MODES OF DISCOURSE

THE LOCAL STRUCTURE OF TEXTS

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1 *The study of discourse*

This book studies discourse passages from a linguistic point of view. Discourse is made up of sentences, and through linguistic analysis we have learned a good deal about them. The perspective of linguistics, however, can't be used directly to study an entire discourse. Novels, histories, arguments, and other types of discourse are activities with their own character and conventional structure. Receivers draw on discourse knowledge to construct interpretations.

The first problem for the linguist interested in close study of discourse, then, is to find a fruitful level for analysis. Larger units are organized primarily by convention and expectation. I will work more locally, at the level of the passage. There are intuitive differences between the passages of a discourse. People recognize passages of several kinds, namely Narrative, Description, Report, Information, and Argument. The intuitions are linguistically based: the passages have a particular force and make different contributions to a text. They can be identified by characteristic clusters of linguistic features. I shall say that a passage of text with certain features realizes a particular "Discourse Mode." The Discourse Mode is appropriate for close linguistic analysis, because at this level linguistic forms make a difference. Discourse Modes appear in texts of all types of activity, or genres. I use the terms "discourse" for spoken and written material, "text" for written material.

The Discourse Modes constitute an interesting level of text structure. I analyze them in two ways. I first discuss the differences between text passages of each mode. I then look at passages in terms of subjectivity and surface structure presentation, features that the modes have in common. Much of the analysis is formalized in the framework of Discourse Representation Theory.

Part I of this book discusses the Discourse Modes and lays out the context for the inquiry. Part II presents the linguistic characterization of the modes, emphasizing the differences between them. Part III discusses subjectivity and surface structure presentation across modes. Text passages are thus considered from complementary points of view in the second and third parts of the book. The different analyses are brought together in Part IV.

Section 1.1 of this chapter introduces the Discourse Modes; 1.2 outlines the approach to texts and analysis that I take in this book; 1.3 presents the main ideas to be developed later, with examples of passages analyzed for different kinds of information that they convey; 1.4 concludes with summary characterization of the modes and brief comments on the importance of temporality for human beings.

1.1 Discourse Modes

I recognize five modes: Narrative, Description, Report, Information, and Argument. This list is not exhaustive, but I think it covers the major modes that appear in texts. I do not deal with conversation, nor procedural discourse.[1] The modes can be characterized with two features. Each mode introduces certain types of situation – Event, State, generalization, abstraction – into the universe of discourse. The modes also have characteristic principles of progression, temporal and atemporal. There are linguistic correlates to these features. Knowledge of one's language includes knowledge of these forms and meanings, some of them quite subtle.

The notion of Discourse Mode accounts for the variety that one finds in texts. Actual texts are usually not monolithic. In narratives, for instance, the significant unit is the episode: a group of Events and States in sequence that are bound together by a unifying theme. Narrative episodes, however, rarely consist only of sequence. There are also descriptive passages, and perhaps argument as well. Similarly the expository genres often have narrative sequences which support the main line of argument. Narrative, description, and argument make different contributions to a text, and have different linguistic features and interpretations. Each constitutes a distinct Discourse Mode.

The short passages below exemplify the five modes; they are taken from a group of texts that will be discussed repeatedly throughout this book.[2] Sources for the natural examples are listed at the end of each chapter; some of the texts are reproduced in Appendix A.

(1) She put on her apron, took a lump of clay from the bin and weighed off enough for a small vase. The clay was wet. Frowning, she cut the lump in half with a

1. Persuasive discourse is not listed separately. All genres and modes of discourse may have a persuasive component.
2. The texts were chosen to provide a variety of examples. They include short stories, novels, books, articles from journals and newspapers. They were analyzed intensively by the author. Appendix A provides a list of the texts and significant fragments from the ones most often used.

cheese-wire to check for air bubbles, then slammed the pieces together much harder than usual. A fleck of clay spun off and hit her forehead, just above her right eye.

(2) In the passenger car every window was propped open with a stick of kindling wood. A breeze blew through, hot and then cool, fragrant of the woods and yellow flowers and of the train. The yellow butterflies flew in at any window, out at any other.

(3) Near a heavily fortified Jewish settlement in the Gaza Strip, an Israeli soldier and a Palestinian policeman were wounded as Palestinian protests for the release of 1,650 prisoners degenerated into confrontations. Israeli military officials say they are investigating the source of fire that wounded the soldier.

(4) Thanks to advanced new imaging techniques, the internal world of the mind is becoming more and more visible. Just as X-ray scans reveal our bones, the latest brain scans reveal the origin of our thoughts, moods, and memories. Scientists can observe how the brain registers a joke or experiences a painful memory.

(5) The press has trumpeted the news that crude oil prices are three times higher than they were a year ago. But it was the $10 or $11 price of February 1999, not the one today, that really deserved the headlines.

In order, these fragments exemplify the modes of Narrative, Description, Report, Information, and Argument. Passages of the Discourse Modes are linguistic units, since they have recognizable linguistic features. They also have rhetorical significance. In fact the Discourse Modes are text units both linguistically and notionally. They function as a bridge between the sentences of a text and the more abstract structures that it evokes. The relations between Discourse Modes and such abstract structures are discussed in Chapter 11.

In close analysis of a text one considers the linguistic forms, asking what information is conveyed by the sentences and sentence sequences of a discourse. Since this study is limited to written texts I do not discuss such matters as stress and intonation, audience, or specific setting.

The inquiry shows that the information in a text is varied at the local level, providing multiple meanings. Thus the analysis in this book is a partial explication of text complexity.

1.2 Approaches to the study of texts

1.2.1 Linguistic features and discourse structure

Discourse is a human activity with language at the center. Types of discourse are usefully grouped into genres, each genre with its own purpose, structure, and conventions. Knowing the genre of a discourse provides indispensable cues to its structure.

The idea of discourse as a type of activity helps us to discard our customary expectations and to analyze it afresh (Levinson 1979/1992). The idea harks back at least to Wittgenstein's "language games." The term was coined to draw attention to language as part of action. This passage from Wittgenstein's *Brown Book* outlines a simple language game:

> Its function is the communication between a builder A and his man B. B has to bring A building stones. There are cubes, bricks, slabs, beams, columns. The language consists of the words "cube," "brick," "slab," "beam," and "column." A calls out one of these words, upon which B brings a stone of a certain shape.

In a different game, calling out the same word would have different force. A and B might be archaeologists investigating a site, for instance, and A might call out a word – *column*, *brick* – to convey to B what he has found. To interpret A's utterances, we have to understand the language game being played: the activity and the role that language plays in it. Wittgenstein glosses the term "language game" as referring to "the whole, consisting of language and the actions into which it is woven."[3]

Knowing the language game, or genre, requires knowledge of an activity as a whole. This knowledge is not conveyed by linguistic forms. The global structure of a discourse is rarely if ever stated explicitly. People understand discourse with different kinds of information, including what is conveyed by linguistic forms. They use general information about genre and principles of communication, and specific information about a particular case. There are some differences among genres. Scientific articles and textbooks often lay out the specific relations between their parts, whereas literary genres tend to be less explicit.

1.2.2 The linguistic approach

At the level of the passage, close linguistic analysis of discourse can be fruitfully pursued. I am interested in working out information that is conveyed by linguistic forms, directly and indirectly. To interpret text passages, people draw on syntactic, semantic, and pragmatic knowledge; see Chapter 3 for some discussion.

I rely on two insights in the analysis. The first is that linguistic meaning is often due to a group of forms – a composite – rather than to a single form.

3. R. Rhees, in a Preface to *The Blue and Brown Books*, says that Wittgenstein introduced the notion of language games "in order to shake off the idea of a necessary form of language . . . He is insisting that . . . understanding is not one thing: it is as various as the language games themselves." *The Blue and Brown Books* were dictated in 1934–35 and published in 1958.

Whether a sentence expresses an Event or a State, for instance, depends on the composite of the verb and its arguments, as well as adverbials in the sentence. Together, these forms express a State or an Event. The composite approach is used throughout the book.

The second insight is that grammatical terms such as tense and pronouns often have two different functions in discourse. Besides the direct information that they code in a sentence, they give cues to local text structure. Maintenance or change of pronouns, for instance, often indicates continuity or change of direction. In this way grammatical forms contribute to the pattern of a text.

I work with surface syntactic structures. I assume a generative syntax with movement rules. The surface syntax makes available the constituent structure of a sentence, grammatical relations such as subject and object, and the semantic features associated with particular morphemes and constituents. For specificity, I use structures roughly following generative theory of the 1990s, somewhat simplified.[4] I use only surface structures in this book: no syntactic rules are stated.

I take the stance of the receiver of a text. I assume that receivers assemble and interpret the different cues that a text contains. They include lexical and semantic choices, syntactic and information structure, patterns within and across sentences, cue words, typography. The preferred interpretation is the one most compatible with all the information available. I do not attempt to model the actual processes involved nor the shifts in attention as readers make their way through a text. The analysis is not a psycholinguistic one but an idealization, in the tradition of modern linguistics. The interpretation is given in the form of an ongoing semantic-pragmatic structure, in the framework of Discourse Representation Theory. This theory is explicitly formulated to deal with discourse.

Sentences in discourse have a dual nature that has been difficult to understand. The difficulty is that sentences are self-contained units from a certain point of view; but for interpretation they depend on linguistic and extra-linguistic context. This dependence cannot be captured simply by making connections between sentences. The meaning of a sentence often requires information from the context. The realization that sentence meaning can be elucidated only in context is the leading idea of Discourse Representation Theory (Kamp 1981; Heim

4. The syntactic surface structures that I use are based on such works as Culicover (1997) which are in the Principles and Parameters generative framework. I do not take a position on types of movement rules or the mechanisms that trigger movement.

   There is no level of Logical Form in this approach: the semantic interpretation is developed in the Discourse Representation Theory framework.

1982). As discourse is dynamic, so representations must be: new information is added, familiar entities are referred to, situations change. The representation is updated as a discourse develops.

Rules of the theory construct a representation from information in the surface structure of sentences. The representation gives the conceptual information that a receiver grasps in understanding discourse. Text representation consists of "discourse entities" for individuals, situations, and times; and conditions that characterize the entities. In some cases a discourse entity is embedded in a sub-structure and is not available as antecedent for anaphoric reference. Embeddings represent the scopal effects of operators such as negation, quantifiers, and modality. There is a second, truth-conditional level, at which the structure is interpreted within a formal model.

Information about Discourse Mode and some aspects of presentational structure will be encoded in Discourse Representation Structures. I introduce the theory and its representations in Chapter 3; later chapters formalize the analysis in the structures of the theory. Given the richness of the information that is conveyed in sentences, an interesting question arises: how much of the information conveyed by a sentence should survive in representations of text meaning? This question is particularly difficult for those aspects of meaning that are clearly not truth-conditional. The question will be discussed from time to time throughout the book.

1.3 Overview of key ideas

I introduce four key ideas explored in later chapters of this book, and then present multiple analyses of text passages in which all of them are exhibited.

1.3.1 Situation type, text progression, subjectivity, surface structure presentation

Types of situation: the sentences of a text introduce situations into the universe of discourse. Events and States are the basic types in most studies of aspect and discourse. Adding to this tradition, I recognize General Statives and Abstract Entities as two other types. General Statives are expressed by generic and generalizing sentences. They invoke patterns of Events and States rather than particular situations. The complement clauses of certain predicates refer to facts and propositions, which are Abstract Entities. Situations of all types are entered in the structures of Discourse Representation Theory as entities, along with individuals and times. They are known as "situation entities," discussed in Chapters 2 and 4.

Text progression: there are several principles of text progression among the Discourse Modes. In Narrative, situations are related to each other and dynamic Events advance narrative time. In Reports, situations are related to Speech Time and time progresses forward and backward from that time. In Description, time is static and the text progresses in spatial terms through the scene described. The Information and Argument modes are atemporal and progress by a metaphoric path through the domain of the text. Text progression is discussed in Chapters 5 and 6.

Subjectivity: I distinguish "subjective" sentences from others on the basis of a set of grammatical forms. All forms of subjectivity convey access to mind – either the mind of the writer or a text participant – through communication, mental state, perception, and perspective. For each subjective expression a Responsible Source must be identified. The main predicate of a sentence may indicate communication, mental state, evaluation. The arguments of the predicate may indicate perspective with deictic pronouns and reflexives. Modals, adverbials, parentheticals indicate evaluation and evidentiality. Subjective forms appear in passages of all the Discourse Modes. Subjectivity is discussed in Chapter 7.

Surface structure presentation: presentational features organize the information in a sentence, usually into topic and comment, focus and background. These features appear in all text passages. I develop an integrative approach, drawing on current linguistic insights and traditional Prague School views. Presentational information depends on syntactic surface structure, the linear and grammatical position of phrases. I will be particularly interested in presentational progression, which tracks the shifts from one topic to another in the sentences of a discourse.[5] The topic phrase gives the referent that a sentence is about. The main criteria for identifying the topic phrase are salience, coreferentiality, and continuity.[6] See Chapters 8 and 9 for discussion.

Presentational structure is also known as "information structure"; I prefer the term "presentation" because texts convey other kinds of information besides that of topic, focus, and associated notions such as familiarity status.

5. The notion of presentational progression is unlike the shifting of attention in reading a text, studied in psycholinguistics and artificial intelligence. The processes involved in understanding are beyond the scope of this discussion.
6. Local continuity looks for a topic phrase that is coreferential with the topic phrase immediately preceding. Global continuity looks for a topic phrase that is coreferential with other phrases in the context. These factors are recognized in other approaches to local relations between sentences such as Centering Theory, which ranks local continuity above global continuity (Walker *et al.* 1998). See Chapter 6 for discussion.

1.3.2 Multiple analysis of text passages

Discourse Mode, subjectivity, and presentational progression are the main concerns of this book. They convey information that complements the lexical and rhetorical aspects of a text. This section offers passages of three Discourse Modes, analyzed for these features.

The Discourse Modes differ in the type of situation entities they introduce, and their principle of text progression. Forms of subjectivity and presentational progression are found in all the modes of discourse. I discuss these features of passages in the Narrative, Report, and Information modes. The passages are given more than once. The first version shows the situation entities and text progression. Information about subjectivity is added next, and then presentational progression. The final version displays together the different kinds of information conveyed by a passage.

The first passage I discuss is in the Narrative mode. Characteristically, a narrative introduces Events and States into the universe of discourse. The text progresses as narrative time advances. This advancement is based on sequence: we interpret the events of a narrative as occurring in sequence, one after another. Aspectual and temporal linguistic cues in a passage trigger the interpretation of advancement. Bounded events advance narrative time; temporal adverbials also advance it. Event clauses with the perfective viewpoint express bounded events; the progressive expresses ongoing events. The perfective is conveyed by the simple form of the verb, the progressive by the auxiliary *be+ing (called* vs. *was calling*). These points are discussed in Chapters 2 and 4.

The narrative passage below introduces Events and States. They are marked with subscripts for each tensed clause; E = bounded event, S = State. Arrows preceding a clause indicate temporal advancement. Clauses that are not preceded by arrows do not advance narrative time. When a sentence has more than one tensed clause the clauses are distinguished by letter (1a, b, etc.).

(6) Narrative a: situations and text progression

$1_E \rightarrow$ A few days later I called on Dr P and his wife at home, with the score of the Dichterliebe in my briefcase and a variety of odd objects for the testing of perception. $2a_E \rightarrow$ Mrs. P showed me into a lofty apartment, b_S which recalled fin-de-siècle Berlin. $3a_S$ A magnificent old Bösendorfer stood in State in the centre of the room, b_S and all around it were music stands, instruments, scores. $4a_S$ There were books, b_S there were paintings, c_S but the music was central. $5a_E \rightarrow$ Dr. P came in, a little bowed, b_E and$\rightarrow$ advanced with outstretched hand to the grandfather clock, c_E but, hearing my voice,$\rightarrow$ corrected himself, d_E and$\rightarrow$ shook hands with me. $6a_E \rightarrow$ We exchanged greetings b_E and$\rightarrow$ chatted a little of current concerts and performances. 7 Diffidently, $a_E \rightarrow$ I asked him b_S if he would sing.

Each E in this passage advances the narrative: the clauses express bounded Events. State sentences such as 2a, 3a–b, and 4a–b do not advance narrative time.

Now I add forms of subjectivity. They indicate access to mind, of either the author or a participant. There is only one such form in this passage, a verb with an implicit experiencer argument, given in bold.

(7) Narrative b: situations, text progression, **subjectivity**
$1_E\rightarrow$ A few days later I called on Dr P and his wife at home, with the score of the Dichterliebe in my briefcase and a variety of odd objects for the testing of perception. $2a_E\rightarrow$ Mrs. P showed me into a lofty apartment, b_S which **recalled** fin-de-siècle Berlin. $3a_S$ A magnificent old Bösendorfer stood in state in the centre of the room, b_S and all around it were music stands, instruments, scores. $4a_S$ There were books, b_S there were paintings, c_S but the music was central. $5a_E\rightarrow$ Dr. P came in, a little bowed, b_E and$\rightarrow$ ø advanced with outstretched hand to the grandfather clock, c_E but, ø hearing my voice, $\rightarrow$ corrected himself, d_E and$\rightarrow$ ø shook hands with me. $6a_E\rightarrow$ We exchanged greetings b_E and $\rightarrow$ ø chatted a little of current concerts and performances. 7 Diffidently, $a_E\rightarrow$ I asked him b_S if he would sing.

The verb *recall* implies an experiencer (recalled to someone). Since the passage is in the first person, participant and narrator are the same. We infer that the narrator perceives the room according to the description in sentences 3 and 4. The first person pronouns woven into the passage do not convey subjectivity in the intended sense of access to mind.

Finally, information about surface presentational progression is added. The topic phrases of each clause, in italics, provide the steps of progression through the passage.

(8) Narrative c: situations, text progression, **subjectivity**, *topic*
$1_E\rightarrow$ A few days later *I* called on Dr P and his wife at home, with the score of the Dichterliebe in my briefcase and a variety of odd objects for the testing of perception. $2a_E\rightarrow$ Mrs. P showed *me* into a lofty apartment, b_S *which* **recalled** fin-de-siècle Berlin. $3a_S$ A *magnificent old Bösendorfer* stood in state in the centre of the room, b_S and all around it were music stands, instruments, scores. $4a_S$ There were books, b_S there were paintings, c_S but *the music* was central. $5a_E\rightarrow$ *Dr. P* came in, a little bowed, b_E and$\rightarrow$ ø advanced with outstretched hand to the grandfather clock, c_E but, ø hearing my voice,$\rightarrow$ corrected himself, d_E and$\rightarrow$ ø shook hands with me. $6a_E\rightarrow$ *We* exchanged greetings b_E and$\rightarrow$ ø chatted a little of current concerts and performances. 7 Diffidently, $a_E\rightarrow$ *I* asked him b_S if *he* would sing.

The topic phrases are subjects in S1, 2b, 3a, 4c, and the clauses of 5, 6, and 7. This is the most common position for topics. Topic phrases are discussed

in Chapters 8 and 10. S3b and 4a–b are non-canonical structures without topic phrases; see Chapter 9.

The next example is in the Report mode. Reports are similar to Narrative in the situations they introduce: Events and States, and sometimes General Statives. They have a different principle of progression, however. In the Report mode, situations are related to the time of the report, Speech Time, rather than to each other. The text progresses as time changes. The linguistic cues to change are tensed verbs, modals, and adverbs that convey temporal information. In (9) the adverbials and tensed verbs are underlined.

(9) Report a: situations and text progression

1a_{E1} A week after Ethiopia started an offensive b_{E2} that it says is aimed at ending the two-year-old war, c_{S1} it is now clear d_{S2} that the whole of Eritrea could become a battlefield. 2 With hundreds of civilians fleeing the region, a_{E3} Colonel Kidane said b_{E4} Ethiopian soldiers continue to skirmish with Eritrean soldiers on the run here in western Eritrea.

3a_{E5} Tonight, Ethiopian officials said b_{E6} planes bombed the main Eritrean military training center at Sawa, an American-built base 100 miles west of Asmara, the capital. 4a_{E7} The officials also said b_s they had taken a village, Maidema, 30 miles from Asmara, on the way from the western front to the central front along the disputed border. 5a_{S3}That is where the next round of fighting, b_{S4} already heavy, is generally expected.

The time talked about moves back and forth from past to present, with one modal future ("could become") and one past perfect ("had taken"). Both modal and perfect clauses are stative.

Subjective and presentational features are added in (10). The topic phrases are italicized; subjective features are in bold.

(10) Report b: situations, text progression, **subjectivity**, *topic*

1a_{E1} A week after *Ethiopia* started an offensive b_{E2} that *it* says is aimed at ending the two-year-old war, c_{S1} it is **now** **clear** d_{S2} that *the whole of Eritrea* **could** become a battlefield. 2 With hundreds of civilians fleeing the region, a_{E3} *Colonel Kidane* said b_{E4} *Ethiopian soldiers* continue to skirmish with Eritrean soldiers on the run **here** in western Eritrea.

3a_{E5} **Tonight**, *Ethiopian officials* said b_{E6} *planes* bombed the main Eritrean military training center at Sawa, an American-built base 100 miles west of Asmara, the capital. 4a_{E7} *The officials* also said b_{E8} *they* had taken a village, Maidema, 30 miles from Asmara, on the way from the western front to the central front along the disputed border. 5a_{S3}That is where *the next round of fighting*, b_{S4} already heavy, is generally expected.

The passage has deictic and evaluative subjective features. The deictics indicate the time and place of the reporter ("now," "here," "tonight"), in addition to their locating function. The evaluative "clear" implies an evaluator (clear to someone) and the modal "could" suggests access to a mind. The Responsible Source is the author, since no plausible text participant is available. The topic phrase is the subject in all but two clauses of this passage.

The next example is Information, an atemporal mode. The situation entities introduced include a significant number of facts and propositions, and generalizing statives. They do not involve particular situations located at a time and place. Therefore text progression in this mode cannot be based on temporal or spatial location. Passages in the atemporal modes progress by metaphorical motion through the semantic domain of the text. Motion, or lack of it, depends on metaphorical changes of location. We track location in this sense by identifying a Primary Referent in each tensed clause in a passage, and considering the location of the primary referents.

The Primary Referent is semantically central in the situation expressed. In Events, the Primary Referent is what moves or changes. In States, the Primary Referent is located or characterized; or emergent, dependent on the State for existence. The Primary Referent of a clause usually coincides with the argument that has the thematic role of Theme/Patient. Criteria for determining Primary Referents are discussed in Chapter 6.

The fragment in (11) is an Information passage. It introduces Generalizing Statives, except for S2b which refers to a Fact. These situations are typical of the Informative mode. In addition, the Primary Referent phrases are shown with underlining for each tensed clause. In S2 the extraposed clause is Primary Referent for the main clause, indicated by the underlining of "S" which precedes the clause. Ge = Generalizing Stative. Within the extraposed clause the Primary Referent is also underlined.

(11) Information a: situations and Primary Referents

$1a_{Ge}$ When people try to get <u>a message</u> from one individual to another in the party game "telephone," b_{Ge} they usually garble <u>the words</u> beyond recognition. $2a_{Ge}$ It might seem surprising, then, b_{Fact} that mere molecules inside our cells constantly enact <u>their own version of telephone</u> without distorting the relayed information in the least.

3_{Ge} Actually, no <u>one</u> could survive without such precise signalling in cells. $4a_{Ge}$ <u>The body</u> functions properly only because b_{Ge} cells communicate with one another constantly. 5_{Ge} Pancreatic cells, for instance, release <u>insulin</u> to tell muscle cells to take up sugar from the blood for energy. $6a_{Ge}$ Cells of the immune system instruct <u>their cousins</u> to attack invaders, b_{Ge} and cells of the

> nervous system rapidly fire messages to and from the brain. $7a_{Ge}$ Those messages elicit the right responses only b_{Ge}because they are transmitted accurately far into a recipient cell and to the exact molecules able to carry out the directives. 8_{Ge} But how do circuits within cells achieve this high-fidelity transmission?

Metaphorical progression in the first paragraph moves from "a message" to the smaller unit "the words" to a particular type of message – "their own version of telephone." The Primary Referent in the second paragraph changes from people to "body," "cells" of several kinds, "insulin," then back to messages of a different nature.

I now add subjective forms to the fragment, which begins an article. Several appear in S2 and others are scattered throughout. All evoke the author as Responsible Source. The evaluative adjective implies an experiencer; in this context it refers to people in general, including the author. The direct question of S8 also indicates subjectivity: the author directly addresses the audience. Example (12) presents the fragment with all the types of information noted:

(12) Information b: situations, Primary Referents, **subjectivity**
$1a_{Ge}$ When people try to get a message from one individual to another in the party game telephone, b_{Ge} they usually garble the words beyond recognition. $2a_{Ge}$ It **might seem surprising, then**, b_{Fact} that mere molecules inside **our** cells constantly enact their own version of telephone without distorting the relayed information in the least.

3_{Ge} **Actually**, no one **could** survive without such precise signalling in cells. $4a_{Ge}$ The body functions properly only because b_{Ge} cells communicate with one another constantly. 5_{Ge} Pancreatic cells, **for instance**, release insulin to tell muscle cells to take up sugar from the blood for energy. $6a_{Ge}$ Cells of the immune system instruct their cousins to attack invaders, b_{Ge} and cells of the nervous system rapidly fire messages to and from the brain. $7a_{Ge}$ Those messages elicit the right responses only b_{Ge} because they are transmitted accurately far into a recipient cell and to the exact molecules able to carry out the directives. 8_{Ge} **But** how do circuits within cells achieve this high-fidelity transmission?

The subjective forms in S2 are predicative, deictic, modal, adverbial. They are part of the main sentence, though they do not involve either topic or Primary Referent phrases. The concentration of subjective forms in this sentence, the second of the article, conveys subjectivity which can be maintained with fewer subjective forms later. S8 is in question form, directly invoking author and reader. This pattern of subjectivity is fairly typical of informative prose. The author is not a participant but can be glimpsed from time to time.

Next, information about presentational progression is added, with the topic phrases in italics:

(13) Informative c: situations, Primary Referents, **subjectivity**, *topic*
1a$_{Ge}$ When *people* try to get a message from one individual to another in the party game telephone, b$_{Ge}$ they usually garble the words beyond recognition. 2a$_{Ge}$ It **might seem surprising**, **then**, b$_{Fact}$ that mere molecules inside our cells constantly enact their own version of telephone without distorting the relayed information in the least.
3$_{Ge}$ **Actually**, *no* one **could** survive without such precise signalling in cells. 4a$_{Ge}$ The body functions properly only because b$_{Ge}$ *cells* communicate with one another constantly. 5$_{Ge}$ *Pancreatic cells*, **for instance**, release insulin to tell muscle cells to take up sugar from the blood for energy. 6a$_{Ge}$ *Cells of the immune system* instruct their cousins to attack invaders, b$_{Ge}$ and *cells of the nervous system* rapidly fire messages to and from the brain. 7a$_{Ge}$ *Those messages* elicit the right responses only b$_{Ge}$ because they are transmitted accurately far into a recipient cell and to the exact molecules able to carry out the directives. 8$_{Ge}$ **But** how do *circuits* within cells achieve this high-fidelity transmission?

The single instance of non-canonical syntax, the extraposed *that*-clause in S2, removes the possibility of a topic phrase in subject position.

The two kinds of progression provide a dual patterning in texts. Topic and Primary Referent phrases appear in two patterns. Primary Referent phrase and topic phrase may coincide, or interact in counterpoint. In the latter case the topic phrase is subject and the Primary Referent phrase is in the predicate. While topic phrases tend to be subjects, Primary Referent phrases tend to appear in the predicate unless a clause is intransitive. The topic phrase performs its canonical function as the starting point of the sentence; it serves to introduce the Primary Referent.

The multiple analyses above give a kind of thick description of text passages. This demonstration sets the stage for the detailed analysis to follow in the later parts of the book. In Chapter 10 I return to the multiple approach, this time with summary and discussion that in effect bring together the main points of the analyses.

1.4 Conclusion

Summarizing, I give below a brief characterization of the modes, listing the main properties of each

The Narrative mode
Situations: primarily specific Events and States
Temporality: dynamic, located in time
Progression: advancement in narrative time

The Report mode
  Situations: primarily Events, States, General Statives
  Temporality: dynamic, located in time
  Progression: advancement anchored to Speech Time
The Description mode
  Situations: primarily Events and States, and ongoing Events
  Temporality: static, located in time
  Progression: spatial advancement through the scene or object
The Information mode
  Situations: primarily General Statives
  Temporality: atemporal
  Progression: metaphorical motion through the text domain
The Argument mode
  Situations: primarily Facts and Propositions, General Statives
  Temporality: atemporal
  Progression: metaphorical motion through the text domain

The entities differ in abstractness and temporality. The most specific are situations which are located in the world at a particular time and place. General Statives – Generic and Generalizing sentences – are also located, but they express a pattern of situations rather than a specific situation. Facts and Propositions, the most abstract entities, are not located in the world. Because of these differences, information about the domains of time and space, or the absence of it, is a revealing feature in a text.

The notion of "predominant entity" is flexible. Entities predominate when there are relatively many of that type, or if they are highlighted in the text by syntax and/or position in a passage.

Discourse conveys several kinds of information. Underlying a story, historical account, or argument is information about situations and participants, time and place, continuity, text progression of two kinds, point of view. Part of the complexity of a text comes from its multiple linguistic cues to inter-related meanings, expressed simultaneously. This book explores how some of these meanings arise.

I have emphasized that temporal factors are important for the modes. The point is supported by empirical findings which show that people notice temporality in texts. Faigley & Meyer (1983) did an experimental study in which readers classified texts. In three experiments, subjects were presented with a varied group of texts and asked to sort them "according to type." The subjects were identified as high- and low-knowledge readers, graduate students and

undergraduates respectively. They did not receive special training for the experimental tasks.

When genre and subject matter were controlled, temporality was the feature that explained the results. The temporal and aspectual information of a text correlated with the subjects' classifications. All subjects put texts into three classes, identified by Faigley & Meyer as (a) narrative, (b) process-description, (c) definition–classification. Temporality was recognized on a continuum, Faigley & Meyer suggest. Passages with many events (narration) are at one end and passages with many statives are at the other (description, classification). In the middle are passages with unspecified time, often with modals such as *should*, *would*, *could*, etc.

This work confirms the importance of temporality that we have arrived at on a linguistic basis. The conclusions of Faigley & Meyer go beyond temporality as such: they claim that there is a cognitive basis for text types if genre is controlled. Their notion of "text types" is that of traditional rhetoric. Although traditional text types are not defined in linguistic terms, they are remarkably close to the Discourse Modes arrived at independently here, as I show in 2.4 below.

Time is one of the key factors that affects behavior, memory, and thinking. We are only dimly aware of the "biological clocks" in the brain that synchronize body functions with day and night and track the passage of time. Recent work has led to understanding of how the body keeps time through circadian rhythms, or "body time" (Wright 2002). However, we do not yet understand very much about "mind time." Mind time deals with the brain mechanisms for organizing time, and the consciousness and perception of time (Damasio 2002). Time is currently under study in anthropology, biology, neuroscience, philosophy, physics. That time plays a role in so many aspects of human life may partly explain its importance in cognition and discourse.

Example sources in this chapter (page nos. are given only for examples from books):

(1) Peter Robinson, *A Necessary End*, New York: Avon Books, 1989, p. 182.
(2) Eudora Welty, *Delta Wedding*, New York: Harcourt, Brace, 1945, p. 1.
(3) Barak fights on many fronts. *New York Times*, May 20, 2000.
(4) Mapping thoughts and even feelings. *New York Times*, May 20, 1999.
(5) Robert Mosbacher, Cheap oil's tough bargains. *New York Times*, March 13, 2000.
(6–8) Oliver Sacks, *The Man who Mistook His Wife for a Hat*, New York: Harper & Row, 1970, p. 11.
(9–10) After a victory, Ethiopia looks toward other fronts. *New York Times*, May 20, 2000.
(11–13) John Scott & Tony Pawson, Cell communication. *Scientific American*, June 2000.