# DISCOURSE,

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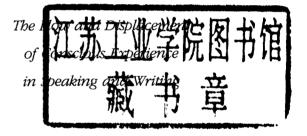
## AND TIME

*The Flow and Displacement*

*of Conscious Experience*

*in Speaking and Writing*

# DISCOURSE,

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*The Flow and Displacement
of Conscious Experience
in Speaking and Writing*

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For Marianne

# Contents

*Preface*

Quite a few years ago I wrote a book whose purpose was to show how semantic considerations might form the basis for understanding grammar (Chafe 1970). It was a book that represented a certain culmination of my interests at the time, and subsequently I began to pay more attention to discourse—language beyond isolated sentences—but also to psychology. It had become clear to me that we can never really understand language without understanding the human mind, and vice versa. At that time I was especially interested in exploring the relevance to language of mental imagery, memory, and consciousness, and for a while I planned a book that would pull those topics together. Somewhat later, and for somewhat independent reasons, I also became interested in relations between spoken language and written language. The present book eventually materialized as an attempt to combine certain parts of these several interests into a single work.

People in the diverse fields and subfields of academia are trained to value certain ways of doing things. Each group has its own standards for responsible research that limit both the kinds of data it looks at and the kinds of theorizing it accepts as valid. Researchers are very different from one another in these respects. Reading what others have had to say about language and the mind, I have come to appreciate the extent to which varied training and experience predispose investigators toward diverse methods and findings. There are many linguists, for example, who believe that a particularly good way to advance our knowledge is to construct sequences of English words, some of which appear to fit the language better than others, and then to attempt to explain these "data" by manipulating abstract constituent structures. That kind of research is foreign to my own experience, and I will have almost nothing to say about it here. Psychologists, quite differently, spend most of their time conducting experiments. While I can understand the allure of that approach, its contribution to this work will be much smaller than some will find appropriate. There are still others who like to build computer models, an activity that is understandably seductive, but for me it lacks the special joy that comes from being in love with a constantly expanding body of natural observations.

My own approach owes much to Franz Boas, Edward Sapir, Floyd

Lounsbury, and others whose understandings of language (and ultimately the mind) were influenced by their contacts with the indigenous languages of the Americas. This tradition has emphasized the recording and analysis of natural language data. As a student I was taught how one could begin with tape recordings, transcribe them with all possible care, and—in collaboration with people who spoke these languages, having recourse also to one's own experience and insights—try to make sense of them in terms of grammatical structures, meanings, discourse processes, and the nature of the mind. This book grew out of an analogous procedure applied largely to my own language, with one chapter providing a brief foray into a language the reader will find less familiar.

I confess to a certain distaste for doing "normal science" in the sense of Thomas Kuhn (1970) and to finding more pleasure in exploring new ground. Working with little-known languages offers new discoveries at every turn, and that is one of the great appeals of such work, but probing the mysteries of language and the mind provides equally exciting challenges. For me these two activities have been inseparable parts of a single larger enterprise.

Whatever their background may be, readers of this book will find that it is not in the mainstream of anything. I think that it is all to the good, having always had a bias against mainstreams. Readers who have a problem with this attitude should perhaps reexamine their own commitments to whatever doctrine it is they believe in, for surely our quest for understanding cannot, in the long run, be profitably forced within the boundaries of any single true religion. Anyone who thinks we are close to final answers, or that we know how to find them, must surely be mistaken. This work suggests some things I hope will turn out to be of value as we grope, in our very different ways and by no means in a straight line, toward an understanding that may, if we are lucky, improve.

## Acknowledgments

pletely approve of the final result, just as experience has taught me that I myself will soon wish I had said some things differently.

## *Symbols Used in Transcriptions of Speech*

| | |
|---|---|
| ' | primary accent (a pitch deviation accompanied by loudness or lengthening) |
| ` | secondary accent (a pitch deviation without loudness or lengthening) |
| .. | a brief pause or break in timing |
| ... | a typical pause (up to one second) |
| ... (.36) | a measured pause |
| = | lengthening of the preceding vowel or consonant |
| , | a terminal contour which is not sentence-final |
| . | a sentence-final falling pitch |
| ? | a yes-no question terminal contour |
| @ | laughter |
| boldface | loudness (shown only in chapter 5) |
| [ ] | a segment of speech that overlaps with another segment |
| ~ | preposed to a constructed rather than observed example, but one judged likely to occur in real language |
| ~~ | preposed to a constructed example judged unlikely to occur in real language |

# PART ONE

*Preliminaries*

# I

## Introduction

*As we take, in fact, a general view of the wonderful stream of our consciousness, what strikes us first is this different pace of its parts. Like a bird's life, it seems to be made of an alternation of flights and perchings. The rhythm of language expresses this, where every thought is expressed in a sentence, and every sentence closed by a period.*

(William James 1890, 1:243)

*Man is apparently almost unique in being able to talk about things that are remote in space or time (or both) from where the talking goes on.*

(Charles Hockett 1960, p. 90)

The two quotes above, though written at different times in different styles for different purposes, nevertheless combine well to set the stage for a work that brings together the notions of consciousness and language. James was intrigued with the observation that consciousness is in constant motion, a motion which, he suggested, is reflected in language. Hockett was concerned with the "design-features" that differentiate human language from the communication systems of other animals, and he noticed that humans, more than other animals, often communicate about things that are displaced from the immediate situation of language use. I doubt that he would object to my extending his observation to include the human ability to be *conscious* of things that are absent from the immediate environment, whether language is involved or not.

If language and consciousness come together in both these ways, both ways are also related to time. In the first case the time is that in which language is produced: the constant flights and perchings of consciousness and their reflection in the rhythm of ongoing language. In the second case the scale of time is larger, separating the immediate situation of language users from the displaced time and space of the experiences they talk about. But since those experiences are also in the talker's consciousness at the time of talking, Hockett's insight adds depth to James's. The flights and perchings, in other words, need not be limited to awarenesses of what is present at the moment, but often have their bases in distal experiences that are sometimes remembered, sometimes imagined.

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The two quotes have in common the fact that their insights have not been followed up. Thus there is room for a book of this kind. The twentieth century has focused its attention on matters quite remote from relationships between language, consciousness, and time. Yet there has always, of course, been an interest in the nature of language, and lately there is a reawakening interest in consciousness. If I am right, there will sooner or later be a broader recognition of the fact that neither language nor consciousness can be adequately understood until we succeed in combining them within a more comprehensive picture in which the nature of each will shed crucial light on the nature of the other. This book is an initial sketch of what such a picture might look like, or, at the very least, it is an attempt to demonstrate why constructing such a picture would be a good thing to do.

As long as I can remember, I have been fascinated by the way ideas come and go in my own consciousness. I have marveled at my ability, apparently shared with others of my species, to have thoughts that have nothing to do with what is going on around me, by the ability of language to capture and communicate those thoughts, and by the different ways both speaking and writing allow my consciousness to participate to some degree in the consciousnesses of others. This book is an attempt by one curious human being to understand these and related matters a little better. But also, because I am a professional linguist, I have a special interest in understanding how both the flow and the displacement of conscious experience affect the shape of language, and conversely how language can help us better understand these basic aspects of our mental lives.

It is impossible to pursue these concerns very far without recognizing their dependence on the various ways language is used. Conversing, for example, is in quite obvious ways different from writing, but writing itself has many different varieties. Of major interest here will be the fact that both the flow of consciousness through time and the displacement of consciousness in time and space have different natures and interact with language in different ways, depending on whether one is talking with one's friends or, for example, writing a book. We need, therefore, to take varieties of language use into account. I will focus here on conversational language and a few varieties of writing. I regret that space limitations have forced me to neglect the varied genres of so-called oral literature, whose important contributions to the total picture will have to be treated elsewhere.

In its major outline, the book is organized as follows. In chapter 2 I set forth certain beliefs with regard to what it means to "understand" the workings of language and the mind. Such a chapter is necessary because the world is at present full of conflicting views of "science," many of

which are not receptive to the approach I follow here. I try to justify that approach. Chapter 3 confronts the vexing question of what consciousness is and points to certain properties, both constant and variable, that consciousness has. I also speculate on how much of our mental life lies outside of consciousness. Chapter 4 reviews some of the relevant characteristics of speaking and writing, and justifies the treatment of conversational language as the basic use from which all others are deviations. These four chapters of part 1 constitute a lengthy but necessary prelude to what follows.

Part 2 then explores the flow of consciousness and language in conversation. It is based on three major sources of data. In 1980 and 1981 Jane Danielewicz and I recorded twenty dinner-table conversations for the purpose of comparing the kind of language used in them with three other kinds of language—informal lectures, personal letters, and academic writings—produced by the same individuals. Our aim was to investigate differences between the two kinds of speaking and the two kinds of writing (e.g., Chafe and Danielewicz 1987). These data were analyzed to some extent on the basis of findings derived from the earlier Pear Stories study, in which speakers of a number of different languages saw a film and told what happened in it (Chafe 1980). Although the language in that earlier study was not conversational, it provided a first entry into some of the ideas developed here.

The dinner table conversations had two drawbacks that limited the generality of conclusions drawn from them: they involved a relatively homogeneous sample of speakers (professors and graduate students), and the portions of them that were intensively analyzed consisted largely of personal narratives. Thus, a more recent effort was made to deal with a more socially diverse group of speakers and to include more diverse interactions. This recent sample consisted of excerpts from five conversations among adult interlocutors of varied occupational and regional backgrounds: farmers, a factory worker and car salesman, missionaries, housewives, and students. The portion of each conversation that was analyzed both qualitatively and quantitatively in depth was approximately two thousand words, making a total of about ten thousand words on which certain quantitative statements are based. This corpus is a small one, but it is large enough for some of the purposes of this work. It is supplemented by findings and examples from the dinner table corpus of more than twenty thousand words as well as from the Pear Stories. Certainly this study is only a beginning, and I hope and expect that the future will see it extended to more varied and extensive materials.

To return to the organization of part 2, chapter 5 begins by identifying three states that information can have within the mind—*active, semiactive, and inactive*. It then focuses on a basic unit of verbalization, the *intonation*

*unit,* interpreted as the expression of information in active consciousness. It ends by exploring the relation between intonation units and *clauses.* Chapter 6 uses the three states of activation to explain activation *cost,* often spoken of in terms of *given* and *new* information, to which is added a third category that I will call *accessible* information. Chapter 7 deals with the functional basis of grammatical subjects, interpreted as the expression of *starting points,* and introduces the *light subject constraint,* a limitation on what can occur as a subject in terms of activation cost and importance. Chapter 8 discusses *identifiability,* the functional basis for what is often called *definiteness,* with attention given to the relation between identifiability, activation cost, and starting points. Chapter 9 explores the hypothesis that intonation units are limited to the expression of one new idea at a time, reflecting a fundamental temporal constraint on the mind's processing of information.

Chapter 10 deals with discourse *topics* in the sense of coherent chunks of semiactive information, and two examples of topic development are discussed in detail. Chapter 11 explores the manner in which topics form a hierarchy, with basic-level topics occupying an intermediate position between *supertopics* and *subtopics.* This discussion provides a functional basis for understanding the elusive ontology of the *sentence.* Chapter 12 turns to a very different kind of language, the American Indian language Seneca, in a provisional attempt to explore which of the matters discussed earlier are universal, which language-specific. Chapter 13 compares the ideas developed in part 2 with a few of the best-known alternative approaches to similar matters: the Czech notion of functional sentence perspective, Michael Halliday's functional grammar, Herbert Clark and Susan Haviland's given-new contract, Ellen Prince's taxonomy of given-new information and related hierarchies, and Talmy Givón's view of grammar as mental processing instructions. Chapter 14 concludes part 2 with a brief *divertimento* in which I suggest that music both of Mozart and of Seneca religious observances exhibits a pattern of information flow analogous to that described in the preceding chapters. It is intended as a brief taste of a line of research that might, if pursued further, contribute importantly to our understanding of music and the mind.

Part 3 turns from the *flow* to the *displacement* of consciousness, investigating ways in which both immediate and displaced consciousness are represented, first in conversational speaking, then in several genres of writing. Chapter 15 explores the nature of conversational consciousness in the immediate and displaced modes, identifying qualitative differences between them. It ends with some remarks on the so-called historical present. Chapter 16 looks at the manner in which distal speech and thought are represented in conversational language, as viewed within the framework of immediacy and displacement.

The succeeding chapters explore consequences of the observation that it is common in writing for a representing consciousness to lose all functions except the creation of language. Chapter 17 discusses a type of first-person fiction in which qualities of immediacy are transferred to a distal represented consciousness. Chapter 18 extends that discussion to the representation of distal speech and thought in the same style. Chapter 19 extends the discussion further to a type of third-person fiction in which the distal consciousness belongs to a distal self. Chapters 20 and 21 look, respectively, at fiction and nonfiction in which a represented consciousness is at least partially absent. Chapter 22, which is in one sense the culmination of the book and in another sense nothing more than a starting point for further study, suggests ways of integrating the notion of displacement with that of flow. Chapter 23 briefly explores the relations between written paragraphs and discourse topics. The epilogue, chapter 24, rounds off what has been said, but a slightly more detailed overview of the book's contents can be gained from the summaries provided at the ends of all the chapters.

What has already been written on the topics covered in this book is vast and varied. To review it adequately would require several books the size of this one. Since my purpose is to articulate what I hope is a relatively coherent understanding of these matters, I am not able to devote much space to discussing alternative understandings. Many people's work impinges on, overlaps with, agrees with, or contradicts what I set forth here, and I regret not being able to discuss more than a small sample of it. Chapter 13, though the longest chapter in the book, succeeds only in sketching a few comparisons with certain alternative treatments of the subject matter of part 2. An analogous comparison for part 3, however desirable it might be, is restricted to a few remarks at the end of chapter 20 concerning the work of Franz Stanzel and Gérard Genette.

I believe the twentieth century will eventually be seen as a time in which the human sciences decided it was a good idea to ignore human experience. It can hardly be questioned that the century's greatest progress has been in technology, and it would be worth studying the extent to which attempts to understand humanity have been shaped by technologies from the adding machine to the computer—from behaviorism to cognitive science. If this book has a higher purpose, it is to provide a bit of evidence that sooner or later we will have to restore conscious experience to the central role it enjoyed in the human sciences a hundred years ago. Much, I believe, depends on such a reorientation.

# 2

## Understanding Language and the Mind

*We would do well to explore new models, to approach the domain
of method with a new set of attitudes, and to experiment with new
and different operational styles. Our strategies must relate both to the
intellectual styles of the individual scholar and to the institutional
structure of the enterprise.... The great disservice that results from
the generic methodology associated with modernism lies in its stamp-
ing some procedures as scientific and the others as unscientific, some
as legitimate and others not. (The narrowly conceived quarantine
against introspection, in effect for so many years, is a useful example
of what I have in mind here.) It would do us all good to loosen up
and look around, not only to our closer relatives in the biological
sciences and in the social sciences, but to the humanities as well.*

(William Bevan, 1991, p. 479)

The sciences that deal with language and the mind are currently in some-
thing of an epistemological crisis. It should be obvious that there are
many important things about language that can never be understood by
constructing sequences of words that begin with *John* and end with a
period, and asking oneself whether or not they are sentences of English.
It should be equally obvious that there are many important things about
the mind that can never be understood by measuring the amount of time it
takes undergraduate students to press buttons. And it should be especially
obvious that we cannot program machines to be like the mind without
first learning what the mind is like. The machines themselves are not
going to tell us that. As we approach the twenty-first century, it is a good
time to think deeply about ways in which we can enrich what we know
of both language and the mind by moving beyond the methods that have
limited research on these topics during the century that will soon lie
behind us.

Each of us constitutes a tiny part of a vast, complex reality—far too vast
and far too complex for any of us, either singly or in collaboration, to
understand very much of. The fact that language and the mind are so vast
and so complex is well attested by the observation that, despite prolonged
and intensive investigation by large numbers of intelligent people, we still
understand them so poorly. To a linguist like myself it is quite remarkable

that so many have tried for so long to fathom the nature of *language* with
no consensus on basic issues in sight. I do not mean to belittle the many
important things that have been discovered, but we remain very far from
seeing anything like the whole picture. When it comes to the *mind*, Ulric
Neisser had good reason to state some years ago, "If X is an interesting
or socially significant aspect of memory, then psychologists have hardly
ever studied X" (Neisser 1978, p. 4). The same could have been said of
most other facets of the mind. Neisser has now found the situation
changed: "Nowadays, if X is an ecologically common or socially significant
domain of memory, somebody is probably studying it intensively" (Neis-
ser 1991, p. 34). I'm not so sure, but in any case there is much that still
eludes us. We are all blind, each of us touching his or her small part of
an elephant that is very large, very complex indeed.

### The Nature of Understanding

The human mind is an endowment that allows the human organism to
deal with its surroundings in ways that are more complex and effective
than anything available to other living creatures. It combines at least three
remarkable achievements that enable it to surpass the accomplishments
of other nervous systems, in degree at least, and perhaps in kind. One
of them is language, whose contribution to humanness has long been
recognized. Another is memory—the ability to store and recall a wide
range of earlier experiences, even if not with verisimilitude. The third is
imagination, which allows us to exceed the limitations of particular sense
impressions, interpreting them as manifestations of more encompassing
schemas that allow us to recognize, have expectations about, and act on
our surroundings in flexible and complex ways.

In the most general terms, this description of imagination also de-
scribes the essence of human understanding: the ability to interpret par-
ticular experiences as manifestations of larger encompassing systems.
Language plays a crucial role by categorizing and codifying the under-
standings, and organizing them in useful ways. Memory is obviously an
essential part of this picture. But there is at bottom only one way to
understand something, whether it is some everyday experience or the
nature of the universe. Understanding is the ability to relate a particular,
spatiotemporally limited observation to a more encompassing and more
stable imagined schema, within which the observation has a natural place.

On a clear night the sky is full of thousands of points of light, forming
patterns that move slowly across the sky as the night progresses. Among
them are a few that wander independently among the more stable pat-
terns. People in many times and places have observed these points of

light and their movements, and have understood them in a variety of ways in accordance with diverse imagined schemas. The patterns in the sky have been imagined as beings of some kind who travel from one horizon to the other. They have been imagined as influencing the lives of persons who are born when they are in certain positions. The wanderers among them have been imagined to be heavenly bodies orbiting in cycles and epicycles around the earth.

Schemas like these are folk beliefs. All human societies have imagined numerous ways of understanding particular observations in terms of more encompassing systems. These understandings are acquired by individuals in part through their participation in a culture, in part through a lifetime of trying to deal effectively with experiences, and doubtless in part through patterns that have become wired into the human nervous system. Folk understandings have been articulated in rituals, folklore, laws, religions, and political systems, but all leave room for an unlimited variety of competing understandings. Despite that fact, each understanding assumes with stubborn conviction its own validity and denies any validity to the competition, which it prefers to annihilate. How different human history would be if the imaginative origins of folk understandings were generally recognized.

To a limited extent the conflicts engendered by competing folk understandings have been mitigated by the development of science: a more self-conscious, more systematic approach to the interpretation of particular experiences in terms of imagined schemas. Despite the popular belief that there is a unique "scientific method," science is really nothing more than a collection of diverse ways of improving the quality of folk understandings. Different sciences make their improvements in very different ways. What physicists do, what biologists do, what psychologists do, and what linguists of this school and that school do are all quite different things. But the general thrust of such efforts is illustrated well with the familiar example of the solar system—the schema that imagines our earth as being itself one of the wandering bodies, participating with them in elliptical orbits around the sun. The success of this schema in allowing us to understand better the wandering points of light derives in part from the more careful and systematic observations associated with Tycho Brahe, in part from the ability of men such as Copernicus, Galileo, and Kepler to imagine a larger frame of reference within which those observations have a natural place.

Understanding, then, of whatever kind is the ability, through imagination, to relate limited, particular, concrete observations to larger, more encompassing, more stable schemas within which the particular experiences fit. The observations are often called *data,* the schemas *theories.*

In general, folk understandings tend to emphasize certain qualities in the theory and are less concerned with the quality of the data or with the theory-data match. Folk theories are valued when they are aesthetically pleasing and interesting and have a potential relevance to daily life, regardless of whether they are supported by any substantial or careful observations. Thus, astrology has an aesthetic appeal and encompasses much that is important to people's lives, but its adherents are less concerned with systematically checking what they imagine to be the case against what actually is the case. The reader can easily multiply examples of folk theories that are strong on aesthetic appeal, interest, and everyday relevance but weak on what we like to call empirical validation.

Ideally, scientific understandings ought to pay equal attention to the quality of the data and the quality of the theory. In practice, it often happens that some aspect of one of these components is emphasized, while the other is treated in a manner that constitutes no improvement over folk understanding. For example, twentieth-century psychology has placed an extraordinarily high value on data that are publicly observable and replicable, while it has not distinguished itself for the quality of its theories. Much of contemporary linguistics has focused on the construction of elaborate theories invented for the understanding of minuscule and questionable observations. The human sciences thus suffer from various pathologies that block more complete understandings of language and the mind. There is some point, therefore, in examining a little more closely the nature of both observing and theorizing as they have been and might be applied to this elusive subject matter.

## Observing

The quality of observations can be evaluated in various ways, but I will focus here on two dimensions that are especially relevant to understanding language and the mind. Each involves an opposition between two poles, and each of the poles has its good points and its bad points. It would thus be shortsighted to assert that any one way of observing is good or "scientific" and the other bad or "unscientific"; each pole of each dimension can contribute essentially to the total enterprise. With respect to both of these dimensions, progress in the twentieth century has been retarded by a commitment to one of the poles and a rejection of the other.

One of the dimensions is the opposition between public and private data—the question of whether the observations are accessible to anyone who wants to make them, or whether they are restricted to a single lone observer. The other is the opposition between manipulated and natural

data—the question of whether the observations are set up by the observer, or whether they capture more directly what occurs in nature. My major point is that public and private, manipulated and natural data all provide important insights, and all have their limitations.

### Public versus Private Observations

It is widely believed that some data are publicly observable in the sense that, given the right circumstances, different investigators can observe what are for their purposes the same data and can agree on what they have observed. When it comes to understanding the mind, publicly observable data usually take the form of *behavior*—publicly observable things that people *do,* including overt manifestations of language. The aspects of language that are publicly observable include especially the production of sounds and written symbols. There are other, certainly important aspects of language and the mind that are privately observable, accessible to each individual but not in any direct way to others. Meanings, mental imagery, emotions, and consciousness are in this category. Observing one's own mental states and processes is often called *introspecting.* Sometimes this distinction between public and private observing is characterized with the words *objective* and *subjective:* behavioral observations are objective, introspections subjective. It is unfortunate that the word *subjective* has connotations of vagueness and imprecision, since those qualities are no more intrinsic to private than to public observations. The only real distinction here is the matter of public accessibility.

It may seem obvious beyond question that scientific understandings must be based on publicly observable, objective data. Since one of the goals of science is to create understandings that can be shared by everyone, public verifiability seems essential. Without it, the argument goes, understanding degenerates into solipsism, a morass of private understandings that may have some significance for each individual but are clearly of no use to science because there is no way of publicly verifying them.

What, then, is wrong with continuing to base the scientific understanding of language and the mind on overt behavior alone? The trouble is that, at best, behavior can provide only indirect and incomplete clues to mental phenomena, while at worst it may distort or provide no evidence at all for what we most need to understand. Behaviorist psychology coped with this problem in an understandable, though highly peculiar way: by simply asserting that psychology was the science of behavior and not of the mind at all. Psychology should not seek to understand the mind or human experience, but only what people do. With respect to any broader understanding, a psychologist might, like Howard Kendler (quoted in Baars 1986:113), admit that "when I have such urges [such as knowing how one's phenomenological experiences compare with others'], I read

novelists to whom I resonate. . . . They provide me with an intuitive grasp of the feelings of others and insight into the human condition."

Of course there is nothing wrong with studying behavior for its own sake, but if psychology lived up to its name it would not so easily abandon its historical interest in more inclusive aspects of human experience. There ought to be some science that studies the mind, and why shouldn't it be psychology? Ironically, even if understanding behavior were agreed to be psychology's only goal, ultimately it would be necessary to understand the mind that lies behind the behavior, for it is only through a major effort at self-delusion that one can avoid recognizing that people's actions are determined by what they think and feel.

The behaviorist bias has had a strong and lasting effect on linguistics too. Leonard Bloomfield's extraordinarily influential book *Language* (1933) was among other things a strong commitment to publicly observable data, to sounds and written symbols (though Bloomfield found the latter of secondary importance). The result was a reduction of language to the distribution of elements of linguistic form and a deliberate avoidance of what those elements meant or how they functioned. The much touted Chomsky "revolution" was hardly an advance beyond this tradition, its manifesto declaring "a language to be a set (finite or infinite) of sentences, each finite in length and constructed out of a finite set of elements. All natural languages in their spoken or written form are languages in this sense, since each natural language has a finite number of phonemes (or letters in its alphabet) and each sentence is representable as a finite sequence of these phonemes (or letters), though there are infinitely many sentences" (Chomsky 1957, p. 13). This tradition has continued to understand language as if it were observable only through its form, though in recent times it has also come to rely on an observational methodology far removed from anything acceptable to behaviorism.

It is interesting to note that the recently emergent cognitive psychology, billed as an alternative to behaviorism, has retained its predecessor's commitment to public verifiability at the same time that it has returned to an acknowledged interest in the mind. The result has consisted in part of efforts to understand the mind by observing how long it takes students to press buttons, a rewarding but obviously limited tie to the complexities of the mental universe. The other major thrust of cognitive science has been computer modeling, where there has been a tendency to treat observations of any kind in an offhand way, along with a conviction that what is good for computers must be good for the mind.

If observing overt behavior too severely limits our understanding of language and the mind, is there any chance that scientific understanding can be broadened to take systematic account of private observations? Is there any way to deal with the threat of solipsism, the conclusion that

nothing beyond the individual self is knowable? A hundred years ago, introspection provided the chief basis for theories of the mind. As William James expressed it:

> *Introspective Observation is what we have to rely on first and foremost and always.* The word introspection need hardly be defined— it means, of course, the looking into our own minds and reporting what we there discover.... since the rest of this volume will be little more than a collection of illustrations of the difficulty of discovering by direct introspection exactly what our feelings and their relations are, we need not anticipate our own future details, but just state our general conclusion that *introspection is difficult and fallible; and that the difficulty is simply that of all observation of whatever kind.* Something is before us; we do our best to tell what it is, but in spite of our good will we may go astray, and give a description more applicable to some other sort of thing. The only safeguard is in the final *consensus* of our farther knowledge about the thing in question, later views correcting earlier ones, until at last the harmony of a consistent system is reached. Such a system, gradually worked out, is the best guarantee the psychologist can give for the soundness of any particular psychologic observation which he may report. Such a system we ourselves must strive, as far as may be, to attain. (James 1890, 1:185, 191–92)

Once this insight was abandoned in the mainstream of psychology a few decades later, attention stopped being given to the possibility that introspections can be treated as data too. It was an unfortunate development, because it left much about the mind that could never be scientifically understood. The twentieth century gave behaviorism its chance, and only a limited understanding of the mind came out of it. A more balanced approach would recognize, not just the difficulty, but also the validity of private observations, joining the ghost of William James in seeing what can be done about incorporating them into systematic research.

There is an interesting irony in the fact that a great deal of modern linguistics is built on introspective data. Only in the subfield of phonetics and those areas of psycholinguistics dominated by the psychological tradition has an exclusive commitment to public data been maintained. Most of linguistics differs radically from psychology in this respect. To take a simple example, linguists are happy to talk about a past-tense morpheme, a plural morpheme, or the like. But pastness and plurality are based squarely on introspective evidence. Although Zellig Harris, for one, hoped that the necessity for introspection could be overcome by examining nothing more than the distributions of publicly observable sounds or letters in large corpora, no one has ever really done linguistics in that way (Harris

1951). Without an awareness of what one "has in mind" when one uses a past tense or plural form, semantics, for example, could hardly be practiced at all, and without semantics, linguistics would surely have diminished interest and significance. One goal of this book is to show how the study of discourse is equally dependent on introspective insights.

There are some things I will suggest in this book that will seem vulnerable to the charge of "circularity" if access to introspective data is denied. The charge will seem more serious to the extent that the introspection in question is more difficult. For example, I will suggest that weakly accented pronouns express *givenness,* a property of ideas that are judged by the speaker to be already active in the consciousness of the addressee. We cannot publicly observe the consciousness of either the speaker or the addressee, or publicly know what judgments the speaker is making. This characterization of givenness is based on introspection of a kind I believe is possible for all of us who are users of language. It may be that recognizing givenness is more complex and subtle than recognizing past tense or plurality, but the principle is the same.

The proper conclusion regarding public and private observation may be the following. Data that are *only* privately observable do not, by themselves, advance scientific understanding. That is not because they are worthless or invalid, but because they need to be substantiated through consensus as well as through some pairing with data that are publicly observable. When it comes to studying the mind, language provides the richest possible fund of publicly observable data of a relevant kind. Language can thus help to rescue us from the solipsism that results from pure introspection. Though difficult, introspection is an absolutely essential part of this picture. When careful and consensual introspective observations can be paired with public observations—and especially with overt evidence from language—the resulting combination may be the most powerful one we have for advancing understanding of the mind.

### Manipulated versus Natural Observations

It is possible either to observe reality in its raw form, interfering with it as little as possible, or to manipulate it in such a way that the observations will test directly the match between a theory and the manipulated data. John Ohala has written of "a contrived observation":

> The contrivance may amount to being in the right place at the right time to make a crucial observation. An example is Eddington's test of Einstein's claim about the bending of the path of light near large masses; he traveled to the Gulf of Guinea when a solar eclipse would occur to see if a given star that should have been hidden behind the sun could actually be seen as its light curved around the sun.

More often the experimenter himself contrives the circumstances giving rise to the events that will be observed. An example is Pasteur's famous test of his anthrax vaccine by administering it to one group of sheep exposed to the disease and withholding it from another similar group. (Ohala 1987, pp. 1–2)

There is an important difference between those cases where the observer manipulates himself, as Eddington did, to be able to observe something that occurs naturally, and those cases where the observer manipulates reality, as Pasteur did. It is difficult to control the sun and stars or produce eclipses on demand, and thus Eddington was forced to move himself in order to take advantage of the opportunities reality offered him. Pasteur, on the other hand, modified reality by administering the vaccine and by deliberately separating the two groups of sheep. When I speak here of manipulated data I will be referring to observations of the Pasteur type.

The dominant twentieth-century view has been that manipulated observations are more useful than natural ones. The good thing about manipulating reality is that one can target one's observations on a particular question that has been isolated from the vastness of reality. One can deliberately construct the situation within which the observations take place, bypassing the need to wait for the relevant phenomena to occur in nature, if indeed they ever would occur. The value of controlling one's observations in this way has been an article of faith in both psychology and linguistics, as strongly held as psychology's commitment to public observability. But there is clearly a down side. There are important aspects of language and the mind that have more in common with the sun, stars, and eclipses—things that can only be understood by observing their occurrence in nature. No other way of observing them is possible. The importance of observing in this way is recognized in the traditional practice of ethnography as well as in more recent ethnographic approaches to language acquisition and sociolinguistics, and in the "ecological" approach to psychology. Mainstream psychology might have taken a different route if it had heeded Frederic Bartlett when he pointed out the limitations of the work of Hermann Ebbinghaus (see more recently Klatzky 1991): "The psychologist, whether he uses experimental methods or not, is dealing, not simply with reactions, but with human beings. Consequently the experimenter must consider the everyday behaviour of the ordinary individual, as well as render an account of the responses of his subjects within a laboratory" (Bartlett 1932, p. 12; see also Baddeley 1976, pp. 3–15).

The unnaturalness of the data on which so much of psychology and linguistics relies can be highly disturbing to anyone who is sensitive to what language is really like. To find examples one need only attend any

psychology, linguistics, or computer science conference or open any journal from these fields. Opening a psycholinguistic journal at random, for example, I found the following used as an experimental stimulus:

(1) The royal guests danced in the palace to the music of an orchestra.

Opening a linguistics book I found an argument that was based on examples like

(2) He is the man to whom I wonder who knew which book to give.

"Data" like these follow an ancient tradition in which conclusions about language and the mind have been drawn from simpler, though still unnatural examples like

(3) The cat is on the mat.
(4) The farmer kills the duckling.
(5) The happy boy eats ice cream.

One purpose of this book is to explore understandings of language and the mind that explain why language like that in (1) through (5) does not occur in nature or, if it does occur, is restricted to very special circumstances. I will try to show how the very rarity or nonoccurrence of such language is itself an important observation, and how it is possible to learn crucial things about language and the mind by discovering the constraints that hinder its creation. It is a very peculiar thing that so much of contemporary linguistic research has been based on unnatural language. It is as if one tried to study birds by building airplanes that were rather like birds in certain ways, and then studied the airplanes, just because they were easier to control than the birds themselves. I suspect that ornithologists have come to understand birds more successfully by examining them as they really are. There is much to be gained from examining language as it really is too.

My point is not that manipulated or constructed data are worthless. I would not want to discard all the conclusions I have drawn from such data myself, and I continue to make modest use of constructed examples in this book. Certainly there are times when it is necessary to appeal to language that fails to emerge naturally. But the constructions are only useful to the extent that they mirror reality, and one can only judge their usefulness through immersion in reality itself.

## Methodologies

The distinctions I have just made suggest a breakdown of observational possibilities into the four categories charted in figure 2.1, where I have included examples of methodologies appropriate to each category. The point I wish to emphasize is that there are both good things and bad things

|  | Public | Private |
|---|---|---|
| Manipulated | experimentation, elicitation | semantic judgments, judgments regarding constructed language |
| Natural | ethnography, corpus-based research | daydreaming, literature |

*Figure 2.1* Properties of Observations with Examples

about each of the four cells in this diagram. Each makes a contribution, but none has an exclusive claim on scientific validity. Psychology, in restricting itself to experiments, has stuck to the cell in the upper left—the intersection of publicly observable with manipulated data. The methods that have dominated linguistics have been those of the entire upper row, that is, linguists have focused on manipulated rather than naturally occurring data but, depending on the subfield, have been receptive to both public and private observations.

In the upper left cell I have included not only experimentation but also elicitation: a linguistic technique for investigating a language other than one's own in which the investigator produces, say, a constructed English sentence designed to shed light on some point of interest, and asks a speaker of the other language to translate it. The result is publicly observable in the sense that the consultant's reaction can be recorded and studied like any overt behavior. But people do not ordinarily use language to translate decontextualized sentences that were invented in a different language, and there is often little reason to think that the result is anything a speaker of the target language would ordinarily say. A variant on this procedure, also commonly employed, is for the investigator to make up a sentence in the target language, asking the consultant for acceptance or nonacceptance. Having asked the question "Could I say so and so?" many of us have encountered the response, "Sure, you could say that," and then, after a pause, "but *I* never would." In spite of these problems, elicitation, used with care, can be a useful way of investigating hypothetical patterns one thinks one may have uncovered through more natural means.

In the upper right cell of figure 2.1 I have listed "semantic judgments" and "judgments regarding constructed language" as typical ways of exploiting the intersection of manipulated with introspective data. I have already mentioned semantic data. Here we must also recognize the special use of introspection that has become the preferred method of working with one's own language. Investigators imagine a piece of language, nearly always an isolated phrase or sentence, which they then judge for its gram-

maticality. To achieve some degree of verifiability, they frequently ask acquaintances or students whether they "get" or fail to "get" the sentence in question. The answer evidently depends in part on the respondents' abilities to imagine a context for the decontextualized language, in part on their desire to support or contradict the hypothesis for which the evidence is crucial. With this cynical characterization I do not mean to suggest that constructing language and evaluating it is a worthless activity. Used with caution, it is a method that can provide insights unobtainable in other ways. I emphasize again, however, the need for a sensitivity, not just to the grammaticality of what the investigator has constructed, but also to its naturalness.

Continuing in a clockwise direction through figure 2.1, we come in the lower right-hand corner to the introspective observation of naturally occurring data. This type of observation is certainly the most difficult to accomplish in practice. It includes whatever passes through our tacit conscious experience in a natural way. Here belongs what is often called daydreaming (e.g., Singer 1975), which evidently consists in part of inner speech, in part of other kinds of experience. Data of this kind suffer in obvious ways from both unverifiability and accidentalness. They are at the same time the most interesting and relevant data of all, if only we could find satisfactory ways of observing them. One is tempted to leave this area to novelists and poets, but I wonder whether humanistic studies could and should not sooner or later be brought to dovetail more closely with "scientific" studies of language and the mind.

The last area in our clockwise journey offers possibilities that are much exploited in this work. The observation of naturally occurring overt behavior includes activities that have been termed ethnography. The ethnographic tradition has had considerable influence on some areas of linguistics, and it is out of that tradition that this book has arisen. I will be combining observations of natural language with introspective data concerning the meanings and functions of phenomena observable in compilations of naturally occurring corpora. It emerges from this discussion that linguistic corpora have the following advantages and disadvantages (Chafe 1992b). Since they record overt behavior, they are available to anyone who wants to examine them, and thus they offer the benefits of verifiability. Although behavioral data in general suffer from indirectness of access to mental processes, language is not as problematic in this regard as button pressing, since it provides an incomparably more complex and subtle window to the mind. While it does not tell us everything, it tells us more than any other single kind of behavior. Furthermore, both spoken and written corpora have the decided advantage of providing data that are natural and not manipulated. The problem with them is their accidental nature, the fact that they fail to allow the targeting of particular theory-