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Discourse Analysis

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In this chapter, we first define discourse analysis and illustrate the breadth of its usefulness as a research method. We also emphasize how choosing to use this method can be part of a larger change of theoretical perspective. We devote the rest of the chapter to one of the main purposes of a handbook such as this one, which is to assist readers in the use of the method; thus we include many hands-on issues, such as choices about data, recording, transcription, and reliability. In reviewing these issues, we focus on principles that might be useful for helping readers to develop new

and original methods of discourse analysis that suit their particular interests and goals, guided by explicit theoretical assumptions.

WHAT IS DISCOURSE ANALYSIS?

Discourse analysis is the systematic study of naturally occurring (not hypothetical) communication in the broadest sense, at the level of meaning (rather than as physical acts or features). However, a survey of the literature on discourse analysis would quickly reveal that, although some researchers employ the

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term to describe a particular kind of analysis, it is also a label that has widespread usage across several disciplines with diverse goals. Consequently, it is more accurate to think of discourse analysis as a cluster of methods and approaches with some substantial common interests rather than as a single, unitary technique.

As Wood and Kroger (2000, p. 18) explain, the existence of several kinds of discourse analysis is undoubtedly due to the developing nature of the field as well as to its diverse disciplinary origins. Discourse analysis began in branches of philosophy, sociology, linguistics, and literary theory, and it is continuing to develop in additional disciplines such as anthropology, communication, education, and psychology. We find this newness and diversity a positive feature of the field. It is not bound by any single discipline, which means that there is a rich infusion of ideas and methods across disciplines. Nor is it committed to traditions of the past; indeed, many discourse analysts are rebels and innovators within their own home disciplines who have moved out to join other like-minded researchers.

It is intriguing that one of the original meanings of the verb *discourse* was "to travel across a course or terrain." We like to think of discourse analysis as still doing that, traveling across many disciplines, often into new territory, rather than staying in one place. In that spirit, in this chapter we travel through (but by no means claim hegemony over) the many domains of discourse analysis and a wide variety of other territories where researchers study naturally occurring language, including conversation analysis, microanalysis, ethnography, some areas of nonverbal communication, and mediated communication. As is appropriate to this kind of intellectual internationalism, the stimulus for our survey of definitions and approaches is a traveler's curiosity about how people do things differently rather than any goal of standardization.

Defining Discourse

In new disciplines, familiar terms often take on new specialized or professional meanings that differ from their commonly used informal or everyday definitions. Discourse analysis is no different. Van Dijk (1997c) points out that the term *discourse* is commonly used to refer to a particular form of language use (e.g., public speeches) or more generally to spoken language or ways of speaking, such as the "the discourse of former President Ronald Reagan." Another informal usage refers to the ideas or philosophies propagated by particular people or groups of people (van Dijk, 1997c, pp. 1-2). In this usage, van Dijk notes, the actual language used by a person or persons is ignored in favor of a focus on the ideas or philosophies expressed. According to van Dijk, the more specialized or professional definition of discourse includes a particular focus on the actual language used in a communicative event. A discourse analyst is essentially interested in "*who* uses language, *how*, *why* and *when*" (van Dijk, 1997c, p. 3). So, for example, a discourse analyst might examine talk occurring during encounters with friends, phone calls, job interviews, doctor's visits, and so forth.

Van Dijk (1997c) also touches on another important distinction when he points out that language can be spoken, written, or printed. Each kind of language use, he notes, has distinct properties; for example, the communication may be passive (as in when an individual reads a newspaper), more active (as in e-mail communication), or fully active (as in face-to-face dialogue). It is important that researchers consider these characteristics when conducting analyses. Van Dijk's inclusion of both spoken and written forms of language use is a fairly common view (e.g., Gilbert & Mulkay, 1984; Potter & Wetherell, 1987, p. 7; Wood & Kroger, 2000, p. 19). It is not the case, however, that all discourse analysts agree. Some

would reserve the term *discourse* for spoken language and use the term *text* to describe written or printed language; others use the two terms interchangeably. Most researchers define discourse as the activities of speaking or writing, but there are some researchers who include other aspects of communication in their definitions as well. Brown (1995) studied the role of *listeners* as they participate in dialogues, and Kroger and Wood (2000) point out that some theorists, such as Fairclough (1993) and Harré (1995), have extended the definition of discourse to include “semiotic practice in other semiotic modalities” (p. 19). That is, these researchers have a broader definition of discourse that includes not only words (spoken or written) but also other kinds of meaningful communication, such as visual images and nonverbal movements (e.g., gestures). Our research group can be counted among those who accept all of these broader definitions.

Finally, there are some implicit agreements among discourse analysts that become significant in contrast to other approaches to language and communication. Discourse analysts would always look closely at the actual language itself rather than at secondary sources such as reports or descriptions of what was said, meant, or understood. That is, virtually all discourse analysts would agree with the conversation analysts, such as Atkinson and Heritage (1984), who use only data from behaviors generated in their own context. The observers’ and participants’ descriptions, interpretations, and comments on conversations are necessarily gathered in different contexts, for different purposes, and these inevitably affect the descriptions. These reports might be analyzed as “accounts” (Scott & Lyman, 1990) or as “remembering” as opposed to “memory”; (Bartlett, 1932; Edwards & Middleton, 1987), but they are not substitutes for the discourse they describe.

Kinds of Discourse Data

Another way to define discourse is to illustrate some of the many possible sources of data for discourse analysis. Face-to-face dialogue occurs in families, in most workplaces and public places, in psychotherapy, in courtroom settings (e.g., examination and cross-examination), in police interviews, in medical examinations and interviews, on social occasions, in classrooms, in meetings, and some in psychology experiments, to name just a few settings.¹

Individuals communicate in writing through memos and letters, when they post notices, when they publish books and articles, when professors write comments on students’ exams or papers, and in many other settings.

Mediated communication includes telephone conversations and communication via answering machines or voice mail, radio call-in shows, and computer-mediated forms such as e-mail, Internet chat rooms, and bulletin boards. In the mass media, mediated communication occurs through newspapers, comic strips, TV talk shows, and political interviews. We provide more examples throughout this chapter, especially in the sections on recording and transcription. Undoubtedly, readers can immediately think of many other examples we have not mentioned here.

Levels of Analysis

Nunan (1993), who comes from a more linguistic background, takes an even different cut at the definition of discourse. He uses *text* to refer to the written or taped record of a communication event and *discourse* to refer to the interpretation of that event in the context in which it occurs. For Nunan, the difference between text analysis and discourse analysis is that the former is the study of formal linguistic devices that distinguish a text from random sentences, whereas the latter is also the study

of such devices but is conducted by the researcher with the intention of coming to understand the purpose and function of the discourse as well as the context in which it developed (p. 20). What he calls discourse analysis involves language *as it is being used*, whereas text analysis is concerned with patterns and regularities that occur in written language, such as phonemic or grammatical analyses. That is, discourse analysis is concerned with patterns and regularities in language but also with the people using language (what they mean and the purpose to which language is put) and the context in which it is used. Nunan (1993) says of discourse analysts, "Their ultimate aim is to show how the linguistic elements [found in language] enable language users to communicate in context" (p. 20). Thus Nunan's interest in linguistic elements leads him to study, among other things, linguistic devices such as pronoun usage and conjunctions that enable people to build explicit relationships between entities and events in their discourse with each other in different contexts (p. 57). He is also interested in analyzing how smaller components of language contribute to broader social meanings. Thus his research spans two levels in that he breaks discourse down into its component parts and also looks at how the parts contribute to the formation of meaning in social contexts.

Although they often use different terms, other researchers often make the same kind of distinction (between analyzing parts of language versus broader issues of meaning) when outlining their positions. Stubbs (1983) distinguishes between language analysis below the level of the sentence and "language above the sentence or above the clause" (p. 1; quoted in Schiffrin, 1994, p. 23). Schiffrin (1994) proposes that the distinction is between *formalist* or *structuralist* and *functionalist* views of language. Linell (1998) makes a similar point:

Language can be conceptualized in basically two ways, as *system* or *structure*, or as *discourse*, *practice* (praxis) or *communication*. If one gives priority to the former, we can talk about a formalist(ic) framework; here, linguistic expressions can be treated in abstracto. Priorities to the latter yield a more functionalist(ic) paradigm; its focus on communicative meanings and functions makes it necessary to take contexts into account. (p. 3)

We have already encountered a functionalist view in van Dijk's (1997c) stated interest in "*who* uses language, *how*, *why* and *when*" (p. 3). With respect to our own research group's approach to discourse analysis, we take a strongly functional approach, focusing mainly on how dialogue works and what a particular phenomenon is doing (or how it works) in its immediate communicative context.

So far, we have looked at discourse analysts who are concerned primarily with language use, that is, at researchers whose main interest is in what is said or written. However, some analysts focus on the kind of discourse that involves ideas or philosophies propagated by particular people or groups of people (van Dijk, 1997c, pp. 1-2). Analysts such as Caldas-Coulthard and Coulthard (1996b) call themselves critical linguists and, along with researchers such as Fairclough (1992), Fowler (1996), and Hodge and Kress (1993), call their research *critical discourse analysis* (CDA), which they define as "an analysis of public discourse, an analysis designed to get at the ideology coded implicitly behind the overt propositions, to examine it particularly in the context of social formations" (Fowler, 1996, p. 3).

In CDA, the focus is not entirely on the actual words written or spoken but also on the representations implicit in the words. This kind of analysis, one might observe, can be far above the level of the sentence, because it may

be less concerned with what is spoken or written and more concerned with the broader message, philosophy, ideology, or idea conveyed. CDA might, for example, reveal that particular views of gender or race misrepresent or distort characteristics of the people represented. The goal of critical discourse analysts is to expose the misrepresentation or distortion in order to “defamiliarize” the public at large with the negative representation:

Discourse is a major instrument of power and control and Critical Discourse Analysts . . . feel that it is indeed part of their professional role to investigate, reveal and clarify how power and discriminatory value are inscribed in and mediated through the linguistic system: Critical Discourse Analysis is essentially political in intent with its practitioners acting upon the world in order to transform it and thereby create a world where people are not discriminated against because of sex, colour, creed, age or social class. (Caldas-Coulthard & Coulthard, 1996a, p. xi)

Parker (1992), a social psychologist, advocates a similar kind of critical analysis. His particular interest is on the role of discourse in the reproduction and transformation of meaning. Discourses “both facilitate and limit, enable and constrain what can be said (by whom, where, when)” (p. xiii). Parker defines discourse as “sets of statements which constitute an object” (p. 3; see also p. 5). His goal, like that of Caldas-Coulthard and Coulthard, is unequivocally emancipatory. That is, he endeavors to reveal problematic views as such. He states the case quite strongly, maintaining that an “amoral/apolitical psychology is worse than useless” (p. 2).

Within the writings of critical discourse analysts, the term *text* has a different (and more complex) meaning from the ones discussed above, which usually define it as written records of discourse. As Parker (1992) explains:

I want to open up the field of meanings to which discourse analysis could be applied beyond spoken interaction and written forms by saying that we find discourses at work in *texts*. Texts are delimited tissues of meaning reproduced in any form that can be given an interpretative gloss. (p. 6)

He provides an example that is useful in clarifying his meaning. He describes an electronic game that displays a small moving male figure waving a crucifix at ghosts descending from the top of the screen to their graves. Each ghost that is prevented from landing by the crucifix-waving man is consumed in flames, and the player is awarded 10 points. This, in Parker’s view, is a text that conveys Christian discourse. (Interestingly, we can also see by Parker’s example that he is another researcher who extends the meaning of discourse to include means of communication in addition to written and spoken language use.)

Language and Reality

One further important difference must be mentioned. Discourse analysts clearly differ on how they conceive the relation between language and reality. We use the terms *realist* and *antirealist* to refer to two contrasting positions with respect to their subject matter. In stating the distinction so briefly, we identify the crucial issue; however, as is often the case with brevity, we risk oversimplifying at the cost of the loss of finer distinctions. Here we attempt only to introduce some of the issues involved.

Some analysts, such as critical discourse analysts among many others, are realists in that they maintain that certain descriptions or constructions of reality are more accurate than and preferable to others, even if not perfectly accurate and universally valid. Important in this view is the idea that it is possible to replace unfair, inaccurate constructions or representations with fairer and more accurate representations. Note that only if there is a

real reality can any representation of it be seen as accurate or inaccurate.

The point at which this topic becomes complex and sometimes very confusing is when we attempt to answer the question, What is real? Most theorists (but not all) would agree that the physical world exists. However, theorists vary on whether the *social* practices and institutions created by humans—which are therefore social constructions and would not exist without human participation—should be considered real in the objective sense. Further, theorists also differ on how language is related to reality, whether physical or social.

Analysts such as Potter (1996) and Willig (1999) are antirealists, who maintain that reality in the commonly understood meaning of the term does not exist. What exist are descriptions, constructions, and representations that cannot be judged to be either true or false. In explaining her position, Willig (1999) proposes:

[These] discourse analysts conceptualize language as constitutive of experience rather than representational or reflective [of experience]. They argue that the linguistic categories we use in order to “describe” reality are not in fact reflections of intrinsic and defining features of entities. Instead, *they bring into being the objects they describe*. Furthermore, there is always more than one way of describing something and our choice of how to use words to package perceptions and experiences gives rise to particular versions of events and of reality. It is in this sense that *language can be said to construct reality*. (p. 2; emphasis added)

In this view, reality is itself a construction made in language. Crucially lacking, antirealists claim, are any universal standards by which to judge the veracity of any particular representation or construction. For example:

The [conventional] assumption is that meaning resides in movements—we just need to

identify the meaning correctly. But movements have no inherent, essential meaning; rather, they can be given multiple meanings by different interpreters (and by the same interpreter on different occasions), meanings that can vary across situations. (Wood & Kroger, 2000, p. 12)

Having briefly described the range of realist and antirealist positions, we would like to clarify our own position here. First, it is important to distinguish between physical events or objects in the world and the *meanings* of those events or objects. Suppose someone opens a door in the presence of another person. It is possible to say that this event is real in the sense that a movement occurred and the door is now open. However, this movement can take on almost any meaning, depending on context and interpretation: It could mean that the person who opens the door is declaring an intention to carry out a requested errand or an intention to leave the relationship; that he or she is just letting in fresh air or implicitly complaining about smoking; that he or she is advertising that the ensuing conversation is to be public rather than “behind closed doors”; and so forth. In a great deal of social life, such interpretations are elastic, as the antirealists propose. The two individuals in the room can disagree about what the act means, and either of them can change (or lie about) what he or she says it means. However, we would point out two significant qualifications on this elasticity. First, there are occasions when certain meanings of events are not negotiable. If the door is a hatch on a deeply submerged submarine, then opening it means, among many other things, that unprotected occupants are (really) going to die. Second, for a great deal of what we do in everyday life, there is substantial social consensus about meaning. Opening a door ahead of another person who is walking toward it usually means holding the door open for that person, and the other is very likely to go

through the doorway first. The possibility that the act could sometimes be a trap or a joke does not obviate the higher likelihood that it was an act of courtesy; indeed, that very consensus makes the trap or joke possible. We are able to navigate social life because there is a great deal of consensus about meaning; if this were not so, almost no social action would be possible. Perhaps one of our tasks should be to explore such consensus as a topic in itself.

We can extend the same reasoning to a discursive example: When a witness takes an oath in a courtroom, this discursive act changes the status of subsequent testimony. If the witness lies, he or she can then be prosecuted and imprisoned for perjury, a penalty that does not exist in other settings. Therefore the oath, its meaning, and its consequences are, we could argue, effectively real although clearly a social construction.

Summary

The reader can see by now that the terrain of discourse analysis is varied but has some common features. First, there are differences between what different analysts treat as discourse. These range from just written (or just spoken) language to other modes of communication, such as nonverbal gestures. As well, *discourse* can be used to describe a particular ideology or philosophy that is implicit in different forms of language use.

It is not surprising that approaches to analysis also differ. Some researchers look at language from a more structural or formal point of view in order to analyze, for instance, the linguistic devices that can be seen to constitute language. Other researchers take a more functional approach, looking at language use in its social context—for example, examining questions about who uses language, when, how, and for what purposes.

Finally, an important issue in the field is the relation between language and reality. Some discourse analysts maintain that language

describes or constructs different versions of something real that exists independent of language. The meanings given can be more (or less) accurate. Others maintain that there are only versions of reality; it is language itself that creates and constitutes reality.

NEW PERSPECTIVES

Discourse analysis can be a method that complements existing communication research tools (questionnaires, interviews, ratings, and so on), to be used within traditional theoretical frameworks. Or it can be part of a substantially different approach with several new theoretical and methodological premises. We describe these alternative premises in this section, noting that, although our research group has eventually adopted all of them, readers may wish to consider some but not others.

The Primacy of Discourse

A significant theoretical choice can be to focus on the discourse itself rather than on inferred intrapsychic (mental) processes, such as cognition, emotion, motivation, abilities, goals, intentions, attitudes, and personality characteristics. Communication is often treated as secondary to mental processes, in one of two ways. First and most obviously, communicative acts may be of interest simply because they provide a means of revealing or studying mental processes. For example, answers on questionnaires and responses on rating scales are typically seen as direct indications of attitudes and preferences, not as discourse. Similarly, interviews are usually seen as a way of finding out what is on interviewees' minds rather than as dyadic communication between interviewer and interviewee. And many if not most studies of facial expression derive from a primary interest in emotion (e.g., Ekman, 1993; but see also Bavelas & Chovil, 1997; Kraut & Johnston, 1979). Emotions are not directly observable, so the

study of facial expression is a preferred behavioral method for inferring them. Used in these ways, discourse is a behavioral means to intrapsychic ends. The alternative is to become attracted to the discourse itself, treating it as intrinsically interesting and worth analyzing in detail.

The second way in which researchers can treat discourse as secondary is to explain it by mental models. That is, even when the discourse is the initial focus of interest, the focus quickly shifts to mental processes that might explain it. The question of “why” individuals or groups communicate in particular ways is most often answered by hypothesized mental processes, such as their cognitions or personality. If the cause is intrapsychic, the discourse becomes merely an effect or by-product and may not even be examined closely. (For a fuller discussion of the problems with and alternatives to this approach, see Bavelas, 1991.)

We can illustrate these issues with the example of language production, which is usually seen as the outcome of the speaker’s cognitive processes. There are many elaborate cognitive models that explain how an individual finds a word or produces sentences, and of course sophisticated mental processes must be involved in this most skilled of human activities. However, Bavelas and Coates (1992) have questioned whether existing mental models of language production and comprehension can account for the observed precision and complexity of dialogue. At the very least, a thorough appreciation of the nature of the discourse itself (versus hypothetical examples) must be the criterion by which such models are generated or judged.

An even greater shift is to examine the discourse of language production without reference to mental models. Clark and Wilkes-Gibbs (1986) proposed that the speaker and addressee work together to choose a word or term to describe something. For example:

- A. That tree has, uh, uh
- B. Tentworms.
- A. Yeah.
- B. Yeah. (p. 6)

Sacks (quoted in Jefferson, 1973, p. 59) provides another example:

- A. I heard you were at the beach yesterday. What’s her name, oh you know, the tall redhead that lives across the street from Larry? The one who drove him to work the day his car was
- B. Oh *Gina!*
- A. Yeah Gina. She said she saw you at the beach yesterday.

Clark and Wilkes-Gibbs (1986) point out that such excerpts are highly social and collaborative. Clark and his collaborators have conducted experiments showing how, even when one person is the official speaker, both individuals contribute possible terms, modify them, and work out mutually meaningful references (which are not necessarily intelligible to outsiders) (Clark & Wilkes-Gibbs, 1986; Schober & Clark, 1989). Our main point here is that their research focus is on the dialogue that produces references, not on the mental processes of the speaker.

Thus one can choose to study the discourse itself without using or invoking mental processes at all. This proposal is not the same as a radical behaviorism that denies the existence of mental phenomena—which clearly exist and are important—but rather a shift of interest to the other, equally interesting phenomena to be found in discourse. There is no a priori reason why inferred mental phenomena should be given primacy over discourse.

One might fairly ask, however, if researchers turn away from mental models, are they not also abandoning theory and becoming merely descriptive? If individual or intrapsychic explanations were the only way

theory could be built, then eschewing them to focus on discourse would indeed be atheoretical. However, it is also possible to answer the question of “why” by examining *how* and *what for* (Watzlawick, Beavin Bavelas, & Jackson, 1967, p. 45), that is, by looking at interpersonal processes and at the social effects of communicative acts. As theorists, we can look outward rather than inward. For example, in our studies of equivocal communication, we focused on goals, not as mental intentions or plans, but as properties of the social world: the options available and their consequences (Bavelas, 1991; Bavelas, Black, Chovil, & Mullett, 1990). Specifically, we have shown that equivocation occurs when all of the direct options (e.g., lying or telling a hurtful truth) are negative and to be avoided. In this view, equivocation is a way of traversing a social minefield rather than the product of inferred intrapsychic processes.

So far, we have suggested a primacy of discourse as both the focus of interest and the source of explanation. It is possible to go a step further and adopt the even stronger premise that discourse creates our social world. Unseen mental processes are not social. Only observable actions or their consequences can have social effects, and language use is arguably the predominant social action out of which our social lives are created. Thus it is possible to see interpersonal communication not merely as reflecting individuals' views of the social world, but as creating and sustaining the social world, as the fabric of social life itself. A discursive theoretical approach focuses on how the participants *do* social actions.

An Inductive Approach: Learning from the Discourse

Another new perspective one can adopt is an inductive stance. Most researchers, especially students, have learned that one starts a research project by (a) going to the literature to

find previous theory and research, (b) forming a hypothesis, and then (c) going to the data (e.g., discourse) to test the hypothesis. An alternative approach that is consistent with discourse analysis is to go “backward,” that is, to start inductively by studying the discourse first, generating hypotheses or explanations from what one observes, and only then going to the literature.² (For further discussion and examples, see Bavelas, 1987, 1995.)

An inductive approach to discourse analysis involves at least two new premises. The first is a different assumption about the role of the literature in research. Traditionally, research extends an existing literature, building on it study by study to ensure the accumulation of knowledge. However, entirely new insights and approaches cannot come from the literature. If the idea is already in the literature, it is by definition not new. Moreover, the lenses imposed by the literature will inevitably constrain the way in which one can see the discourse. Often, these constraints are unrecognized because they are implicit in a particular paradigm and therefore difficult even to be aware of, much less to question. Without disparaging the obvious importance of previous research, we propose a balance between continuity and innovation that values working both within and outside of existing topics and frameworks. As Yngve (1970) observes, “There is nothing like viewing video tapes of actual communicative activity to dispel any preconceptions one may have” (p. 573).

The most likely source of new ideas in many natural sciences is direct observation, the results of which often violate our preconceived notions:

A good way to tell how the work is going is to listen in the corridors. If you hear the word, “Impossible!” spoken as an expletive, followed by laughter, you will know that someone's orderly research project is coming along nicely. (Thomas, 1974, p. 140)

For example, Coates (1991) took an inductive approach to irony in dialogue and discovered that it is a collaborative, not an individual, phenomenon. Microanalysis of actual discourse has been a fruitful source of entirely new ideas, from the original Natural History of an Interview project in the 1950s (Leeds-Hurwitz, 1987) to conversation analysis. Indeed, given the relative paucity of data about the nature and workings of actual discourse, there is a great deal of observational work to be done. Researchers in our field may be like the 19th-century naturalists (of whom Darwin was only one) who faced an exciting new world of animals and plants to carefully describe and understand.

If we begin to question the traditional role of the literature, we can also question the role of theory and hypothesis testing, which are usually seen as necessary to guide research. In the traditional view, one moves from general to specific; theory and hypothesis come first, then observation: *theory and deduction* → *hypothesis* → *confirmatory observation*. In contrast, observation can lead to theory by moving from the specific to the general. An initial inductive phase may lead to exciting new hypotheses and even theories: *observation and induction* → *hypothesis and theory*. Some inductive researchers, including our group, add a third step by returning to the data to test the new hypothesis, in a cycle of induction and deduction: *observation and induction* → *hypothesis and theory* → *confirmatory observation*. We return to these two alternative approaches later in this chapter.

There are two common and reasonable criticisms of an inductive approach. The first is that one cannot approach data free of preconceptions; no researcher's mind is a blank slate, to be written on by data without any prior ideas influencing what he or she sees. Therefore, some conclude, researchers will see only what they are prepared or guided by their theories to see. The first statement is

unassailably true; the conclusion is not. All veteran researchers have enough experience of failed projects or of cherished but consistently unsupported hypotheses to know that thinking and wishing do not make it so. A great deal of the methodological logic and machinery of scientific inquiry has been devised to guard against this unwanted possibility. Put more positively, the researcher will certainly choose to observe data that fit his or her interests (e.g., dyadic or group interaction, the media) and will also approach these data with a set of assumptions, preconceptions, and even hunches. Curiosity, which is the driving force of research, is rarely neutral, but this need not shut out new or unexpected possibilities. If one is truly curious, then theoretical preferences will not dictate one's observation. Virtually all inductive researchers require a number of instances of a phenomenon before they conclude that it is more than one of a kind.

The second concern about conclusions derived from inductive research is the danger of a particular kind of circularity. If the researcher is creative enough, so the argument goes, he or she will always be able to find some pattern that fits this particular set of data, but that pattern may fit only these data because it was created from and for them. Again, new data are the answer. That is, although it is true that humans are very good at finding patterns and can even find them in random numbers (or the stock market!), new observations will not confirm a pattern that fits only the limited set of data that generated it.

For both of these concerns, there are also procedures that provide technical safeguards, namely, interanalyst reliability and cross-validation, to be described below. Some researchers characterize these techniques as positivist and quantitative, and will not adopt them. In the next section we try to show how they can be a natural extension of a logic shared by all researchers, of whatever stripe.

GETTING DOWN TO DETAILS: TECHNICAL ISSUES

All research is about details; the big picture of theory exists only insofar as the details of data create and support it. Discourse analysis differs somewhat in the kinds of technical issues that are important; these are quite different from, for example, the details of experimental research using questionnaires. Technical issues such as recording and transcription replace more familiar ones, such as the psychometric aspects of rating scales or the intricacies of factorial designs. In this section we consider choices of research design, reliability, recording, transcription, and some ethical issues. We continue to emphasize the broader theoretical assumptions that underlie particular methodological choices.

Research Design

A research design is simply an orderly plan for gathering and analyzing data, one that serves the particular goals of the researcher for a particular study. It is not necessarily or even usually an experimental design. What is crucial is that researchers give considerable forethought to the plans and goals embodied in their design decisions before acting on them, so that the time and effort to be invested in carrying them out are likely to serve their purpose. In our view, researchers should make decisions that fit their own goals and interests, not any particular ideology; questioning methodological dogma and divisions can lead to creative new options (see Bavelas, 1995). An examination of our group's research, for example, reveals a considerable heterogeneity of choices.

Inductive Versus Hypothesis-Testing Designs

As described above, one major choice to be made at the outset is between inductive and

hypothesis-testing designs; here we describe some of the more specific aspects of that choice. Anyone exposed to typical methods courses is likely to be more familiar with hypothesis-testing ("theory-driven") research, which is often described as the pinnacle of research design. Because of the status afforded it in some quarters, hypothesis testing is often the design that researchers choose first, for any topic. We do not subscribe to this "evolutionary scale" view of research design, especially when it relies on the natural sciences as a role model. A careful reading of the history of (and contemporary research in) life sciences such as biology reveals a strong foundation of painstaking inductive observation. However, design prejudice runs in both directions. Just as some experimentalists mistrust inductive research, some inductive researchers reject experimental or hypothesis-testing designs out of hand, primarily because of historical positivist associations. Our eclectic view is going to offend extremists on both sides, so we address our remarks to those who want to make up their own minds.

If we put preconceptions and received wisdom aside, what are the differences between hypothesis-testing research and inductive research? In hypothesis-testing research, the theory drives the design for gathering the data. Ideally, the researcher has a clearly formulated hypothesis, that is, a serious bet about what is going on and why. Multivariate statistical data dredging is not the same as hypothesis testing. The researcher has to develop a design that clearly anticipates all possible outcomes, including one that would support his or her hypothesis and others that would not. Only if the outcome can either advance *or diminish* the plausibility of the researcher's theory is there true hypothesis testing. A hypothesis-testing design demands an up-front commitment, and a great deal of experimental, quantitative, statistical research does not meet this standard. On the other hand, contrary to

a common antirealist criticism, experiments never attempt to (and cannot) “prove” that a hypothesis is “true.” Rather, experiments are one way of finding out which explanation of the data is more probable or which hypothesis is the best fit—at least until a better one comes along.

In inductive research, the data lead to the theory. Inductive research serves the goal of a researcher who, at a particular point, has a strong intuition that something new and interesting may be going on, which he or she needs to learn about. This approach may be an early stage in the research, or it may be the continuing preference of the researcher at any stage. The inductive researcher’s primary motivations is curiosity about the data. As noted earlier, no inductive researcher is free of a general framework of assumptions, but the ideal is to learn from the data and be prepared to have one’s preconceptions changed by the data. New ideas or entirely new frameworks are not going to come from the library; they will come from carefully observed data. There are some guidelines for embarking on this open-ended process (e.g., Bavelas, 1987; Wood & Kroger, 2000), which requires a good deal of faith in oneself and one’s ability to observe closely and to be fair.

The major objection to inductive research is a concern that the researcher will invent a pattern in the data whether one is there or not. That is, the valuable creative possibilities of this method must be weighed against the more mundane possibility of the researcher’s simply fooling him- or herself. However, logic provides an answer that many inductive researchers follow, formally or informally. Having observed and made inductive propositions based on observed data, most inductive researchers go on to seek confirmation of their conclusions in new sets of data. One design for formalizing this process is analogous to the statistical procedure of *cross-validation* in multiple regression. When approaching a new

set of data inductively, the researcher limits the analysis to a subsample of the whole (ideally, a randomly chosen subsample). Based on this initial inductive analysis, the researcher makes a commitment to what has been found and then is prepared to test it in the remainder of the sample. If the original pattern was random, it will disappear in the new data set. Depending on the outcome, a cross-validation strategy provides either a useful safeguard against the potential weakness of inductive research or a powerful demonstration of its validity.

Returning to the choice between inductive and hypothesis-testing designs, one possibility is to use both, at different times. In our own research, we often follow a cycle of, first, going to the data to learn, then cross-validating on a larger data set, and then experimentally testing the hypotheses developed in the inductive phase. The challenge for all researchers is to practice tolerance toward others who make different choices. In the end, all of us must be able to provide precise answers to these questions: What are you claiming? How do you know?

Agreement Among Analysts (Reliability)

It is hard to believe that the ordinarily boring topic of interanalyst (also called interrater, interjudge, and interobserver) reliability is as controversial as it is in the field of discourse analysis. Some researchers reject all discourse analysis on the grounds that it is not reliable or “objective,” whereas others reject reliability procedures as futile efforts to establish “truth.” We discuss both of these positions here.

Experimental researchers, especially those in psychology, place a high value on objectivity, in the sense that the researcher must not influence the measurement of events. (Readers will recognize that this is a strong realist stance, as described earlier.) To the extent that

discourse analysis focuses on meaning and not on physical actions, it must rely on interpretation by the analyst. In the view of some critics, all interpretation is intrinsically biased and subjective. Because the researcher is making interpretations, he or she is influencing the measurement, which therefore cannot yield objective data.

The answer to this criticism is that *all* sensory data are interpretive, including readings on a dial or thermometer and counts of physical movements. Certain measures are conventionally called *objective* simply because it is obvious that independent observers are very likely to agree: If each of us looks at the same thermometer at the same time, presumably we would have 100% agreement about the temperature. However, there could be disagreements due to different viewing angles, differences in eyesight, or just plain error. Early astronomers learned that their own reaction times affected the measurements they made and had to be compensated for; this did not stop astronomy from becoming accepted as an objective science. If one accepts the interpretive role of the researcher in all measurement, then the dichotomy between objective and nonobjective measurement becomes, instead, *a continuum of demonstrated agreement between independent observers*, ranging from 100% to much lower or even nonexistent agreement. When independent analysts agree highly, then the fear of interpretive bias is unfounded, and any such measure must be accepted on equal footing with other, more conventionally objective measures.

However, a different group of researchers rejects the pursuit of interanalyst agreement for other reasons. Some simply feel that the original analyst must be correct, by definition, or that the skilled intuition of an experienced analyst is not replicable. Others, especially antirealists, see any attempt to establish interanalyst reliability as an effort to establish the "truth," and they reject the entire realist

epistemology—the belief that there is a reality independent of the observer. This is not an unreasonable reaction to the strong pro-objectivity stance outlined above; the two positions are mirror images of each other. And if, as argued above, all measurement involves at least some interpretation, then the pursuit of an objective truth free of interpretation is indeed a misleading, even useless, exercise.

We would like to articulate an alternative reason for and use of interanalyst agreement, one that does not claim that it establishes the truth of a measure or an interpretation. One simple way of debunking that criticism is to point out that there is no standard of truth in the calculation of interanalyst reliability. The usual calculation for qualitative data is simply the number of agreements between analysts divided by the number of their agreements plus disagreements. For the rarer quantitative measures, agreement is calculated by correlation, or *r*, between analysts' decisions, but the same point holds: The analysts are being compared only to each other, not to some independent "correct" standard. The question that a reliability figure answers is simply, How well do analysts agree? There is no claim to the truth or correctness of what they agree on (which is conventionally called *validity*).

Stripped of the claim of truth, there is quite a different benefit to this kind of reliability. Establishing agreement among independent analysts requires the careful explication of what is being examined and how it is being interpreted. That is, achieving high agreement on complex interpretations of discourse requires careful and explicit description of the interpretive and reasoning processes. This requirement is as valuable as the goal of demonstrating agreement itself. In our experience, we always understand the phenomenon more clearly and deeply after we have done the hard and iterative work of describing (and debating!) it sufficiently to achieve agreement.

The extended definitions that are necessary for high agreement require clear statements of what the phenomenon is and is not; many, many examples; and a guided decision process. (It is often helpful to put the latter in the form of a decision tree, which articulates the interpretive reasoning as a series of nested decisions.) When new analysts can follow the process and agree, we know we are clear about the phenomenon we are studying, and this increased clarity also helps us in our responsibility to describe it fully in research articles.

There is a final, technical point we want to make about interanalyst agreement, for readers who decide to pursue it. In discourse analysis, unlike other occasions for interrater reliability, there are often two levels of decision: (a) *locating* instances where the phenomenon is occurring and then (b) a more specific decision about *what kind* of instance this one is. The first level is not necessary in, for example, questionnaire research, because the answer will be located where the question was asked. However, in naturally occurring language, the individuals structure their own discourse, usually for reasons that are very different from the researcher's interest, and much of what they say and do is not relevant to what the researcher is focusing on at the moment. So the researcher needs, first, to locate sites where relevant discourse is occurring. A concrete example will illustrate this process. Coates (1997) was interested in the kinds of attributions that trial judges make about what causes offenders to commit crimes—that is, in how judges discursively construct responsibility. The legal texts that Coates analyzed were the full judgments delivered at the ends of trials, so they contained a great deal of information unrelated to attributions. Therefore her first step was to locate, reliably, places in the texts where the judges were making attributions about the causes of the crimes (e.g., “due to his alcoholism”). In

the second step, she analyzed each of these located instances for the kind of attribution being made; a separate reliability was required for this analysis. (A detailed summary of the process our group uses for developing and assessing the reliability of new methods of analysis is available in Coates, 1998.)

Choosing and Recording the Data

We have two purposes in this subsection. First, we want to provide readers with several ideas about where to locate discursive data that will suit their interests—not an exhaustive list, but one intended to fuel readers' imaginations. Second, we discuss the options for recording the data for later analysis, which necessarily differ depending on whether the original discourse occurred in writing, in spoken form, or face-to-face.

Recording and Transcription as Theoretical Decisions

In a classic article, Ochs (1979) proposes that transcription itself is theory; we would add that recording embodies theory as well. That is, knowingly or unknowingly, researchers make important theoretical decisions when they decide how to record and transcribe their data. We review some of these theoretical decisions below, as well as some practical considerations.

Choices regarding how and what to record and transcribe are inevitably guided by assumptions and presuppositions about the phenomenon or process being studied. These assumptions may not constitute a fully articulated theory; they may not even be recognized as assumptions. However, the act of choosing to record or transcribe in a particular way inevitably makes some aspects of the discourse more salient while other aspects are unrecorded or left on the cutting room floor, so to speak. It is therefore essential that the researcher be explicit about these decisions,

making deliberate choices about what is to be included and excluded and ensuring that these choices are guided by and consistent with the goals of the research.

It will become obvious in the following that our research group's theoretical position is always that we should record in the same mode in which the participants are interacting, on the assumption that they will use all of the features available to them in any given mode. That is, if one is prepared to analyze only words, then one should study messages that were originally written (Bavelas, 1984; Bavelas et al., 1990, chap. 5). This reveals our assumption that participants select or omit certain behaviors because their receivers will or will not see or hear them; for example, they will use voice quality when they know it will be heard, but will use other alternatives in writing. Many other researchers have different views of communicators and communication and would therefore disagree with our position and make other decisions; their assumptions and rationales should be equally explicit.

We want to emphasize here the advantages as well as the limitations of any recording or transcribing decision. It would be possible to misread what follows as our suggesting that, because all data are limited and fallible, no data are satisfactory, but this is very far from our position. In our view, all discourse is context specific. There is no easy source of "naturalistic" data in the sense of their being unaffected by the contexts in which they occur and the ways in which researchers choose to analyze them (Bavelas, 1984, 1995).³ The challenge is to understand these contextual and technical factors and to incorporate them in a creative manner into one's research. Understanding the contextual factors that affect the participants' communication can be a substantive gain as well as a methodological necessity. An understanding of how technical decisions such as those regarding recording

and transcription can affect the data and their interpretation is essential to the researcher's reaching either goal.

Textual Material

If the researcher has chosen to work with written or visual material (e.g., newspaper articles, e-mail messages or chat room exchanges, memos or letters, written legal judgments, media ads depicting nonverbal communication), it is fairly easy for him or her to obtain a printed copy of the entire text. Another potential advantage to this choice is that written data can often be rendered anonymous, so ethical issues such as the protection of the participants' identities are simpler, and participants may be much more likely to give their permission for use of the data. Also, some written data are in the public domain and require no permission at all for their use.

In approaching a printed record of written dialogues, it is important that the researcher remember that the *timing* of the participants' contributions has been lost. For example, between the times when they are writing e-mail or other correspondence, the participants are out in the world doing other things, and each returns anew to the previous message and his or her own reply. So, although the researcher can read the participants' messages in close sequence, he or she must remember (and preferably encode into the data) that the messages were in fact separated by time and many other events.

As Linell (1982) has pointed out, written language differs from spoken language (and especially from face-to-face dialogue) in timing and many other important respects; a summary of these differences is presented in Table 4.1. When individuals communicate in writing, it is important to remember that, even though the printed record of their exchanges may sometimes look like a record of face-to-face dialogue, there are crucial differences: For

Table 4.1 Differences Between Written and Spoken Language

<i>Written Text</i>	<i>Face-to-Face Dialogue</i>
<p>Is a persistent, static "object" It can be reread any time. It seldom requires a rapid response.</p> <p>Consists of discrete, separate symbols Words are easily separated. Text is organized spatially.</p> <p>Is relatively context-free It uses only words and punctuation</p> <p>The words are highly explicit. Text is monologue and solitary. There is no immediate reader. The writer and reader are in different places. Text must often be addressed to a general audience.</p> <p>Is acquired as secondary socialization Literacy is learned institutionally (in schools). It is taught with explicit, conscious norms. The norms are more standardized, with less variation.</p>	<p>Is ephemeral, "dynamic" It cannot ordinarily be reviewed. The participants must respond immediately, "on-line."</p> <p>Is virtually continuous Words and other acts merge. Dialogue is organized temporally.</p> <p>Is highly dependent on context It uses face and hand gestures as well as prosodic features. The words can be less explicit. Dialogue is a "social interplay." There is an addressee present. The participants are in the same setting. Dialogue can draw on the setting and the ongoing conversation.</p> <p>Is acquired as primary socialization Dialogue is learned interpersonally (at home). It is practiced rather than explicitly taught. The norms are freer, with more variation.</p>

SOURCE: Adapted from Linell (1982, pp. 5-10); reprinted from Bavelas and Chovil (2000). Copyright 2000 by Sage Publications.

NOTE: Some of the features of written text noted here do not apply to computer-mediated communication, especially if both parties are on-line at the same time.

example, the participants were usually not in the same social context or physical setting, and they may not have been responding only to each other (e.g., memos go to other recipients as well; newspaper editorials and letters to editors have larger audiences). Even the immediate participants may have been drawing on different memories or versions of what they previously corresponded about (or even of the messages they were currently responding to). They may have given more or less time to thinking about and writing or editing their replies. The way the recipient (or researcher) reads a reply may not be the way the writer "said" it; that is, the writer may have intended an emphasis on one word whereas, lacking

any auditory cues, the reader may assume an emphasis on a different word. Although the written version that the researcher possesses may be exactly what the participants wrote and read, it is important that he or she be alert to unwarranted assumptions about *how* they wrote and read their messages. Ideally, the record of their exchange should be annotated to remind the analyst constantly of these factors.

Real-time electronic exchanges (e.g., ICQ, chat rooms) overcome some of the above limitations, but only if they are videotaped (e.g., Garcia & Jacobs, 1999; Phillips & Bavelas, 2000). A printout alone cannot capture the precise timing of the exchanges and

in fact may even misrepresent the sequence in which responses were actually made.

Spoken (Voice-Only) Communication

There are many important settings where interpersonal communication occurs in voice-only dialogues. The best example is a telephone conversation; conversation analysis began with Harvey Sacks's analyses of recorded telephone conversations, and this format continues to be a fascinating source of data (e.g., Hopper, 1992). Other examples include answering-machine or voice-mail exchanges and radio call-in programs. We have used telephone exchanges in the lab when we wanted to deal only with audible features of communication rather than with both audible and visible features (Bavelas et al., 1990, chap. 6). Participants in spoken records are more identifiable than those in written records (although less identifiable than those in videotaped records), so the researcher should obtain permission to use the data. In our experience, it is a good idea to use a multipart permission form that allows participants to consent to the researcher's analysis of their tapes and still withhold permission, for example, for the researcher to play the tapes in public presentations where someone might recognize the participants' voices.

Many of the same cautions given above for written communication still apply, especially if the exchanges examined are not real-time dialogues. Even for a telephone conversation, it is crucial that the researcher hear the exchange as itself and not as if it were a face-to-face dialogue, staying constantly aware of contextual factors that affect the participants (they are not in the same physical or social context, they cannot see each other's actions, and so on). With this awareness, and if the recording of a real-time telephone conversation is of the same quality as the participants heard, the

researcher can come very close to "being there." Indeed, one significant advantage of the telephone format is that in making the recording, the researcher has potentially captured the conversation as it originally occurred. In contrast, for example, speakers who leave messages on answering machines are responding in part to their own circumstances and even to the outgoing messages they just heard, which the researcher may overlook (e.g., if an outgoing message is humorous, unexpected, unclear, or offers limited choices, it may affect incoming messages in systematic and interesting ways).

Face-to-Face Dialogue

Arguably, most interpersonal communication occurs in real-time face-to-face dialogue, which, as Table 4.1 shows, has several unique features. Of particular relevance for the researcher's decision about recording is the fact that face-to-face dialogue has both audible and visible features, so arguably the best method of recording such dialogue is by videotaping. However, before we discuss this technique, we want to consider other possibilities. Again, the method the researcher chooses to use for the recording of data should follow from and be consistent with the research questions he or she is interested in answering and also with the broader theory that guides the research.

Most social interaction occurs too quickly to be recorded by hand (in writing) as it occurs. It might be possible for a researcher to record the frequency of certain obvious features if they do not happen too rapidly or too often (e.g., the use of particular words or phrases), but there is no possibility of accurately recording their immediate context or sequence, which most discourse analysts would consider essential. Only real-time recording will do.

Audio recording of face-to-face dialogue. The use of audio-only recordings in discourse analysis is common and offers several advantages. The equipment can be relatively inexpensive and small, making it portable and unobtrusive; convenient standard transcription equipment is available that allows repeated playback; and, as noted earlier, audio recordings provide a degree of anonymity for participants. However, one may need relatively sophisticated equipment to ensure that voice qualities are accurately reproduced, that all voices are equally audible, and that overlapping speech can be disentangled.

The central issue (and potential controversy) concerning the use of audio recordings of face-to-face dialogue is whether such recordings are necessarily incomplete—and not just for researchers whose primary interest is in nonverbal communication. Unlike telephone conversants, participants who interact in person are in the same physical and social setting and able to see each other as well as the same objects or events around them. Each can see how the other looks, both can refer to features of the environment that they can see, each knows when the other person is looking at him or her, both can see and interpret any nonverbal actions, and so forth.

There may be instances where the researcher's interest is entirely lexical, that is, focused on verbal or grammatical features. Or the researcher's theory may hold that any visible features (e.g., gaze, body orientation, hand and facial gestures, or the physical objects or events in the setting) are noncommunicative, redundant, or irrelevant. Thus the decision to audiotape a face-to-face dialogue is part of a clear theoretical position and must be recognized as such. If the phenomenon or process under study can occur only audibly and could not be affected by what the researcher cannot see, then the use of audio recording is a good option. We offer several

cautions, however, about accepting this assumption immediately.

First, in face-to-face dialogue, the participants often use deictic expressions, such as "over here," "that one," or "like this." In such cases the words are insufficient, because they were intended by the speaker to be supplemented by a visible action such as looking, pointing, or gesturing.

Second, the meaning of a polysemous word can be specified by a nonverbal demonstration. In Kendon's (1985) example:

I have a Minolta SLR [still-photo] camera, and whenever I refer to this in my family I always refer to it as "my Minolta." Recently, I acquired a Minolta super-8 movie camera. Consequently the word "Minolta" became ambiguous, for it could refer to either [camera]. In the course of a conversation with my son—soon after this new camera had been acquired—he said to me: "You could do it with yours, your Minolta." As he said "Minolta" he lifted his hands up, thumb and forefinger of each hand extended at right angles to one another and held on either side of his face, thereby modeling the action of holding a [still-photo] camera. . . . By doing this he disambiguated "Minolta," clearly indicating that it was the SLR he was referring to and not the movie camera. (pp. 225-226)

In this case, the hand gestures specified the meaning of the word. In other cases, the speaker may complete a verbal phrase entirely with a gesture or facial display rather than finding the word ("mixed syntax"; Slama-Cazacu, 1976), so that an observer needs both parts to understand the utterance. Kendon (1985) describes a host who said to his guest, whom he needed to drive home,

"Last night I had more coffee than usual . . . and I didn't sleep well, so maybe we oughta /GESTURE/." In this gesture he placed his two extended index fingers side by side and then extended both arms away from himself

and upwards in the direction of the door. He thereby clearly indicated that he and [his guest] should leave. (p. 224)

Third, some aspects of communication are typically not put into words. In multiparty interactions, whom the speaker is addressing (and who is attending to the speaker) is typically indicated by gaze, rather than verbally (Vertegaal, 1998). Finally, an audio recording will not capture what happens in the ubiquitous (auditory) pauses. A "pause" on audiotape is only a verbal pause. It is not likely that the participants were momentarily frozen in time, doing nothing; they may have been smiling at each other, gesturing, avoiding each other's gaze, or engaging in any number of other communicative acts. Researchers who interpret (auditory) pauses as, for example, hesitation or reluctance might have reached entirely different interpretations if they had worked from video recordings. (As will be seen below, we are by no means suggesting that a video recording misses nothing.)

The reader may appreciate by now why we have proposed that this issue is both theoretical and potentially controversial. Researchers who insist on videotaping face-to-face dialogue (as our research group does) often hold the theoretical position that visible features such as hand and facial gestures or gaze are an integral part of communication (Bavelas & Chovil, 2000). Researchers who prefer audiotapes often hold the theoretical position that these visible features are not so important as to justify the expense and inconvenience of video recording. We obviously cannot seek to resolve this issue here, but we suggest two guiding principles. First, the theoretical choice should be explicit and considered. Researchers who choose audio-only recording should explain in their research reports their underlying theoretical position and rationale as it applies to the particular studies at hand; the same burden falls on proponents of video. Second, many of the issues that guide these

theoretical choices could be resolved empirically. Much more research is needed that compares audio-based and video-based analyses of the same data. Those who advocate video recording should support their position by showing empirically that it matters. For example, we found in our own work that speakers often made certain gestures (*interactive gestures*) that elicited responses such as back channels from the listener, yet 80% of these gestures were completely nonredundant with speech (Bavelas, Chovil, Coates, & Roe, 1995; Bavelas Chovil, Lawrie, & Wade, 1992). That is, there was no verbal indication of the speaker's action and meaning, so the speaker's influence on the listener's response would be ignored, inexplicable, or spuriously interpreted from an audio-only recording. A later study demonstrated the interaction between speaker gaze and listener responses (Bavelas, Coates, & Johnson, 2002; this article is accompanied by a video on CD that lets the reader see the effect).

Video recording of face-to-face dialogue. In most of this subsection we discuss issues related to researchers' making their own video recordings. We want to note, however, that researchers who find that this is not possible, or who want to examine wider ranges of contexts than are directly available to them, may want to consider the possibility of analyzing documentary films. For example, the National Film Board of Canada specializes in high-quality documentary films, hundreds of which are available through the board's Web site at www.nfb.ca. We have also used training or demonstration films of psychotherapy because of the ethical problems of filming actual sessions (Bavelas, McGee, Phillips, & Routledge, 2000; Phillips, 1999).

It is important to say at the outset that researchers who study videotapes should have no illusions that viewing such recordings is the same as being there. As we note below, even when a video recording is made with the best

equipment, it is a smaller-than-life, selective, two-dimensional image that cannot in any case capture everything the participants could perceive (e.g., temperature, smells, and sights and sounds out of range of the recording equipment).

Video recordings also present researchers with the most challenging ethical issues, because participants are clearly identifiable to anyone who knows them. If the participants' facial features and voice qualities are not of interest, they can be electronically scrambled, but this is usually not the case. In our own research, we use a multipart participant permission form that lets each participant (after having viewed his or her tape) give or withhold permission separately for keeping the tape at all, analysis by the research team, viewing by audiences at other universities or at conferences, viewing in classes at our university, and any other uses we can reasonably anticipate (e.g., on our Web site). Then we transfer the coded permission status to all copies of the tapes.

One potential ethical decision, whether or not to hide the camera in the first place, is becoming a nonissue. With more experience in videotaping interaction, researchers have discovered that filming openly does not produce "artificial" data. For example, Goodwin (1981) films openly in the field, as we do in the lab. Certainly, presenting the camera as a non-threatening aspect of the study is essential, but we also have popular technology on our side: Most participants are now used to being videotaped in banks, stores, and airports, and many have their own camcorders.

Researchers who choose to record on video must consider many factors prior to collecting the data (Goodwin, 1993). First, they must choose a format to record in. Popular choices are VHS, SuperVHS, 8mm, and digital. Analog cameras and camcorders are relatively cheap. Digital video is more expensive, but it offers improved image quality, does not degrade with repeated viewing, and provides

more options for later storage and analysis. In any case, a permanent time signal on the tape is invaluable for later locating and identifying segments.

With whatever equipment, camera placement is an important decision: What you see is what you get. A video recording will include only the view and focus the researcher selects. Studies of social interaction usually require that the behaviors of both participants be captured by both lens and microphone. (Choosing to film only one of the participants would be a major theoretical decision.) The field researcher is usually limited to only one camera, which must capture everyone of interest; this probably means a fixed perspective and no close-ups. If the participants are moving around, the camera must track them or be set for a wide-angle shot. When there is a choice of focus, the researcher must usually choose, for example, between being far enough away to see hand gestures and being close enough to see facial expressions.

In the lab, it is possible to use more than one camera; the shots from two or more cameras can be configured and fed onto one split-screen videotape by a special-effects generator or "splitter." It is also possible to seat the participants in preselected places. We will illustrate some of the possibilities with a two-person interaction. With two cameras, the researcher can capture a front view of both participants as they looked to each other, by seating them almost face-to-face (but not perfectly, so they do not block each other's cameras) and placing the cameras opposite each other, behind each participant. This configuration aims a camera over the shoulder of each person, directly at the face of the other, so the viewer sees both individuals as they looked to each other. Then, choosing a vertical split produces a recorded image that looks as though the participants were side by side, which is something the analyst must adjust to. (It is also possible to produce a two-way split-screen effect with just one camera by placing a mirror

behind one of the participants, provided this does not distract the other participant.) If there is a third camera available and a suitable splitter, the third camera can capture both participants from the side with a wide-angle lens. This third image can then be split onto the bottom of the recorded image, where it creates a pseudo-three-dimensional perspective, in that the analyst can see the participants' spatial movements, including hand gestures and their movements toward or away from each other. It can take an analyst a while to get used to this view and be able to reconstruct from it mentally the three-dimensional interaction; it is certainly not a literal recreation of the interaction.

Finally, whether recording by audio or video, researchers must remember the practical wisdom that all of us have learned the hard way. First, set up the equipment and try it out, from a trial recording through analysis of that recording. It is much better to find out that you cannot analyze one trial recording (because the sound is inaudible, the image is too small, you did not include something that had not seemed important at the time, and so on) than to find out after having recorded all of your data. And second, technophiles and technophobes alike can solve the vast majority of equipment problems by asking three questions: Is it turned on? Is it plugged in? Is it connected?

Transcribing

Why transcribe? There are several reasons that researchers need to consider separately before embarking on this time-consuming activity. The first is ease of access. Consider that, with textual materials (such as e-mails or letters), the analyst can work directly with the printed data and can therefore easily study any part of the data in any order and in any time sequence. Because written transcripts of non-textual data (e.g., telephone conversations)

provide similar and familiar ease of access, they are often more convenient to use than audio or video recordings. That is, perusing audio or video recordings and locating particular segments can be awkward and time-consuming, so many researchers prefer to work with transcripts instead. Note, however, that the advent of digitization may be reducing the transcript's advantage of convenience because the linear viewing constraint does not hold. With a digitized video (even of an originally analog recording) and appropriate software,⁴ it is possible to go immediately to specified segments and to view them repeatedly with a simple command. Segments that seem to demonstrate the same process or phenomenon can be stacked up together for comparison. (Digitized video is also easier to transcribe, because the video image and word-processing program can be tiled side by side on the computer monitor, rather than using several pieces of equipment.)

The other reasons for transcribing audio or video records are increasingly theoretical, in that they involve assumptions (either implicit or explicit) about the nature of the discourse. The researcher may simply produce a verbal transcript because he or she implicitly assumes that words are the significant feature of communication. Or the researcher may be explicitly organizing the data according to his or her theoretical interests, and a specific kind of transcription is the first step. In either case, the effects of transcription can be made clear by an analogy with formulations in conversation (in which one person summarizes or describes what the other person has just said; Garfinkel & Sacks, 1970). Heritage and Watson (1979) point out that formulations inevitably *preserve* something of the original statement, *delete* part of it, and *transform* other parts. A transcription is like a formulation; it preserves some aspects (e.g., the words), deletes others (e.g., visible features), and transforms others (e.g., prosodic features may be represented in

words or symbols). The challenge to the researcher is to be aware of these changes and to be explicit about his or her rationale.

Many established transcription systems exist (e.g., Jefferson, 1985). The method the researcher chooses to use in transcribing the data—whether a method developed by someone else or by the researcher him- or herself—determines what will be preserved, what will be ignored, and how the data are transformed. Choosing a transcription method or creating one is therefore an important theoretical decision and should be treated as such. Several papers have been written on transcription (e.g., Edwards, 1993; Ochs, 1979), so we cover only the main considerations here, organized into content (what to include) and format. As you consider the following, keep in mind that *not* transcribing is also an option.

What to Include?

First, the researcher must consider his or her own research goals. Transcription is an extremely time-consuming process—an hour or more for each minute of dialogue would not be unusual—so it is wasteful to transcribe more (or less) information than one needs. Most researchers transcribe all of the words spoken, but practices vary. If a researcher is interested only in where listeners' responses occur (Bavelas, Coates, & Johnson, 2000), for example, he or she might transcribe all of the listeners' responses from the videotape but transcribe the speaker only around the points where listener responses occur. Such a transcript would be unusable as a version of the speaker's contribution, but that is not its purpose.

Whether one is working with an audio or video recording, the prosodic and other paralinguistic features are available to be included. Many researchers, for example, are interested in phenomena such as intonation, stress, pauses, and timing of exchanges (for a

review, see Dressler & Kreuz, 2000). The transcripts these researchers create therefore include precise description and timing of these phenomena (e.g., "u:h" means an elongated sound). Researchers working from a functional perspective, on the other hand, will emphasize the rhetorical or meaningful impacts that behaviors have in a conversation. These researchers will be less interested, for example, in the absolute duration of a pause than in an interpretive evaluation of what that pause means in a conversation (Gumperz & Berenz, 1993), so a pause might be transcribed with an annotation marking it as an indication of uncertainty.

With a video record, the researcher has a great deal more to decide about, including how to transcribe hand gestures, facial displays, gaze direction, and postural and limb positions. If these are included in the transcript, how should they be represented? One important choice is between a purely physical description and a meaning-based description. For example, in Kendon's "Minolta" example above, he first describes the physical actions and then adds information about what those actions were meant to depict ("holding a [still-photo] camera"). Ekman and Friesen's (1978) Facial Action Coding System (FACS) describes facial expression by referring to the muscle groups involved—a purely physical description. In contrast, Chovil (1989, 1991-1992) has developed a meaning-based system in which the analyst describes what the facial display is depicting (sadness, skepticism, and so on). It is worth pointing out that Chovil's data demonstrate higher interanalyst reliability than the FACS. The same can be true for interpretive approaches to gestures (for further description of meaning-based systems for describing nonverbal acts, see Bavelas & Chovil, 2000, pp. 175-183). This agreement is encouraging because such approaches are more suited to the goal of discourse analysis, which is to study communication at the level of meaning.

Format

The format of the transcript will influence the analysis carried out by the reader. Transcripts should be formatted so that they are easy to read and the appropriate information can be extracted quickly. To make transcripts readable, the researcher should consider both the visual prominence and the spatial arrangement of the data (Edwards, 1993). Visual prominence refers to how the data appear, such as the use of italic or bold-face type, underlining, and font size. Using any one or a combination of these tools can give prominence to particular elements of the transcript. In addition, data elements can be positioned spatially on a transcript so as to improve both readability and efficiency.

Note that the spatial format of the transcript also reflects often unrecognized theoretical assumptions. For example, because of Western writing conventions, behaviors for which descriptions are placed either to the left or above other descriptions of behaviors in a transcript are seen as occurring before (and potentially as causes of) behaviors transcribed to the right or below them (Ochs, 1979).

Several similar features can be found across different transcription systems. First, *related events* tend to be located near each other. For example, descriptions of gestures are usually located near the speech events with which they co-occur. Similarly, transcription systems that include prosodic information (e.g., the London-Lund Corpus; Svartvik & Quirk, 1980), such as prominent syllable stress, will put that information with the relevant syllables. Second, visual prominence is used to *separate* qualitatively different data. Transcribers' comments are usually bracketed or presented in font that is different from that used for the data. Third, as noted above, *temporal relationships* are usually presented in a left-to-right and top-down format, so that earlier events are presented before later events. Similarly, explanatory material is placed at the beginning, where it frames all that follows.

Although there are many similarities among different transcription systems, there are also many differences, reflecting the differing goals, theoretical assumptions, and sometimes unrecognized presuppositions of different researchers. For example, an important formatting choice concerns how to arrange speakers into turns. Notice that this format presupposes that alternating speaking turns are a basic unit of dialogue, which makes simultaneous or overlapping speech problematic and ignores the simultaneous, noninterruptive facial expressions and nods of those who are not speaking. There are at least three different arrangements used in existing transcription systems: vertical, column, and partiture (Edwards, 1993), as shown in the following examples (which come from Tannen, 1989, p. 60). The *vertical* format is perhaps most common. It is similar to the script of a play, but usually with overlapping speech shown in aligned square brackets:

- A: Like he says that he says that American[s]
 B: [Yeah]
 A: or Westerners tend to be u:h think of the
 body and the soul as two different th[ings,]
 B: [right]

As Ochs (1979) points out, this format has several effects: It encourages the reader to link adjacent utterances and to see each as successively contingent on those preceding it; it also tends to make the reader see participants as equally involved and influential in the interaction.

When the researcher wants to highlight the influence of one person on the other, a *column* format may be more appropriate:

- | Speaker A | Speaker B |
|--|-----------|
| Like he says that he says
that Americans . . . | Yeah. |
| or Westerners tend to be u:h . . .
think of the body and the soul
as two different things. | Right. |

In this format, the speaker on the left is given prominence over the speaker on the right; thus Speaker A may be implicitly seen as initiating the behaviors of Speaker B. This format does not provide an easy way to indicate precisely when the speakers overlap, as they often do in spontaneous dialogue. However, it might be suitable for capturing asymmetries in dialogue or for depicting parallel speech (e.g., when both are trying to get the floor or are having a shouting match).

Partiture formats (Tannen, 1984) are designed to capture interaction in which there may be many instances of simultaneous behaviors. They are similar to multipart musical scores and preserve both timing (horizontally as opposed to vertically) and the assumption of conversational equality:

- A: . . . American[s]
 B: [yeah]
 A: or Westerners . . .

This format is continued, with line breaks as needed.

Another important choice the researcher must make when creating a transcript is where to put visible elements of the dialogue, such as hand gestures and facial displays, if indeed they are systematically included. Some systems separate the visible elements by placing them in their own column on the right-hand side of the transcript, roughly parallel to the spoken words in the left column. This format has several effects: First, it imposes a theory of verbal and nonverbal (audible and visible) acts as separate channels and gives words priority by placing them on the left. Second, the relationship between the two is lost. For example, the use of a gesture to supplement words is less clear, and the precise verbal context of the gesture may be lost.

Researchers who take an integrated view of audible and visible acts would use a format that integrates the verbal and the visible and also preserves their timing as precisely as

possible. For example, one can underline the words that overlap the gesture and describe the gesture in brackets underneath. The following example (adapted from Bavelas, 1994, p. 207) also illustrates meaning-based description of the gestures; the speakers are discussing the Royal Canadian Mounted Police (Mounties, or RCMP):

- A: Is—the only RCMP in the area
is—what? Colwood or?
 [draws jagged circles,
 as if on a map]
 B: Well that's, that's a, a
regular detachment in Colwood,
 [draws tighter circle]

A final, practical warning: The transcription process takes a toll on audio or video records. Repeatedly playing, pausing, and rewinding an analog tape will soon degrade its quality. Therefore, researchers should always work from copies, using the originals only to make new copies. As noted above, one advantage of digital records is that they will not degrade; however, it is still wise to make at least one copy.

New Technologies

Although most of us develop or adapt our own systems for managing our data and coding social interactions, commercial software systems designed specifically for these tasks are available. One of these, Noldus Observer Pro, is a system for collecting, analyzing, and presenting observational data (see the Web site at www.noldus.com). It can be used to record behaviors such as postures, movements, positions, and facial expressions. The analyst uses key presses to log events and the times at which they occur. This system makes it possible for the researcher to work directly from the video record rather than from a written transcript of it. It also allows the analyst to add notes and comments that are then stored with

the video data. The system provides facilities for descriptive statistics, lag sequential analysis, and reliability analysis. The data can be exported into spreadsheets, databases, or statistical packages. The Noldus Observer package (which costs several thousand dollars for the software alone) can be purchased either as software only or as part of a complete hardware/software bundle that includes analog or digital cameras, VCRs, video capture cards, and time-code generators. Transana, on the other hand, is a free tool for transcription and qualitative analysis of videotape (see the Web site at www2.wcer.wisc.edu/Transana/index.html).

Several attempts have been made, such as the Text Encoding Initiative (TEI), to introduce guidelines for electronic text encoding and interchange (see the TEI Web site at www.tei-c.org). The goal of these systems is to create a common encoding scheme for transcripts and other text, that is, to reduce the diversity of existing encoding practices and to encourage the sharing of data, as well as to make it possible for the data to be read by machines. The TEI is one of the only systematized attempts made thus far to develop a fully general text encoding model and encoding conventions. Because these guidelines are meant to be applicable over a wide variety of data, they are necessarily restrictive in terms of what they permit the user to do, as well as being time-consuming to learn. We would expect the same trade-off to apply to any new system—that is, the user must choose between the potential benefits of a common system and its methodological constraints, which, as we have emphasized throughout, also impose implicit theoretical assumptions.

WHERE TO FIND MORE

To return to our introductory metaphor, we have traveled through a lot of territory in the far-flung field of discourse analysis and have stopped to look briefly at many of its features,

from theoretical and philosophical debates to technical considerations. As on any tour, we could have stayed longer in each place, and interested readers may want to know more than we have provided here or in our references. Van Dijk's (1997a, 1997b) two-volume introduction covers the many kinds of discourse analysis in much more detail, and each chapter has a list of further readings on its topic. Finally, many journals (such as *Discourse Processes*, *Discourse and Society*, *Research on Language and Social Interaction*, and the *Journal of Language and Social Psychology*) include studies that have used some form of discourse analysis. Interested readers will find that locating such articles in their own areas of interest is an excellent way to continue the tour and to decide where (and if) they want to go on their own.

NOTES

1. Many readers will be startled to see data from a psychology lab included as "naturally occurring." However, we agree with Schegloff (1992, p. 116) that, as long as the participants are not confederates and are interacting spontaneously, even within an assigned task or topic, their discourse cannot be arbitrarily dismissed because of the context in which it occurred.
2. It is undoubtedly because of the inductive preferences of many discourse analysts that they eschew the term *coding*, which has implications of an a priori system that the term *analysis* does not.
3. Ironically, the term *naturalistic* actually means "as if natural" (e.g., a naturalistic painting).
4. We are currently using the software Broadway (www.b-way.com) because of its higher-quality AVI format and because it allows us to create "loops," that is, to isolate and replay selected segments easily.

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