comprehension of the terms is quite literally loaded in terms of other terms. Readers comprehend texts largely by finding out what topics they are *not* about, using sufficient context to eliminate spurious interpretations and retain only the most salient. In this process, readers work their way into and through the text, processing each layer of context in terms of expectations set up by the previous layer. Hence, as I reach into my locked box rather than the pigeonhole, I eliminate some possibilities; as I note how the envelope is addressed, I eliminate yet more possibilities; and so on and so forth as I work my way through the text itself.

As each layer of text and context is processed, it constrains or **frames** the possibilities for interpretation of the next layer. Readers' expectations are increasingly "fine tuned" as they work their way into the text. In effect, everything understood defines new horizons of expectations as previous text becomes context for interpreting text yet to be read. Through the cognitive transformation of comprehension, each layer of understanding becomes the ground against which the figure of subsequent text takes shape and has meaning.

## What Writers Do

### INITIATING DISCOURSE

If reading is a process of eliminating alternative meanings and interpretive possibilities, then writing is the complementary and reciprocal process of elaborating these possibilities, associative paths, and interpretive contexts. The writer gets the reader off and running by setting the text in one particular direction rather than another, i.e., by loading the communication in favor of certain possibilities and interpretive contexts rather than others.

The start of a text performs this function quite directly. A professional journal article titled "The Effects of Text Editing on the Cognitive Processes of First Graders" announces a different kind of text than a newspaper article in the Modern Living Section titled "Byting Bits in First Grade." These titles indicate to readers just how they should proceed to read what they find there. Among other things, readers must have some insight about the relative importance of understanding details. In reading the newspaper piece, "Byting Bits in First Grade," all the reader really needs to get is the main idea whereas with the research article on "The Effects of Text Editing on the Cognitive Processes of First Graders," far more than just the main idea is at stake. To fully understand this latter piece, the reader must know about computers, text editing, and cognitive psychology. But note that to understand these respective texts, knowledge of the topic is not sufficient. Comprehension requires not just understanding what a writer says about a topic; comprehension also requires understanding what sort of text the writer has chosen to write and being able to evaluate the relevance of details in terms of the purpose of the genre. Hence, to properly understand "Byting Bits" and "The Effects of Text Editing," readers not only need to have