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Discourse Structure and Anaphora
in Written and Conversational English

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy
in Linguistics

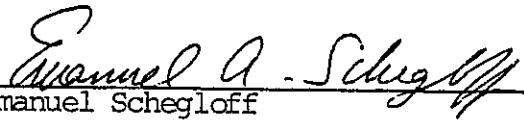
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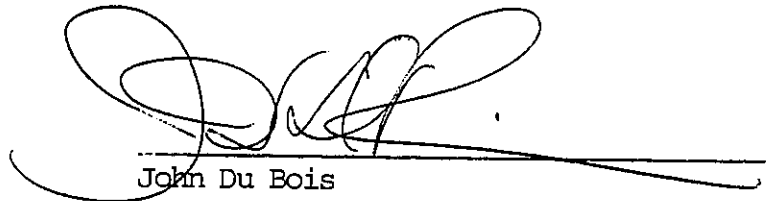
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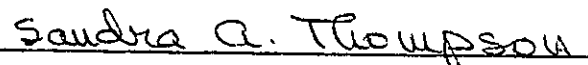
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The material presented here as rhetorical structure analysis is derived by my own musings from Rhetorical Structure Theory as developed by Mann, Matthiessen and Thompson (1982). Those authors are in no way responsible for the use I have made of their theory or for the way in which I have presented it.

The errors that remain in this thesis are of course my own.

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ABSTRACT OF THE DISSERTATION

Discourse Structure
and Anaphora in Written and Conversational English

by

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The problem of what motivates speakers and writers choose a given linguistic forms to refer to an item at a given point in a text has been of interest recently to researchers in linguistics, cognitive psychology, and artificial intelligence. While this research has provided many valuable insights into particular aspects of the problem, no work to date has tried to provide a view of anaphora that is at once comprehensive--encompassing a wide range of text-types and anaphoric environments--and sufficiently detailed to allow for specific predictions. The present study attempts to fill this gap by examining at a fine level of detail the patterning of anaphora in English in a variety of text-types.

The fundamental assertion of this thesis is that discourse anaphora cannot be understood unless we examine the hierarchical organization of the texts which are the sources of the anaphors. In this study I have therefore adopted three hierarchical models of discourse--one for each text-type explored--so that a hierarchical structure of each individual text can be correlated with the patterns of anaphora it displays. The models used are: rhetorical structure analysis (expository texts), story structure analysis (narrative texts), and conversational analysis (non-story conversational texts). These models are used as analytic tools for understanding the structure of the texts involved.

In addition, it is claimed here that structural factors are not the only principles that guide referential choice in discourse; other non-structural principles (such as disagreement and classification) also play a role in influencing anaphoric selection.

Finally, it is claimed here that anaphoric patterning varies quite widely across text-types, so that a statement of distribution that is based on one text-type cannot be accurate for the language as a whole, or for any other given text-type. This finding raises difficult issues concerning the nature of linguistic descriptions; in particular it calls into question the common aim in linguistics of describing how a particular linguistic item is used in the language, as opposed to in a particular text-type. It is suggested that such general claims about the uses of linguistic items may not be appropriate in the context of a multi-genre society.

1. Introduction

1.1 Major Themes of the Study

This thesis is a study of the distribution of pronouns and full noun phrases in monologue expository written English and in spontaneous conversational English. As such it is also an exploration of several related themes having to do with anaphora and the nature of texts. These major themes are discussed below.

The first, and most central, issue addressed in this thesis is the distribution of anaphoric forms in the two types of texts examined. Inasmuch as complete accounts of anaphora have never been offered for the two text-types (see chapter 2 for a review of the relevant literature), and no comparison of anaphora across text-types has been attempted, this study provides insights into a largely neglected phenomenon.

The second theme of the thesis centers on the belief that all types of human discourse are hierarchically organized, and hence that any treatment of a discourse phenomenon must seek an understanding of that phenomenon in the hierarchical structure of the text-type being used as a source of data. Texts may be produced and heard/read in a linear fashion, but they are designed and understood hierarchically, and this fact has drastic consequences for the linguistic coding employed.

The third, somewhat counterbalancing, point made in this study is that not all instances of anaphora can be accounted for by hierarchical structure; that is, certain patterns of anaphora "deviate" from what one could have expected using predictions based on the structure of the text, and these "marked" patterns of anaphora are used to accomplish other functional/interactional goals. These other functions have

traditionally been ignored by researchers working on anaphora (Linde (1979) and Duranti (1983) are important exceptions), and it is thus critical that they be brought up here.

The last major theme concerns the relationship between the data source used in linguistic studies and the scope of the claims made thereby. I would like to demonstrate in this thesis that detailed claims about the use of a particular piece of linguistic coding can be made for one text-type only; global statements about "how anaphora works in English," for example, should not at this point be made, and most certainly should not be made on the basis of the findings within one text-type. The distribution of particular linguistic systems differs too radically from one text-type to another to allow for such broad statements.

These issues, and other minor ones, are taken up in the chapters that follow.

1.2 Organization of the Thesis

The remainder of the thesis is organized as follows.

Chapter 2 presents a survey of the literature for the two major concerns of the study, discourse structure and discourse anaphora. Works from cognitive psychology, linguistics, rhetoric, sociology, and artificial intelligence are discussed and compared with the principles of the present study.

Chapter 3 describes the methods and materials used for the study. This chapter lays out the procedures used for collecting the data and explains the computer database which was used to gather quantitative evidence about patterns of anaphora, as well as giving a brief introduction to the methods of structural analysis employed.

Chapter 4 gives an introduction to one of the methods of structural analysis used in this study, Conversational Analysis. The basic units of the model are presented, and example passages are analyzed. This chapter is background for chapter 5, which details the actual anaphoric patterns found in the conversational texts.

Chapter 5 lays out the patterns of anaphora in the conversational material in terms of the hierarchical organization of the texts. Structural patterns, as well as non-structural (i.e., performing other functions) ones, are explored.

Chapter 6 gives an introduction to the method of structural analysis used for the monologue expository written texts, Rhetorical Structure Analysis. The basic units of the model are discussed, and example passages are analyzed. This chapter provides the background needed for the analyses offered in chapter 7.

Chapter 7 formulates the patterns of anaphora found in the expository written texts, using Rhetorical Structure Analysis as the tool for exploring the structural designs of the texts. The patterns of anaphora offered in this chapter, as in later chapters, are presented in terms of the hierarchical organization of the texts in which they occur.

Chapter 8 compares the anaphoric patterning established for the conversational and expository texts using quantitative and qualitative methods of comparison. Evidence is presented which demonstrates that the two text-types differ fairly strikingly in the distribution of anaphors they display.

Chapter 9, finally, pits the traditional "distance" theory of anaphora against another genre of English, namely monologue written narratives. It is shown that the

distance theory fails to account for a wide range of anaphoric facts and hence must be discarded in favor of a theory that specifically allows for the influence of hierarchical structure on anaphora. This chapter also briefly compares the two previously-examined text-types (expository written and non-story conversational) with written narratives to indicate how widely patterns of anaphora can vary even within a single modality. Conclusions are offered concerning the need in linguistic research to base claims about discourse phenomena on a wide range of text-types and the need to limit the extent of the claims to the text-type(s) actually examined.

2. Survey of the Literature

This chapter presents a survey of the literature for the two major concerns of the study: discourse structure and discourse anaphora. Works from cognitive psychology, linguistics, rhetoric, sociology, and artificial intelligence are discussed and compared with the principles of the present study.

2.1 Models of Discourse Structure

2.1.1 Introduction

By its very nature, a study of text structure must touch upon the work of several disciplines. Texts are produced by individuals, and thus are partly influenced by cognitive factors; but they are also produced for other individuals, and thus must be partly influenced by interactive and social factors. Moreover, texts appear in the real world via linguistic forms, thereby being partially affected by the linguistic system in which the writer and reader(s) function. In addition, texts need to be created by non-human producers; in recent years, computers have come on to the scene as language users, and this development has had its effect on text research. This portion of the thesis, as a survey of the literature on models of discourse structure, therefore covers Cognitive Psychology, Sociology, Linguistics, Rhetoric, and Artificial Intelligence.

2.1.2 Cognitive Psychology

Cognitive Psychology has recently become involved in analyzing text structure in order to determine the relationship between text structure and memory. The texts which have been used in these studies have usually been narratives, and the structures have been those of story grammars.

Work with the story grammar model became popular with Rumelhart's 1975 paper, in which he proposed a set of phrase-structure-like rules to describe the structure of narratives. According to Rumelhart's model, narratives consist of a Setting, an Initiating Event, and a Reaction to the Event. Each of these major components can be "re-written" as several smaller constituents; for example, the Reaction can be "re-written" as Internal Response + Overt Response. In turn, the Overt Response can be broken down into a Plan of action and some Attempt to carry out the plan. Some of these rules are shown below, in Rumelhart's own notation.

Story--Setting + Episode
Episode--Event + Reaction
Event--[Episode/Change of State/Action/Event + Event]
Reaction--Internal Response + Overt Response
Internal Response--[Emotion/Desire]
Overt Response--[Action/(Attempt)*]

While Rumelhart's story grammar model represents an admirable move in the direction of recognizing hierarchical structure in texts, and of recognizing the role of participant goals in determining narrative structure, there are at least two criticisms which can be raised against it. The first criticism is rather minor since it is based on the adequacy of the rules that Rumelhart proposed, and not on the theoretical foundation of the model. This first criticism was addressed by Mandler and Johnson (1977) in their paper "Remembrance of things parsed: story structure and recall." In analyzing stories, they found that Rumelhart's set of rules was inadequate for covering all of the structures found, and so they added rules to cover the new cases. In addition, they posited 3 relationships which could hold between nodes of a story grammar tree--AND, THEN, and CAUSE. But essentially the basic philosophy of the grammar approach is maintained. Thorndyke (1977) takes a similar tack and presents a slightly modified set of story grammar rules (see also Stein and Glenn, 1979).

The second, and more serious, criticism is based on the theoretical foundation of the notion of text grammars. Do all examples of a type of text follow a rigid and pre-determinable pattern? Is it theoretically possible to have an adequate and complete set of grammar rules for a given genre? My own work with texts indicates that a complete grammar of even a sub-type of texts is a theoretic impossibility, and I have therefore chosen to work within a much looser descriptive model of text structure. Within rhetorical structure analysis, there are no rules which a writer must follow in order to produce a coherent text; rather the writer is seen as choosing a pattern from among a collection of patterns according to her/his current communicative goals. This approach is not meant to imply that texts lack conventionalized structure, only that the conventions are much looser than a "grammar" model might suggest.

Not all text work within cognitive psychology operates within the model of story grammars, however. Van Dijk (1977) and van Dijk and Kintsch (1978) have described text structures using what van Dijk has called "macro-structures." Macro-structures are similar to what have been termed topic sentences by those involved in the teaching of "composition" in that they are semantic units which are entailed by a sequence of propositions: "we have rules for PARAGRAPH indentation which have a macro-structure nature: they mark sequences which somehow 'belong together', i.e., which belong to the same topic. A new paragraph thus indicates (sub)-topic change" (van Dijk, 1977:152). We see here again that texts are not simply strings of undifferentiated clauses, but are rather constructed of larger units which are realized by the linear clauses of the surface text. Furthermore, van Dijk includes a discussion of acts as an organizing principle in text structures: "acts simply do not merely follow each other at the same level: sequences of acts may be taken as one act, and some acts may have

secondary rank with respect to others, viz as preparatory or auxiliary acts" (1977:216). Unfortunately, both the discussion of macro-structure and the discussion of hierarchical act-structure are left in a preliminary and vague state.

Still within a cognitive framework, Warren, Nicholas and Trabasso (1979) have presented a model which is intended, it seems, as an alternative to story grammars. Their model is based on event chains and inferencing rather than on hierarchical structures. Although Warren et al admit the relevance of categories like Reaction and Event, they claim that these categories do not have to be represented hierarchically: "knowing about stories amounts to knowing about the kinds of permissible connections between events rather than particular higher order structures" (p.50). Viewing narratives as event chains, they claim, allows them to diagram the goals of more than one participant at a time, while story grammars are limited to tracing the goals of the main participant.

Other valuable work in the area of cognition and text structure can be found in Crothers (1975, and 1972), de Beaugrande (1980), Freedle (1979), Bransford (1979), and Kintsch (1974).

2.1.3 Rhetoric

One of the reasons for calling the model used in this study Rhetorical Structure Analysis is to show its connections to Rhetoric, which in some of its forms, is concerned--as I am here--with goal-directed and patterned texts. In my view, the aspect of Rhetoric which most closely touches the analyses I present here on texts (see chapters 6 and 7) lies in the aspect of writing known as arrangement, in which the writer organizes the information obtained through invention into a coherent discourse (see

D'Angelo (1975) for an historical discussion of these terms). It is interesting to note here, however, that the recent work in Rhetoric which seems to have focused, as I have, on patterning in texts comes largely under the label of invention, i.e., that part of composition in which the writer probes the subject matter to determine what to say. This conflict between positing patterns at the level of arrangement and at the level of invention is more apparent than real, and is based in large part on the extreme interdependence of the two parts, as can be judged from the title of one article "The siamese twins: inventio and dispositio" (Knapp and McCroskey, 1966), and from the following comment in D'Angelo:

In the conceptual theory of rhetoric, the concept of arrangement is closely connected to that of invention....In other words, in the inventive process, the writer begins with a mental image or plan of the discourse which is to be produced. This image... corresponds roughly to the order of the discourse itself....The formal principle or process of invention is therefore implicit in any discourse. If, for example, the predominant organizational pattern of a mode of discourse takes the form of a comparison, then the writer must have gone through the inventive process of comparing in order to produce that pattern. (p.56)

Given this view of invention and arrangement, I think it is safe to say that anything done under the label of invention is as relatable to the present study as work done under the label of arrangement, and since most of the work looked at deals with the topics of invention, this section will necessarily be more concerned with invention than with arrangement. My basic orientation towards arrangement should be kept in mind, however.

As mentioned above, invention is the art of probing one's subject matter to determine what to say about it. The tools of probing are known as the "topics of inventions" (topoi), and are alternatively thought of as stock arguments to be used in any persuasive oration or as heuristics for "feeling out" any subject matter. As

D'Angelo suggests "The first line [of development] interprets the topics as being content-laden, to be used as subject matter or as prefabricated arguments that could be directly inserted into a discourse. The second line of development views the topics as abstract and analytical, to be used to probe any subject whatever" (1975:38). Topics are thus in some ways related to the rhetorica structures, and it is interesting to see what scholars have had to say about them over the centuries.

Winterowd (1975) offers a useful characterization of the types of topics that have been proposed in the literature since Aristotle's time. He distinguishes three classes of topics. I will deal with each of these topic-types below.

1. **content-oriented nonfinite set of topics:** such topics have been proposed by Aristotle, and can be found in modern handbooks of writing dealing with paragraph development.
2. **content-oriented finite set of topics:** D'Angelo (1975), Young, Becker and Pike (1975) and Burke (1969) have offered such topics.
3. **form-oriented finite set of topics:** Winterowd himself has proposed a set of such topics in "The Grammar of Coherence" (1975).

I will deal with each of these topic-types individually. In Aristotle's day, rhetoric was viewed as a means of attaining one's communicative goal--often, in public speaking, a goal of persuasion. D'Angelo defines the classic view of rhetoric as "the art of speaking or writing effectively, the art of verbal communication, and the art of effective expression" (1975:2), where "effective" is usually synonymous with persuasive. According to classical rhetoric, an effective discourse consisted of 5 parts:

- the introduction
- the statement of situation
- the proof

- the refutation of one's opponent's objections
- the conclusion

A writer within this mold would further probe the subject matter of her/his discourse using the topics (topoi) of invention. The topics proposed by Aristotle were content-oriented and nonfinite and included definition, partition, comparison, analogy, antecedent, consequence, cause, effect, genus and species (see D'Angelo, 1975).

In classroom books on writing, content-oriented nonfinite sets of topoi creep in under the rubric of "methods of paragraph development." These methods usually include definition, classification, comparison and contrast, description, and exemplification (see e.g., Brooks and Penn Warren; 1972). While these "methods" are much diluted in their theoretic force, they do recognize the patterns present in even the simplest freshman composition, as well as the goal-directed nature of those patterns.

D'Angelo, in his book A Conceptual Theory of Rhetoric, offers what he considers to be a set of content-oriented finite set of topics. He argues in favor of the view of topics as abstract and analytical, and further claims that this view "conceives of the topics as symbols of abstract, underlying mental processes which take place in the brain" (p.41). Rhetorical patterns thus reflect conceptual patterns for D'Angelo. His two main categories of topics--logical and nonlogical--mirror this philosophy in that these are taken to be the two basic types of thought. His taxonomy of logical topics includes description, definition, classification, exemplification, kind, degree, similarity, narration, process, cause-effect, syllogistic progression, and iteration. Topics included under nonlogical are imagining, symbolizing, free association, transformation, and nonlogical repetition. D'Angelo's selection of topics is thus considerably more diverse

than that of the typical rhetorician, and although the set is claimed to be finite, it is not clear that it actually is, or that the substantive issue of finite vs. nonfinite sets has been addressed.

Young, Becker and Pike (1975) propose another content-oriented but finite set of topics which is based metaphorically on modern physics. Their three topics are the particle view, the wave view, and the field view. The particle view examines the distinctive features of the item under consideration, the wave view examines the continual development of that item over time and the larger process of which it is a part, and the field view examines the functional elements of the item. In their view, the exploration of these three aspects of a concept is the foundation of any coherent composition.

Burke, in "The five key terms of dramatism," presents agent, agency, act, purpose and scene as the Pentad topoi. This pentad is clearly utilized in modern journalism under the labels of who, what, where, when, and why--the 5 w's--although agency (how) seems to have been omitted, and scene is realized by two terms, where and when. In Burke's view, then, a complete composition will thus discuss these five aspects of any given event.

As Winterowd has pointed out, the parts of the classical oration are also content-oriented and finite. These parts are discussed above in connection with Aristotle: they are introduction, statement of situation, proof, refutation of opponent's objections, and conclusion.

Form-oriented sets of topics are somewhat rarer in the literature than are

content-oriented topics. Winterowd himself proposes a finite set of form-oriented topics which he says are relationships which hold "among any segments of discourse" (1975:231). These relationships are:

coordinate--and
observative--but, on the other hand
causative--for
conclusive--so
alternative--or
inclusive--:
sequential--first...second,etc.

The set of rhetorical structures (R-structures) I have proposed for this study, if viewed from the perspective of invention, could possibly fit under the classification of content-oriented finite topic-sets. However, the R-structures differ from all of the types of topics discussed above in at least two ways: first, the structures proposed in this report are explicit and shown to be recursively embeddable; in addition, the R-structures have greater internal structure to them than do any of the topics or relationships discussed here--since each of the R-structures consist of a nucleus and one or more adjuncts--and thus make more explicit claims about the relationships that exist within larger topic-like segments of a text. My work on rhetorical structures has suggested that one of the crucial tasks--and one of the main goals--of the writer is to guide the reader's attention effectively through the text. Since language production is linear and thought is almost certainly nonlinear, a major part of attention-guiding must be directed to helping the reader identify which portions of the linear string of text form more or less tightly bound units.

2.1.4 Artificial Intelligence

Recent work in Artificial Intelligence has attacked just this issue of text structure and attention. Grosz (1977) gathered task-oriented dialogues and found that these dialogues were structured parallel to the tasks they accompanied. In particular she found that the linguistic form taken by a NP referring to an object in the task was determined by the focus of attention at that point in the task. In one striking instance she found that a pronoun was used to refer to the object being built (the main task) even though that object had not been mentioned for over 30 minutes. From this example (and others like it) Grosz concludes that "when the resolution of definite references is considered from the perspective of focus, questions like how far back in a discourse to look for a referent are no longer relevant. Instead, the problem is how long an item stays in focus and what can cause a shift in focus" (p.6). That is, units in texts reflect units in focus of attention, which Grosz calls "focus spaces." In Grosz's work, the opening and closing of focus spaces is crucial to the detection of units and subunits of the dialogue, which in turn is essential for identifying referents.¹

Reichman (1981) has looked at attention and structure in naturally occurring conversations and has confirmed many of Grosz's findings for task-oriented dialogue. However, instead of postulating focus spaces as the determining force underlying textual units, Reichman postulates "context spaces": "in this thesis, I attempt to characterize a level of discourse structure in which utterances fulfilling a single communicative goal...are said to lie in a single discourse unit. These units, I refer to as context spaces" (p.15). Context spaces are thus more explicitly connected with speaker goals and conversational "moves" than are Grosz's focus spaces (which seem

¹See the second half of this chapter for a more detailed discussion of Grosz's work.

to be involved basically with attention), but both systems are intimately concerned with identifying the underlying source of unity in linguistic texts.²

Another relevant piece of research in AI is McKeown (1982). In this dissertation, McKeown develops a computer system (called TEXT) which allows users to ask questions of a database. In this study, she examines one of the possible relationships between what she calls rhetorical predicates (following Grimes, 1975) and the focusing mechanisms established by Grosz and Sidner (1979): "The main features of the generation method developed for the TEXT strategic component include (1) selection of relevant information for the answer, (2) the pairing of rhetorical techniques for communication (such as analogy) with discourse purposes (for example, providing definitions) and (3) a focusing mechanism" (p.12). In the TEXT system, the semantics of the question being asked of the database triggers the selection of a relevant knowledge pool; on the basis of this knowledge pool, a rhetorical "schema" is selected from a set of possible schemas, and the schema chosen then in turn is used to guide "the selection of propositions" from the knowledge pool. The focusing mechanism is used to create discourse coherence.

Within McKeown's work, a schema is considered to be a pattern of rhetorical predicates (similar to my R-structures). The specific rhetorical predicates McKeown suggests include Attribute, Equivalent, Specification, Explanation, Evidence, Analogy, Constituency, and Cause-Effect. Some of the schemas which are formed on these predicates are the Attributive schema, the Identification schema, and the Constituency schema.

²See the second half of this chapter for a fuller discussion of Reichman's work.

2.1.5 Linguistics

Within Linguistics, the work which is most closely related to the present study in terms of modeling discourse is the text analysis research of Grimes (1975, 1980), Beekman, Callow and Kopesec (1981), and the English Language Research at Birmingham.

Grimes (1975) presents a taxonomy of rhetorical predicates, which are predicates whose arguments are related non-lexically. These predicates are parts of larger propositions. For example, the surface sentence he saved the day: he made three touchdowns (Grimes, 1975:213) is represented by the rhetorical proposition

Z gives details for X

the predicate specifically, and the arguments Z (he made three touchdowns) and X (he saved the day). Predicates can take anything from lexical items to large "semantic subtrees" as arguments.

Grimes finds that the basic partition for rhetorical predicates is between paratactic and hypotactic predicates. He says that "PARATACTIC predicates dominate all their arguments in coordinate fashion. HYPOTACTIC predicates have as one of their arguments, the CENTER, a term with respect to which the proposition as a whole is subordinated to some other proposition by being added to it as an extra argument" (p.209). For example, in the illustrative sentence above, he saved the day: he made three touchdowns, argument X, which represents the general statement in the hypotactic general-specific predicate, is the center and argument Z is the extra argument. A third type of predicate, the NEUTRAL predicate, can take the form of

either a hypotactic or a paratactic predicate. Grimes' paratactic predicates are Alternative and Response; his hypotactic predicates include Attributive, Equivalent, Specifically, Evidence, Location, Time and Constituency. There are two neutral predicates, Collection and Covariance.

As we'll see in chapter 7, rhetorical structure analysis incorporates many of these same notions. R-structures (roughly equivalent to rhetorical predicates) can scope over units as small as propositions or as large as an entire text (Grimes' semantic subtrees). In addition, hypotactic predicates and the notion of center and extra argument are captured in rhetorical structure analysis by the concepts of nucleus and adjunct, while paratactic predicates and the notion of equal-status propositions are captured by multi-nucleus R-structures, such as List and Disjunct.

Beekman, Callow and Kopesec (1981) present a similar, though somewhat distinct, view of text structure. Although they do not explicitly use the notions of rhetorical predicates and rhetorical propositions, preferring instead to talk about relationships between clauses (and higher units), it is clear that they really do maintain a notion of rhetorical predicate, given the types of relationships they discuss (e.g., generic-specific, reason-result, means-purpose).

According to these authors, there are three essential features of a text: unity, coherence and prominence. Coherence and prominence are especially important, because clauses (and larger units) are said to group together into clusters, with one (sometimes more) unit being prominent and receiving the label HEAD. These clauses thus stand in a head-support relationship. In some situation, no one clause is more prominent than the others; in this case they are all HEADS, and are said to stand in an

Addition relationship. Head-support and Addition thus seem to be parallel to Grimes' hypotactic and paratactic predicates, respectively.

It is clear that the notion of head-support relationship is similar to the relationship in Rhetorical structure analysis called nucleus-adjunct.. While in my work assignment of the labels nucleus and adjunct is based on the inferred goals of the writer, in Beekman et al, prominence, and the label HEAD, seems to be assigned on the basis of grammatical marking; that is, subordinate clauses are usually support to their main clause HEAD. While the relationship between grammatical subordination and lack of prominence may perhaps be valid, this relationship has not been demonstrated empirically, and should thus not be taken as basic in assigning prominence.

Several other linguists have touched on inter-clausal relationships in describing texts. Longacre (1976) posits 9 basic types of predicate combinations. These are conjoining, alternation, temporal, paraphrase, illustration, deixis, attribution, and frustration. He does not go far beyond the level of the sentence and does not discuss hierarchical structure in relation to clause combining.

The English Language Research studies at Birmingham organize conversational texts within the framework of a hierarchical model. In this model, large units consist of smaller cohesive units, giving the model its hierarchical nature. The basic units are the act and the move. The act is the smallest unit, and is said to be "bound" in that it cannot occur by itself. Acts are grouped into moves, which are the "minimal free interactive unit[s]" (Burton, 1980:124). Examples of acts and moves are given below.

<u>Acts</u>	<u>Moves</u>
marker	aside
	framing

starter
elicitation
check
prompt

acknowledge
comment
bid
cue

focusing
opening
supporting
challenging

The next largest unit is the transaction, which consists of a series of moves. A conversation is presumably made up of one or more transactions.

While this work does recognize the hierarchical nature of the organization of conversation, it appears to pick up on levels of structure that are not necessarily crucial to the organization of talk as interactants view it. That is, the units here are units produced by individuals, rather than interacting parties. As we'll see in chapter 4, Conversational Analysis proposes a different set of units which are based on contributions by at least two parties, namely the adjacency pair and the sequence. An adjacency pair consists of one action by one party which makes relevant the production of another action by another party (e.g., question-answer). In Conversational Analysis, then, the structure of talk is grounded in multi-party participation, while in the ELR work the structure of talk appears to be organized around the contributions of single speakers. The former approach seems to me to be the more revealing.

2.1.6 Sociology

The work of Sacks, Schegloff and Jefferson (1974), Atkinson and Drew (1979), Pomerantz (1975), Schenkein (1979) and others is typically referred to as Conversational Analysis and has to do with understanding the organization of talk as real live participants understand it. Since this work provides the foundation for the analyses given in chapter 5, it will be discussed in detail in chapter 4; hence no further discussion of it will be given here.

2.1.7 Summary

Hierarchical text structure has been studied in several academic domains, with different areas of focus. While many of the models examined in this portion of the chapter provide valuable insights into the nature of texts, they are in general too vague, too restricted, and/or not based on an extensive analysis of real texts. The models used in this study, by contrast, are the outgrowth of substantial explicit work on a wide range of naturally-produced texts (both written and conversational); they thus represent the best that this line of research has produced, at least at the present time.

2.2 Theories of Discourse Anaphora

2.2.1 Introduction

Within the last ten years, work on discourse anaphora has blossomed in scope and depth. What had been a completely neglected area of linguistic behavior has become a source of interest to researchers in linguistics, artificial intelligence, and cognitive psychology. The present section reviews the highlights of these recent studies.

2.2.2 Linguistics

Within linguistics, the major proposals concerning discourse anaphora have been Givón (1983), Hinds (1977), Linde (1979), and Clancy (1980). Since Givon (1983) represents the more traditional view of anaphora across sentences, I will discuss it first.

Givón (1983) deals with anaphora in order to understand the linguistic coding of the concept topic. He proposes the Continuity Hypothesis, in which it is claimed that

The more disruptive, surprising, discontinuous or hard to process a topic is, the more coding material must be assigned to it (original emphasis, p.17).

According to Givon, the factors which influence disruptiveness or discontinuousness include:

1. Distance to last mention. "If a topic is definite and returns to the register after a long gap of absence, it is still difficult to process. The shorter is the gap of absence, the easier is topic identification; so that a topic that was there in the preceding clause is by definition easiest to identify and file correctly" (original emphasis, p.8).
2. Ambiguity from other referents. "If no other topics are present in the immediately preceding discourse environment...topic identification is easiest. The more other topics are present in the immediate register, the more difficult is the task of correct identification and filing of a topic..." (original emphasis, p.8)
3. Availability of thematic information. "Thematic information available from the preceding discourse could help in topic identification--especially when other topics in the register may potentially interfere. Such information establishes specific probabilities...as to the topic identification within a particular clause and in a particular role" (original emphasis, p.9)

The first two factors, distance and ambiguity, are the major foci of the studies in Givon (1983). The third factor is merely hinted at in the introduction and then neglected. Thus although Givon makes explicit mention of something that sounds slightly structural and hierarchical, the end result is a model that views anaphora as a function of distance and a rather vague notion of ambiguity. In an impressive collection of data from several unrelated languages, pronouns are shown to be used when the distance to the last mention is the referent is small (and there are no interfering referents), while fullNP's are shown to be used when that distance is somewhat greater (and/or if there are interfering referents).

What does such a model imply about text structure and the flow of attention through a text? From my reading of the claims in Givon (1983), the following analysis seems reasonable. If the degree of a referent's continuity with the preceding discourse

is measured in clauses to most recent mention, then we can assume that continuity derives from the surface nature of the clauses, rather than their textual function, and that (presumably) all clauses are equal in their contribution to the measure of continuity (except perhaps relative clauses, which were excluded from the continuity counts). That is, whether a clause is an aside about a character, a source of evidence to support a claim, etc. is irrelevant to the count: all clauses have the value 1 for the purposes of measuring continuity. The model thus assumes that discourse is made up of an undifferentiated string of clauses which follow one another in time but do not form larger units that could perform communicative functions in relation to one another.³ Attention must be equally flat, if all that really matters is distance, since there would be no need to indicate to the reader that something new is being started, or that something old is being closed off, or that some interruption--after which the interrupted unit will be resumed--is about to occur. Text structure and attention flow must thus be flat and undifferentiated in this model of discourse.

My criticism of the continuity hypothesis thus rests not on the specific quantitative predictions made--clearly the gross claims of distance are borne out by the cross-linguistic counts--but on the model they presuppose and the accompanying roughness of the predictions. In chapters 5 and 7 I discuss situations in which the continuity hypothesis fails and the approach adopted here succeeds.

While it must be acknowledged that much of the emphasis on distance and ambiguity in the continuity hypothesis arises out of a desire to provide quantitative evidence (and hierarchical text structure is hard to quantify), the overemphasis it

³Givon does mention units such as paragraph, section, chapter, etc., but makes no attempt to incorporate them into the quantitative portion of the study.

produces on the linear nature of texts (and the encouragement it brings to such a view) needs to be recognized. It seems to me that at this point in the study of anaphora it may be wiser to proceed cautiously with a qualitative approach that incorporates a hierarchical structural view of texts to see if we can understand the basic mechanism of anaphora before we begin collecting rough quantitative evidence.

In addition, we should be wary of general claims about any text-situated linguistic phenomenon that are based on data from only one genre (in this case written monologue narratives). As I will try to show in the following chapters, there can be a fair amount of variety in the way anaphora patterns itself, even within, say, written texts; this fact becomes extremely apparent if one compares anaphora in narratives and in pieces of expository writing. Such genre-based differences are to be expected and should be built into any theory of linguistic behavior.

Hinds (197) takes a slightly more structural approach to anaphora.

...I have shown that paragraph structure influences the appearance or nonappearance of pronouns. Paragraphs are made up of segments which are closely connected strings of sentences which develop the paragraph topic. Within a segment there will be a single peak sentence which contains the most important information in that segment. Other sentences in the same segment are semantically subordinate to the peak. Full noun phrases occur in peak sentences while pronouns occur in nonpeak sentences. (p. 11)

It is clear from this passage that Hinds recognizes a type of structuring that Givón does not: Hinds' notion of "peak" sentence moves in the direction of allowing for

hierarchical, textured, structure. We see some explicit claims about paragraph structure and direct correlations thereof with anaphora. Hinds' work is thus in some ways more compatible with the view of texts and anaphora proposed here than is Givon's.

While Hinds' hypothesized association between peak sentence and full noun phrase is intriguing, I think it is fairly easy to show that it could not be the only principle at work in determining patterns of anaphora.⁴

If Hinds' principle is the only factor determining anaphora, we should expect that each paragraph will have a peak sentence, and that each peak sentence will have its references done with fullNP's.⁵ We should thus not expect to find pronouns in peak sentences. Consider the following text, however, in which the peak sentences of the last two paragraphs (the only sentence in each paragraph) contain pronouns instead of fullNP's.

Naftaly S. Glasman has been appointed dean of the Graduate School of Education at Santa Barbara.

A professor of education, Glasman has been a member of the UCSB faculty since 1968 and acting dean of the School of Education since January.

He has served as chairman of the faculty committee on effective teaching and has chaired and organized two national conferences on effective teaching.

Recently he was appointed to a statewide committee on the professions,

⁴In fact in accounting for the anaphora in my own texts, I found no reason to postulate a general correlation between fullNP and R-structure nucleus (somewhat similar to Hinds' peak sentence) given that more specific and motivatable correlations were discoverable (see chapter 7 for the details of anaphora in expository prose).

⁵This assumes that "peak sentence" is an easily identifiable class of objects; in fact it is not, but I will suppose for the sake of the present discussion that such sentences can be identified in real texts.

as part of the UC graduate student affirmative action program. (University Bulletin, 7/28/80)

The obituary of Joan Kelly which is cited at length in chapter 7 provides a source of instances in which all of the references (except the first) to the relevant person are done with pronouns, regardless of the "peakness" of their sentences. A revealing paragraph from this text is presented below.

In the last 1960s her interests turned to feminism and socialism. Her writings on women's history helped to define the field. She co-authored Household and Kin (The Feminist Press) and published widely in academic journals. A collection of her work, Women, History and Theory, is being published posthumously by the University of Chicago Press. She was a pioneer in the women's studies movement, innovating women's studies courses and programs at Sarah Lawrence College and City University of New York. She helped to found the Committee to End Sterilization Abuse. (Ms., 12/82)

We can thus easily find cases in which pronouns occur in paragraph-peak sentences.

In addition, if Hinds' principle is the only factor influencing anaphora, we should not expect to find texts in which fullNP's occur in nonpeak sentences. In the following text, however, a fullNP is used in a nonpeak sentence: the paragraph-initial sentence presents a claim and the sentence in which the fullNP occurs provides details of that claim, hence the former ought to be considered the peak sentence (the reference in question is underlined).

Ecologist Gene E. Likens will deliver the 1984 Steinhaus Lecture on "Acid Rain: Causes, Consequences and Controversies" at 4 p.m. Thursday, Jan. 12, in the Village Theatre.

Dr. Likens, considered a world authority on the acid rain problem, is director of the Institute of Ecosystem Studies at the New York Botanical Garden in Millbrook. His research has focused on the ecology of lakes and northern hardwood forests.

Acid rain, caused by the burning of fossil fuels, is suspected of threatening aquatic and plant life. The high acid content of some lakes is believed to be killing fish species, and Likens has found reduced tree growth in eastern North American forests.... (UCItems, 1/9/84)

Furthermore, Hinds does not allow for the possibility that a paragraph might not have a single peak sentence, but might instead have a series of equal-status sentences. In the following paragraph, for example, all of the sentences appear to be equal in status, even though the first contains a fullNP and the others pronouns.

Jackson is a Phi Beta Kappa graduate of UCLA. She received her J.D. degree from the Harvard Law School in 1970. Prior to her UC appointment, she was associate solicitor for general law in the U.S. Department of the Interior in Washington, D.C. (University Bulletin, 4/20/81)

Since each paragraph can only contain one peak sentence, we should not expect to find more than one fullNP referring to the same person in a single paragraph. The following paragraph, however, contains two coreferential fullNP's.

Swift, who recently composed a lengthy, complex song cycle for soprano and symphony orchestra, chose to have the UCD Symphony premiere the work, which is based on poems of Walt Whitman. During rehearsals of "Specimen Days," Swift was highly supportive, moving quietly through the orchestra, giving the students instructions on techniques for performing such music, and encouraging them. (University Bulletin, 12/15/80)

Thus, although Hinds' hypothesis provides a plausible account of distribution of pronouns and fullNP's, it is not apparent that it is altogether accurate for describing anaphora in expository texts.

Linde (1979) explicates the distribution of it and that in apartment layout descriptions using a tree diagram to represent the structure of the discourse and the notion of focus to relate the tree diagram to the current portion of the discourse.

The focus of attention can be represented as the pairing of the underlying tree structure of the discourse with a pointer that marks a particular node of

W's!
You misread
... should be
one segment
↓
peak
paragraph
↑ ↑
seg1 seg2
↑ ↑
peak peak

the tree. The focus of attention is on the discourse node marked by the pointer. (p.345)

Pointer movement along the tree is accomplished in two ways: either by addition of a node, or by a return to a previously established node. In the texts Linde examined, the addition of a new node on the tree is triggered by the description of a new room in the apartment. A new room thus indicates a new area of focus.

The rules for anaphora that Linde proposes are very similar to rules we will see in the Artificial Intelligence research, particularly Grosz (1977). Although these rules are not categorical, it appears that the highest node on the tree--the entire apartment--can always be pronominalized (compare Grosz's findings for the main task); in all other cases, it is used to refer to an item within the node in focus and that is used to refer to an item outside of the node in focus. Moreover, Linde is particularly innovative in recognizing that factors other than discourse structure enter into the choice of which anaphoric device to use; she suggests that contrast is critical in the distinction between it and that:

In the data of this study, there are 38 cases that contain a reference within a discourse node. Of these cases, 34 use it....There are 4 apparent exceptions using that. All of these involve contrast, the current evaluation contrasting with a previous evaluation. (p.348)

In Linde's work, then, we have an even stronger attempt at relating the discourse structure (and other factors) to patterns of anaphora.

Clancy (1980) provides a very rich and detailed look at anaphora in short spoken English and Japanese narratives. Although the notion of discourse structure is not fully integrated into the account (cognitive factors of distance and interference are prominent here, as in Givon (1983)), Clancy brings out the association between

discourse units and fullNP, and notes that this is in some sense an unusual and optional use of anaphora:

In English speakers apparently feel that inexplicit reference [i.e., pronoun or zero anaphora] is still comprehensible after the passage of two clauses...or of one sentence...; Japanese speakers agree....In both languages at least 97 percent of all inexplicit references were made when no more than one other character had been mentioned. Yet as the exceptions to these trends reveal, time and interference cannot account for all referential choices. Therefore, in the following sections of this paper the content of the narratives will be examined in order to clarify how discourse structure may have influenced referential choice... (pp. 143-144)

The main discourse structures Clancy finds influencing referential choice are episode boundaries, wherein a new line of action starts; and world shifts, in which the speaker moves from one mode of talking to another (e.g., from digression to the plot line, or from film-viewer mode to story-teller mode). Both of these structure-types tend to be associated with the use of fullNP's.

Thus although Clancy does not provide a full account of the relationship between narrative structure and anaphoric patterning, there is a very strong attempt here to move beyond treating narratives as strings of clauses and hence to move beyond treating anaphora as responsive only to linear notions of distance and interference.

These four approaches represent the major attempts within linguistics at understanding anaphora in extended texts. Intriguing work on anaphora has also been done in artificial intelligence, and it is to this field that I now turn.

2.2.3 Artificial Intelligence

The most important breakthroughs in research on anaphora have come within the field of Artificial Intelligence, notably in the work of Grosz (1977), Reichman (1981) and Sidner (1983). These studies are discussed in some detail below.

Grosz (1977) studied the structure of task-oriented dialogues between an expert and a novice. The two parties were faced with the joint task of assembling a mechanical pump, and they were placed in separate rooms so that they could communicate only through the use of computer terminals. Grosz found in this study that the structure of the dialogue paralleled the structure of the task, such that the task was divided up into main task and subtasks and the dialogue was divided up into main dialogue and subdialogues. Furthermore, she found that when one subtask (and subdialogue) was completed, the participants regularly returned to the main task (and main dialogue). The most intriguing finding of her study was that the item of the main task/main dialogue (i.e., the pump) could in such a return be immediately pronominalized, even if what otherwise might be considered "interfering" referents were present in the just-completed subtask/subdialogue.

Another indication of the segmentation phenomenon is the use of pronouns whose referents lie far back in the previous discourse. In every case, the pieces of dialogue skipped over are whole segments relating to some distinct subtask or subtasks. (p.22)

This finding led Grosz to postulate the existence of "focus spaces," in which various elements are relevant for a given piece of discourse:

When the resolution of definite references is considered from the perspective of focus, questions like how far back in a discourse to look for a referent are no longer relevant. Instead, the problem is how long an item stays in focus and what can cause a shift in focus. (p.6)

Grosz thus explicitly denies the validity of the distance view of anaphora and replaces it with a structurally based approach, in which the hierarchical structure of a discourse determines which anaphoric device will be used.

Reichman (1981) makes very similar claims about anaphora in naturally occurring conversations between friends. While the structural units in Grosz's work are limited to one relation (dialogue-subdialogue), Reichman distinguishes 12 relations and identifies the clue words for each relation:

<u>Linguistic marker</u>	<u>Relation</u>
because/like/when	support
so	restatement of point being supported
incidentally/by the way	interruption
anyway	return after interruption
yes/right but	indirect challenge
(no) but	direct challenge
all right/okay but	concede subargument
but look/listen/you see	prior logical abstraction
but...(though)	contrastive respecification
it's like/the same as	analogy
now	further development

In contrast to Grosz's focus spaces, which were meant to describe a unit of attention, Reichman introduces the notion of context space:

...I attempt to characterize a level of discourse structure in which utterances fulfilling a single communicative goal (i.e., constituting a single conversational move) are said to lie in a single discourse unit. These units, I refer to as context spaces. (p.15)

According to Reichman, context spaces can have various statuses that reflect

their current prominence in the conversation. For example, a context space can be active, controlling, open or closed.⁶ The definitions of each of these states--taken directly from Reichman (1981)--are given below.

Active	The context space in which the utterances currently being stated are placed. There can only be one active context space at a given point in the conversation.
Controlling	The context space in direct relation to which an active context space is being developed. There can only be one controlling context space at a given point in the conversation.
Open	A previously active context space that was interrupted before completion of its corresponding communicative goal.
Closed	A context space, discussion of which is believed completed for the present time. (p.86)

In addition to notions of discourse structure, Reichman postulates several referent focus level rules which are said to interact with anaphora in certain ways.⁷

These rules involve the previous linguistic coding for the referent and its grammatical role. A few examples of these focus level rules are given below.

F1. A constituent appearing in the subject position of an utterance is assigned a high focus level assignment.

F10. An entity referenced by name is assigned a medium focus level assignment.

F11. An entity referenced by description (e.g., "her boy friend") is assigned a low focus level assignment. (pp.121-122)

Reichman's claims about anaphora are quite intricate, but one of the main factors which is said to influence anaphora is whether the referent in question is in the "current consciousness" of the participants:

⁶There are three other context space statuses: controlling*, generating, and superseded.

⁷Basically, a referent must have a high focus level assignment in order to be pronominalized.

One aspect of pragmatic control of reference is limitation of a pronominal form to refer to a discourse element in high focus in one's current consciousness. (p.118)

where current consciousness is said to hold the portion of the discourse contained in the currently active and controlling context spaces.

Using passages from naturally occurring conversations, Reichman produces a convincing argument that anaphora has nothing to do with distance and has everything to do with the structural organization of the talk. Her work thus demonstrates that a structurally-based approach to anaphora can make interesting and accurate predictions even for discourse-types whose structures are complex and not overly rigid (Grosz and Linde both worked on data whose internal structure was simple and highly specified). The study is limited, however, in that it gives a detailed treatment of arguments but provides almost no discussion of other types of everyday talk (announcing of news, making plans, etc.); furthermore, there is no mention of how this approach to anaphora could be carried over to written texts. Finally, as with most of the studies examined here (Linde (1979) is the main exception), it is assumed in this work that the only source of influence on anaphora is the hierarchical organization of the discourse; in fact, as we will see later in the thesis (chapters 5 and 7), there are many non-structural factors which affect anaphora, including interactional forces and emotional attitudes. Thus, while it is crucial to recognize the significance of hierarchical structure to the mechanism of anaphora, it is equally critical to recognize the significance of other factors which are not based in the structural organization of the discourse.

Although Reichman's findings on anaphora, as far as they go, seem basically

convincing to me and in general are in keeping with my own findings, I disagree with a few of her theoretical assumptions about anaphora, and with a few of her minor claims about anaphoric distribution. In particular, her assumption that pronominalization is limited to one entity at a time is shown to be invalid in the light of examples like the following:⁸

- H. Does Peterson have a copy of the paper.
that you could read.
(1.2)
- S. Evidently Ward's not letting him, (0.6) talk about
what he wanted to talk about,
(0.5)
- S. M-he's making him talk about
something else that everybody's heard.⁹

In addition, she claims that the discourse move "further development"--signalled by the marker now--does not block pronominalization; that is, according to her rules, if a referent is mentioned in one context space, and then a further development move is taken which contains another mention of that referent, this second mention will be done with a pronoun. I have several examples which indicate that this proposed pattern does not always hold:

- A. This-this-this gets to him [i.e., Johnson] I think,
A. I uh
A. It's understandable,
A. I j-
A. It's gotten to people before,
B. Mm hm,
A. Now the-the big problem it seems to me, that
Mister Johnson faces

⁸"Focused processing is further mirrored in the fact that we even seem to limit discourse pronominalization to a specific single entity considered to be in the highest focus in a relevant discourse context" (p.55).

⁹I have normalized spelling in these examples for ease of reading.

- B. I have a son in service, and believe me my son is thoroughly,--uh one hundred percent spoiled,
- A. Mhm,
- B. But one thing we have said to him: "When you go in the service, you must perform if you don't perform one hundred percent you are not welcome back in our house."
- B. Now,
- B. I don't believe in uh--eh--in uh not giving out, all information, and I, th-think that I, made my son, one hundred percent, that he would, perform
- A. Again,
- A. I think one of the problems when you talk to somebody like Dan, or any one of a number of other people is, "What is this 'we' stuff."
- A. Uh,
- A. Now,
- A. Dan Watts writes a magazine, and it's a fairly successful magazine

It may be that these examples, which all come from a radio talk show, are idiosyncratic to the person who produced the relevant utterances (the talk show host) and thus do not form a coherent and general phenomenon; nonetheless, they are potentially problematic for the analysis Reichman has proposed and as a result raise questions as to its validity.

Reichman's approach to anaphora and text structure is the one that is closest to my own. Nonetheless, I chose not to work within context space theory itself because of problems with this theory as presented in her dissertation.

First, it is too limited to apply to a wide range of data (even if the data were limited to conversations). That is, the twelve relations provided for (with their cue words) do

not cover the vast number of activities interactants engage in when they talk (or when they write). The theory does not accomodate such social activities as requesting, offering, inviting, questioning, promising, etc., nor does it accomodate organization produced by two-party interaction, such as the units characterized in chapter 4 as adjacency pairs (question-answer, request-comply, invitation-acceptance, etc.). Furthermore, certain basic informational relations do not appear in the model, such as background, members in a series or list, elaboration, conditional, circumstance, etc. (see chapter 6 for a discussion of these relations in the rhetorical structure analysis model).

Second, the model assumes a strictly cognitive and non-contingent basis for anaphora, such that context spaces are seen as corresponding to mental boxes which pop open and shut according to the structure of the discourse. However, as we will see in chapter 5, the closedness (and openness) of a discourse unit is--at least in conversation--a strictly contingent phenomenon; at various points in a conversation one must speak of "possibly closed" units rather than closed units, precisely because the status of any discourse unit in conversation is non-unilateral: it is conditional upon the acceptance or rejection of the other parties present.

Finally, context space theory assumes the need for referent focus rules (distinct from Grosz's discourse focus rules), which I did not find necessary in my own work.¹⁰

Thus, although there are a great number of correspondences between Reichman's work and the analyses presented in this study, I have adopted discourse models which more closely fit the requirements of the data examined.

¹⁰There are a few instances in which the notion subject appears to be relevant; see chapters 5 and 7 for details.

In contrast to the other AI studies described here, Sidner (1983) is explicitly concerned with pronoun resolution (i.e., interpretation) rather than with pronoun production. Nevertheless, her study is a source of insight into pronominalization because it utilizes a combination of structural and non-structural factors in determining pronoun interpretation.

In this study, Sidner uses the notion of focus as a first step in determining the possible set of elements that the anaphor in question could refer to. Unlike Grosz, however, Sidner's system does not stop there; after the focus elements (and a list of potential focus elements) have been selected from the discourse, there are two steps which select the appropriate element from the foci and update the set of focus elements:

A process model of focusing and focus tracking consists of three distinct processors. The first chooses foci based on what the speaker initially says....Then an interpreter (the pronoun interpreter) uses these foci and a set of rules of pronoun interpretation...to interpret the anaphoric expressions in the discourse....A third process updates the foci by decisions that depend on anaphoric interpretations chosen by the pronoun interpreter. (p.221)

Sidner's process model thus includes factors other than discourse structure to conduct anaphoric resolution. These other factors, which are syntactic, semantic and pragmatic in nature, can be used to bypass the interpretation offered by the initial focusing mechanism in order to select an element from the potential foci as the correct

interpretation. In other words, the system selects a group of first and second choice interpretations of a pronoun, and, by means of the pronoun interpretation rules, can reject the first choice in favor of the second choice. An example of a pronoun interpretation rule is given below.

Basic rule: Test the actor foci as a co-specifier with a pronoun in agent position followed by potential actor foci. If these fail, check the discourse focus, potential discourse foci, and actor focus stack.

In my own work, I have found that various types of grammatical and lexical/semantic information are critical in describing the patterns of anaphora, and it seems to me that Sidner's work is a valuable move in the direction of incorporating this level of information into a discourse-understanding system.

3. Materials and Methods

3.1 Introduction

An understanding of the methods of collecting and analyzing data used in a study is critical in evaluating the validity of the findings of the study. In this chapter I discuss the sources of data used, how individual texts were selected from the larger sources, and how the analyses were performed.

3.2 The Data

3.2.1 The written expository data

The texts used in this study are composed in American English.¹² The instances of written expository texts were selected from four fairly separate sources, in an attempt to have a broad range of expository texts represented. The variety of sources was of course limited by the nature of the phenomenon under study; that is, the text-type had to be a reliable source of multi-paragraph texts containing multiple references to at least one person. In addition, the text-type had to be essentially expository, rather than, say, narrative or procedural.

The sources ultimately chosen were the following:

1. The Los Angeles Times.
2. The University Bulletin, the newsletter of the University of California system, which contains information about administrators, faculty, and staff in the UC system.

¹²For the anonymous articles in the newspapers and magazines, it is not possible to tell if the authors are native speakers of American English; nonetheless, the articles are edited by native speakers of American English for an American English audience, so they should be suitably native for the purposes of the present study. All of the interactants in the conversations are identifiably native speakers of American English.

3. Bloomsbury: A House of Lions, a collection of Freudian-biography essays on the members of the Bloomsbury group, written by the literary scholar Leon Edel.
4. People, a weekly magazine containing gossip about famous people.

A few miscellaneous examples from other sources were included in the study. These sources included The Sun (a San Bernardino county newspaper), UCItems (the University of California at Irvine newsletter), the Santa Monica Seascape (local newspaper), and Monrovia Today (local newsletter).

The texts thus range over being journalistic vs. pseudo-literary, written by professionals vs. amateurs, formal vs. informal, scholarly vs. non-scholarly, informational vs. emotional. They provide a rich variety of paragraphing styles, text structuring patterns, length¹³ and subject matter.

The individual exemplars of each source were chosen randomly within a fixed set of criteria. They had to be basically expository (although they could contain narrative portions), multi-paragraph texts with multiple references to at least one person. Interviews and strict biographies were avoided because of their essentially narrative form.¹⁴ Texts that met these criteria were selected for inclusion in the study until what appeared to be a satisfactory representation of each source was achieved. The number of instances of each source is given below.

1. Twenty articles from the Los Angeles Times.
2. Twenty articles from University Bulletin.

¹³The texts ranged in length from two paragraphs to eight pages.

¹⁴A House of Lions is unusual biography in that it does not attempt, as its main focus, to chronicle the linear passage of time in each biographee's life. In this regard, its psychoanalytic basis is crucial in making it an appropriate text for this study.

3. Four chapters from Bloomsbury: A House of Lions, totalling approximately 30 pages.
4. Eleven articles from People.

A fairly even sampling of each source was thus obtained.

3.2.2 The non-story conversational data

The conversational data, as well, cover a fairly broad range. Telephone and face-to-face, two party and multi-party, single gender and mixed gender, video tape and audio tape, are all represented in the pool. The conversations were chosen randomly within a set of fixed criteria: they had to be spontaneous, naturally-occurring conversations (rather than produced in an experimental or induced setting) between friends or relatives, and they had to contain at least one segment in which at least one person was referred to more than once. They also had to be transcribed within the tradition of Conversational Analysis (see Sacks, Schegloff and Jefferson (1974) and chapter 4 of this thesis for a discussion of transcription practices within this framework). In addition, the passages had to be non-narrative in nature (see the discussion below on the comparability of text-types, in which I suggest that expository written texts are in some sense comparable to non-narrative conversational passages), where narratives are considered to be relatings of a series of sequenced events. The names of each transcript, and a brief description of the interactants involved, are given below (very little ethnographic information is available for these interactions).

1. TG. A telephone interaction between two college-aged women friends. Audio tape.
2. SN-4. A face-to-face, multi-party interaction, involving three college-aged women and one college-aged man (with a brief appearance of another same-aged woman), all of whom appear to know the others. Audio tape.

3. AD. A face-to-face, multi-party (outdoors) interaction involving three couples, most of which consists of the three men talking about cars and car races. Video tape.
4. Friedell. A face-to-face interaction between a college-aged man and woman (possibly husband and wife). Audio tape.
5. HG:ll. A telephone interaction between two young women friends. Audio tape.
6. MTRAC:60-1:2. A telephone interaction between a man and a woman (formerly married to one another, now separated or divorced). Audio tape.
7. US. A face-to-face, multi-party interaction involving as many as 7 people (six men and one woman), in an upholstery shop owned by one of the participants. Audio tape.
8. Clacia. A face-to-face interaction between two women friends. Video tape.

These eight transcripts form the pool of conversational data used in the study.

3.3 The Computer Database

In order to provide some quantitative evidence in support of the qualitative patterns proposed, I produced a computerized database containing pieces of information about each reference that was included in the sample. This database was created using dBasell, on an IBM PC.

To collect the sample I started at the beginning of each text (written and conversational) and began coding each instance of a reference to a third person (singular) done with either a pronoun or a full noun phrase until I reached the end of the text.¹⁵

¹⁵References within postposed subordinate and complement clauses were excluded if they were coreferential with a mention in the preceding matrix clause. These references were excluded because there seemed to be almost no choice possible here--pronouns were used almost without exception. Also excluded were syntactically controlled pronouns.

Each reference was allotted its own record, or data entry. The record consists of 14 fields, or slots in the data entry (name, address and phone number would be fields in a telephonebook record). In this database program, fields can have 3 types of values: logical (either true or false), character (letters and/or numbers, as long as no mathematical function is to be performed on the value), or numeric (numbers to be used in mathematical operations). All of the fields in my database were of the first two types. For example, the first field in my records is called pro; it is a logical field, taking either the value T if the reference is done with a pronoun, or the value F if the reference is done with a fullNP. One of the other fields is called context; this field is a character field and can hold up to 100 characters of the text surrounding the anaphor in question.¹⁶

Each reference was thus coded with the appropriate value for each field. The distributional patterning of the values could be ascertained using dBase II's counting facility, which enables the user to count all of the records having the relevant value for a particular field. For example, I could count all of the instances of pronouns in my database, or all of the instances of pronouns whose referents are also mentioned in the preceding clause, or all of the instances of pronoun whose referents are also mentioned in the preceding clause whose clauses are preceded by periods. Using the logical operators AND and OR, the values of any two or more fields can be combined to narrow the set of instances counted.

The counts obtained by this method are meant only as supplements to the basic

¹⁶The fields used for the conversational data differ slightly from the fields used for the written data, since certain aspects of the written text format (such as paragraphing) are simply irrelevant to conversation (and vice versa).

qualitative analyses provided in the study. They should not by themselves be taken as constituting a theory of text structure.

3.4 The Structural Analyses

Although the text counts provide critical support, the fundamental claims of the thesis rest on the structural analyses offered within the relevant models (Conversational Analysis for the conversational data and Rhetorical Structure Analysis for the written data). Therefore, the texts used as sources of anaphors in the database were also analyzed, as wholes, to determine their hierarchical structure, and ultimately to determine the relationships between such structures and patterns of anaphora.

The use of two fairly distinct models for the two types of texts, written and conversational, is based on the belief that the modes are fundamentally different in the units that serve to organize them. Written monologue texts are by definition produced by one person (although perhaps by one speaker at a time), and the units of a descriptive model should reflect this basic one-party-ness; conversational texts, on the other hand, are by definition produced by more than one person, and the units of a text model should also reflect this fact. In addition, written monologue texts are largely information-oriented, and the structural units of an appropriate model should capture the types of informational relationships that can hold between pieces of text, since these relationships give the texts their hierarchical structure; conversational texts, on the other hand, are largely interactional, and the units of an appropriate model should capture the social-action relationships that hold between pieces of talk, inasmuch as it is these more-than-one-party actions which structure the talk (see Rubin (1980) for a discussion of these and other differences between written and "spoken" language). Thus, while there are clearly interactional aspects of written monologue texts and

informational aspects of conversational texts, these do not form the basis for the fundamental structuring units for that mode. It has therefore been critical in this work to use one model which focuses on the informational relationships between propositions for the written monologue texts and another which focuses on the interactional relationships between utterances for the conversational texts. From the small set of candidates for each type of text model I selected Rhetorical Structure Analysis and Conversational Analysis.

3.5 The Comparability of the Written and Conversational Data

In order to draw interesting conclusions about the difference in anaphoric patterning across the modes, it is essential that the text-types chosen to represent each mode be comparable. In the recent literature on written and spoken language, various suggestions have been made for determining what constitutes comparable texts across the written-spoken division. One suggestion (see Akinnaso (1982)) states that the texts must be identical in all respects except whether they are produced by the mouth or the pen; that is, to be comparable two texts must be produced by the same person, exhibit the same degree of planning, exhibit the same degree of formality, exhibit the same degree of interactiveness (i.e., both must be monologue or both must be dialogue), and be of the same genre (e.g., story or essay). This suggestion suffers from several problems: it renders naturally occurring data virtually useless, since any two such natural texts will differ on more points than the instrument with which they were produced; it sees texts as reducible to a set of controllable variables and hence oversimplifies the extremely complex nature of text production and comprehension; and it presupposes that we want to explain the differences between written and oral

texts using the controllable variables established and not that we might first be interested in simply describing the differences.

Another suggestion, which I find much more appealing, states that there are marked and unmarked types of texts for each modality and that we should compare texts of the same markedness (see Biber, 1983). For example, multi-party spontaneous conversation is the unmarked text type for oral production and expository prose is one of the unmarked text types for written (what Biber calls 'literate') production. This way of looking at genre and modality seems to me to be highly appropriate, since it allows us to compare what one typically does when writing with what one typically does when speaking:

...there is no apriori reason why "functionally equivalent" tasks are in fact "comparable" across the two modes. In a comparison of academic expository prose and academic lectures, for example, we might find few linguistic differences, and be tempted to conclude that speech utilizes "literate strategies" and thereby confirm the view that there are not major differences between speech and writing. But this conclusion would ignore the fact that lectures, although spoken, are not typical of the spoken mode....Thus, even though a study of this type would control for communicative factors, from one perspective it would not be based on comparable tasks. Rather, it would contrast a typical written task with a highly untypical spoken task. (Biber, 1983:9)

In light of this discussion, I have chosen to use Biber's notion of comparability as a basis for choosing "comparable" texts. For the present study I have selected a large group of expository monologue written texts from a range of sources which are compared with respect to anaphora with naturally occurring conversations among friends and/or relatives.

4. Conversational Analysis

This chapter is meant as an overview of the fundamental concepts of Conversational Analysis which will be put to work in chapter five. It is by no means a complete guide to this approach; I have included only those notions which will be applied in the analyses in chapter five. For a more complete introduction to CA, see Levinson (1983) or Atkinson and Drew (1979).

4.1 Notation Conventions

Before we examine some of the substantive findings of Conversational Analysis, I would like to present and discuss some of the notational conventions used in CA-style transcripts. Many of these conventions may be unfamiliar to linguists, but they are all in fact fairly straightforward.

All talk is transcribed in a pseudo-phonetic system, using the basic orthographic symbols of written English; that is, if the speaker pronounces a word in a way that is not the only possible pronunciation for that word, then special care is taken to transcribe that particular pronunciation (but without using a special alphabet). This practice makes the transcripts somewhat difficult to read (especially for the non-native speaker), but since it brings out useful information I have not normalized the transcripts (except for crucial pronouns, which have been normalized for ease of reading and exposition).

The double slash (//) indicates the place at which a speaker's utterance is overlapped by talk from another speaker.

(AD:14)

M. No. They're a//ll thin.]
C. They're not]

Thus with this notation we can see that C's utterance starts after the a in M's all. The right hand bracket (]) indicates the place in the utterance at which the overlap ends (so C's overlap lasts until after M's thin).

An utterance which has more than one double slash in it is overlapped at more than one place, and the utterances which do the overlapping are given in sequential order after the overlapped utterance.

(AD:14)

- G. ..they're all Keegans like the ones around Greensprings
they're all kind'v, // bout five five, five si//x,
M. They're all from around Greensprin//gs.
C. Yeh

Here, M's utterance overlaps G's starting at bout, and C's utterance overlaps G's starting with the x in six. Notice that C's utterance also overlaps the very end of M's.

A left-hand bracket at the beginning of two lines indicates that the two utterances begin simultaneously.

(AD:14)

- M. [Yeh.
C. [Lo:ng time ago it reminds me

M and C begin talking simultaneously.

The equals sign (=) indicates latching, that is, the next speaker begins without the usual "beat" of silence after the current speaker finishes talking. In this case there

is an equals sign at the end of the current speaker's utterance and another equals sign at the beginning of the next speaker's utterance. If two speakers simultaneously latch onto a preceding utterance (that is, they begin talking simultaneously), this is indicated in the transcript with a left-hand bracket preceded by an equals sign.

(SN-4:30)

(R) (h)hh (h)uh (h)uh (h)uh!=
(S)= [hhh(h) H(h)m]
K. [Which 1a:]mpost?

Here S and K simultaneously latch onto R's laughter.

Numbers given in parentheses indicate elapsed silence, measured in tenths of seconds. Single parentheses with a raised dot between them represent a silence that is less than a tenth of a second but still longer than the usual beat of silence. These figures are not arrived at with a stop watch, but are calculated with a verbal counting technique which takes into account the tempo of the preceding talk. Thus a silence which is timed at (0.3) seconds in one stretch of talk might well be timed at something else in another stretch of talk if the tempo of the preceding talk is different. The numbers thus indicate "experiential time" rather than chronological time.

Certain facts about the production of the talk are given through the orthographic symbols used. Punctuation is used to suggest intonation; underlining indicates stress. A colon after a letter means that the sound represented by that letter is somewhat lengthened; a series of colons means that the sound is increasingly lengthened. Anything preceded by a degree mark is quiet.

The letter h within parentheses indicates "explosive aspiration," and usually

means some type of laughter is being produced. A series of h's preceded by a raised dot represents an inbreath (where number of h's is meant to correspond to the length of the inbreath), while the same series preceded by nothing represents exhaling.

Questionable transcriptions are enclosed within single parentheses; the transcribers thereby indicate that the exact form of the utterance is not clear. Speaker's initials given in single parentheses means that there is some question about the speaker's identity. Double parentheses --e.g.,((clears throat))--represent non-transcribed material (i.e., noise which is non-linguistic).

These are the major transcription conventions which will be used in the data fragments in this and later chapters. For a more detailed guide to CA notational conventions see Sacks, Schegloff and Jefferson (1974).¹⁷

To help the reader identify the structure of some of the passages, I have created a simple system of labeling which indicates which adjacency pair an utterance belongs to, what level of structure it is to be heard at, and whether it is a first-pair-part, a second-pair-part, or a third position utterance. This simple system works in the following way.

The label has three slots: the first indicates the position in the adjacency pair--first-pair-part, etc.--that the utterance fills (first-pair-part is abbreviated fpp, second-pair-part spp). So, for example, the following invented example has two utterances, the first labeled fpp, the second spp.

A. Do you have a computer at home? [fpp]

¹⁷For a discussion of notation as theory see Ochs (1979).

B. No.

[spp]

The second slot in the label reflects a sequential numbering of the adjacency pairs. The first adjacency in a cited passage is given the number 1, the second adjacency pair the number 2, and so on. The numbering is done strictly by temporal ordering. All parts of a single adjacency pair (i.e., the first-pair-part and the second-pair-part, along with any third-position utterance) are given the same number. In the following example, we have two adjacency pairs:

(TG:14)

- B. 'hh Hey do you see v- (0.3) fat ol' Vivian [fpp (1)]
anymouh?
- A. No, hardly, en if we do:, y'know, I just say [spp (1)]
hello quick'n hh y'know, jus' pass each othuh
in th//e hall.
- B. Is she still hangin aroun (with) Bo:nny? [fpp (2)]

Notice that the fpp and the spp of the first pair are both assigned the number 1, while the fpp of the next pair is assigned the number 2.

The third slot of the label indicates the level of structure at which the utterance fits in (members of a single adjacency pair are treated as being at the same level of structure). For example, if we have an announcement pair followed by a post-elaboration question-answer pair, the announcement pair will be labeled as being at a higher level of structure than the post-elaboration (lower-case letters are used for this slot, beginning with a). This labeling is meant to capture the impression that the announcement in such a situation is somehow nuclear, or core, and the post-elaboration is somehow embedded, or subordinate, or adjunct. An example of this labeling follows:

(SN-4:10)

M.	A:nd () as far as that goes my father's on his honeymoon.=	[fpp (1,a)]
	=(y:ah ha ha ha)	
K.	(Oh::.) Very nice=	[spp (1,a)]
K.	=Where'd he go.	[fpp (2,b)]

M's utterance is a first-pair-part (fpp), and is in the first adjacency pair of the fragment (1). In addition, it is at the highest level of structure of the fragment (a). K's first utterance possesses all of the same features, except it is a second-pair-part (spp). K's second utterance, on the other hand is different: it is the beginning of the second adjacency pair, and it is at an "embedded" level of structure with regard to the first pair (indicated by the letter b).

This notation system is meant to provide a "map" for some of the fragments presented in chapter 5. It has no theoretical status and is offered only as a simple schematic guide for the reader.

4.2 The Turn-Taking System

One of the most critical aspects of conversational structure is turn-taking. How are turns allocated in informal conversation? To answer this question we need to establish some rudimentaries about turns.

We need to first establish that there are units out of which turns can be constructed. These units have been referred to as turn constructional units (TCU's), and can be single lexical items (e.g., yes), phrases, clauses or sentences. According to the turn-taking system, each speaker is at first allotted one of these TCU's. The end of

such a unit constitutes a place where speaker-change could occur; that is, at this point another person could begin talking. The end of a TCU is thus a transition relevance place (TRP), since it is a place at which a transition from one speaker to another can (but need not) occur.

The following turn-taking rules, which are based on these concepts, are taken verbatim from Levinson (1983), which is based on Sacks, Schegloff and Jefferson (1974):

Rule 1----applies initially at the first TRP of any turn

- (a) If the current speaker selects a next speaker in current turn, then current speaker must stop speaking, and that next speaker must speak next, transition occurring at the first TRP after next-speaker selection.
- (b) If current speaker does not select next speaker, then any (other) party may self-select, first speaker gaining rights to the next turn.
- (c) if current speaker has not selected a next speaker, and no other party self-selects under option (b), then current speaker may (but need not) continue.

Rule 2---applies at all subsequent TRP's

When Rule 1(c) has been applied by the current speaker, then at the next TRP Rules 1(a)-(c) apply, and recursively at the next TRP, until speaker change is effected.

These rules provide a foundation for making sense out of two related phenomena: simultaneous talk and silence.

Simultaneous talk obviously occurs when two (or more) speakers talk at once. But not all simultaneous talk represents a violation of the turn-taking system rules. Rather, there are two basic types of simultaneous talk (i.e., overlap): competitive

overlap and non-competitive overlap. In one type of non-competitive overlap, called terminal overlap, the current speaker approaches the end of a turn constructional unit, and, as that is happening, the next speaker, having predicted the type of TCU that the current speaker is producing, starts talking, thus overlapping with the very end of the TCU which the current speaker was heard to be constructing. This type of overlap is not heard as competitive. In addition, laughter from one party simultaneous with talk from another party is often not heard as competitive (but appreciative). An example of terminal (non-competitive) overlap is given below.

(HG:II:4-5)

- N. Also he sid that (0.3) t what you ea:t, (0.2) end how
you wash yer face has nothing tih do with it,
(0.8)
H. Yer kiddin//g.
N. nNo: ,

In competitive overlap, on the other hand, the rules of the turn-taking system are violated, usually by the next speaker starting up before the projected transition relevance place of the current speaker's TCU. An example of competitive overlap follows.

- M. You c'n get'em ma:de.
G. S'm guys in Bellview bui//lt a frame (en it cost] em),
C. Yea:h, fer a fortune,]

In this passage G is not near the end of a TCU (he has just gotten out the first syllable of a transitive verb) when C starts up.

Competitively overlapping utterances can be characterized by higher pitch, slower tempo, louder volume and lengthened vowels.

Silence occurs, obviously, when no one is talking. Not all silences are equivalent, however. Silence is considered a pause if it is attributable, by the turn-taking system, to a given party; for example, if current speaker has selected next speaker, then any silence after current speaker reaches the end of his/her TCU is a pause attributable to the selected next speaker. The following is an example of two pauses, both attributable to speaker B (I am following Levinson (1983) in this definition of gaps and pauses, the latter of which he calls "attributable silences"):

(from Levinson (1983))

- A. Is there something bothering you or not?
(1.0)
A. Yes or no
(1.5)
A. Eh?
B. No.

Silence is considered a gap, on the other hand, if it is not attributable, by the turn-taking system, to any particular party. This situation often arises if the current speaker has not selected a next speaker, and the silence therefore "belongs" to no one (although the current speaker can apply Rule 1 (c) and get another turn at talk, and in certain cases this will create the effect that the preceding silence was in fact attributable to the current speaker). An example of a gap is given below.

(HG:II:25)

- N. =hhh Dz he av his own apa:rt//mint?
H. hhhh Yea:h,=
N. =Oh:,
(1.0)
N. How didju git his number

The turn-taking system proposed by Sacks, Schegloff and Jefferson (1974)

affords insights into many other aspects of conversation, but for our purposes here the concepts covered above will suffice.

4.3 The Structural Organization of Conversation

The next facet of Conversational Analysis which will be crucial for the analyses presented in chapter 5 is the identification of the structural organization of conversation, through the basic unit of the adjacency pair.

An adjacency pair is said to consist of two parts, the first of which (the first-pair-part) makes relevant a particular type of action (the second-pair-part) from another party. In fact, it is not altogether clear that there should only be two parts in a "pair"; nor is it clear that the parts need to be adjacent. These problems with the literal interpretation of the term "adjacency pair" need not concern us here.

We thus have first actions which make relevant second actions by another party. Standard examples of the notion of adjacency pair are question-answer, invitation-acceptance, offer-acceptance, request-comply, announcement-assessment, etc.

An adjacency pair, or sequence, can take three types of expansions: pre-expansions, insert expansions, and post-expansions (see Levinson (1983) for a discussion). A pre-expansion is an adjacency pair that comes before another adjacency pair and is preliminary to it. A classic example of a pre-expansion is the pre-announcement adjacency pair, which usually consists of a pre-announcement first-pair-part and a clearance second-pair-part:

(Invented example)

- | | |
|----------------|--------------------|
| A. Guess what? | [Pre-announcement] |
| B. What? | [Clearance] |

- | | |
|---------------------|----------------|
| A. I got an IBM PC! | [Announcement] |
| B. That's great! | [Assessment] |

An insert expansion is an adjacency pair which comes between the first-pair-part and the second-pair-part of another adjacency pair. Question-answer pairs are common insert expansions:

(invented example)

- | | |
|-------------------------------------|------------|
| A. May I speak to President Reagan? | [Request] |
| B. May I ask who's calling? | [Question] |
| A. Nancy. | [Answer] |
| B. Ok. | [Comply] |

Notice that the insert expansion pair is completed before the other pair continues.

A post-expansion is a type of pair which follows another pair. If, for example, an adjacency pair that seeks to repair some source of trouble in a preceding turn (known as a repair sequence) is initiated after the possible completion of an adjacency pair, the repair sequence will be considered a post-expansion:

(invented example)

- | | |
|--------------------------|---|
| A. Do you like Virginia? | [Question] |
| B. Yeah. | [Answer] |
| A. You do? | [Next turn repair initiator,
pre-disagreement] |
| B. Well, not really. | [Repair, backdown] |

It is worth taking a brief excursion at this point into the nature of repair sequences. A repair sequence is often initiated with what is called a next turn repair

initiator (NTRI), which indicates that in the next turn the next speaker ought to attend to some problem which the current speaker has encountered with the preceding turn; hence it initiates repair action for the next turn. A next turn repair initiator does not only indicate technical difficulties with hearing, etc., however; it often indicates that the speaker of the NTRI may do a disagreement with the preceding turn (as in the made up example above). A frequent response to this pre-disagreement in the surface guise of an NTRI is a backdown, in which the next speaker backs down off of the utterance which triggered the disagreement (as in the example above).

For the purposes of this study, I have identified two other pair-relations and one turn-relation. These relations are: member of a series, post-elaboration, and turn-expansion.

In a series, one adjacency pair is "tied" to another pair by virtue of being another in a member of the same series, that is, by being a "next" in a series of similar items. We can find a series of topic proffers, or a series of requests, etc. An example of the series relation is given below.

(TG:14)

B. *hh Hey do you see v- (0.3) fat ol' Vivian
anymouh?

A. No, hardly, en if we do:, y'know, I just say
hello quick'n hh y'know, jus' pass each othuh
in th//e hall.

B. Is she still hangin aroun (with) Bo:nny?

B's second turn in this passage is a second in a series of topic proffers.

In a post-elaboration, one pair gives a piece of news, or makes a report, and a

subsequent pair gives or seeks details about that piece of news or report. An example of this relation follows.

(SN-4:10)

- M. A:nd () as far as that goes my father's on his
honeymoon.=
=(y:ah ha ha ha)
K. (Oh::.) Very nice=
K. =Where'd he go. .

K's second line is a post-elaboration on the preceding adjacency pair, since it seeks details about the general piece of news given in M's utterance.

In a turn expansion, a single turn--which had come to a possible completion place--is continued by the speaker self-selecting (following rule 1(c) of the turn-taking system). An example of this relation follows.

(AD:17)

- G. I usetuh go over there wih my cousin (over that track),
(1.2)
G. His name wz uh, Tucker.

G's second line in this passage is a turn expansion.

4.4 Conclusion

These are the major conventions and concepts that will enter our discussion in anaphora in conversation in chapter 5. Additional material about this method of analysis can be found in Levinson (1983), Atkinson and Drew (1979), Sacks and Schegloff (1972), Terasaki (1976), Pomerantz (1975), Schegloff, Jefferson and Sacks (1977), Schenkein (1979).

5. Anaphora in Conversational English

5.1 Introduction

In this chapter I discuss the distribution of pronouns and full noun phrases in non-story conversational texts. The structural analysis technique used is Conversational Analysis.

In presenting the distributions, I operate in two modes of description, one which can be thought of as the context-determines-use mode, the other the use-accomplishes-context mode. In the context-determines-use mode, it is assumed that the hierarchical structure of the talk determines to some large extent the anaphoric form which the speaker is to use. The type of pattern offered in this mode says that in context X the speaker will use anaphoric form Y. In the use-accomplishes-context mode, on the other hand, it is assumed that it is by virtue of using a particular anaphoric form that the structure is created.

I have assumed in this thesis that both modes of operation are always present for the participants. That is, for the most part knowledge about how anaphora is usually handled in certain contexts leads a participant to pick the anaphoric form that is "unmarked" for the context, and by picking this form the participant displays his/her understanding of what type of context is currently under development; this display of understanding, in turn, can create for the other parties present the same understanding (when by themselves they might have constructed some other sort of understanding of the current structure). There is thus a continuous interaction, even in the simplest cases, of the following three steps of reasoning:

1. Anaphoric form X is the "unmarked" form for a context like the one the participant is in now.

2. By using anaphoric form X, then, the participant displays a belief that the context is of a particular sort.
3. If the participant displays a belief that the context is of a particular sort, then the other parties may change their beliefs about the nature of the context to be in accord with the belief displayed.

In this way, an anaphoric choice at once is determined by and itself determines the structure of the talk. It should thus be kept in mind that while some statements of distribution sound like they belong in one mode rather than another, all of the patterns are meant to accommodate the interaction of both modes.

One further note about the assumptions of this chapter are in order here. I have assumed that the Basic Pattern of anaphora (presented below) and the patterns for different-gender and same-gender environments describe the unmarked uses of anaphora, in which the speaker can be heard to be doing "nothing special" except displaying an understanding of the current structure of the talk. The patterns described under the heading of non-structural factors, on the other hand, are offered as the "marked" uses of anaphora, with which the speaker is heard to be doing something special interactionally (such as disagreeing). In this view, anaphora is not determined just by referent-tracking, structuring considerations; it is also manipulated to accomplish certain interactional tasks.

5.2 The Basic Pattern of Anaphora

The basic, most unconstrained, description of the distribution of anaphoric devices in non-story talk can be given as follows:

The first mention of a referent in a sequence is done with a fullNP. After that, by using a pronoun the speaker displays an understanding that the preceding sequence has not been closed down.

This formulation of the distribution implies that interactants monitor the talk they are engaged in for signs of closure and reflect to their interlocutors the result of this monitoring at least in part by the type of anaphoric device they choose.

The basic pattern contains three subcomponents, each of which will be examined in detail below. They are:

1. The first mention of a referent in a sequence is done with a fullNP.
2. After the first mention of a referent, a pronoun is used to display an understanding of the sequence as not yet closed.
3. A fullNP is used to display an understanding of the preceeding sequence containing other mentions of the same referent as closed.

Each of these subpatterns is taken up in the following sections.

5.2.1 FullNP for first mention

The fairly obvious intuition that the first mention of a referent in a sequence is done with a fullNP is supported by the following data fragments.

(TG:6)

- B. Eh-yih have anybuddy: thet uh:?
(1.2)
B. -I would know from the English depar'mint there?
A. Mm-mh. Tch! I don't think so.
B. °Oh,=
→B. =Did they geh ridda Kuhleznik yet hhh
A. No in fact I know somebuddy who has her now.

The first mention of Kuhleznik in the conversation is done with a fullNP.

(SN-4:10)

- S. [She wasn't invited d'the] wedding?
M. [(I'm g'nuh take her out.)]

(1.0)
 M. (She d//oesn' wanna g[o.])
 S. (Hardly.])
 M. ()
 M. N//o no.]
 (R). hh'h] hmh-hmh
 (0.1)
 M. Sh's tryin t'stay away from the wedding (idea).
 (1.0)
 →M. A:nd () (as) far as that goes my father's on his
honeymoon.=

Here again the first mention of a person, M's father, is done with a fullNP.

One additional instance follows.

(MDE:MTRAC:60-1:2:1)
 M. Hellou?
 T. Hi: Marshau?
 M. Ye:ah.
 T. How are you.
 →M. Fi::ne. Did Joey get home yet?

In this passage the first reference in the phone conversation to M and T's son is done with a fullNP.

Although, as we will see in a later section, the first mention of a referent can be done with a pronoun, the basic pattern is to have this mention done with a fullNP.

5.2.2 Pronouns used to display that a sequence is not closed

The range of structural contexts in which speakers are likely to display a "non-

closed" understanding is fairly broad; these contexts are described below.¹⁸

The first, and most obvious instance in which a sequence is not closed is in the middle of an adjacency pair, that is, after the first-pair-part of an adjacency pair. Speakers thus regularly use a pronoun in the second-pair-part of an adjacency pair if the referent is mentioned in the first-pair-part. Examples of this extremely common phenomenon are given below.

Question-Answer

(Friedell:16)

H. Dz Petersin have a copy'v the paper.th't you c'd read. [fpp]

(1.2)

→S. Evidently Ward's not letting him, (0.6) talk about what he wannid t'talk about, [spp]

(TG:3-4)

A. Oh my mother wannduh know how's yer grandmother. [fpp]

→B. hhh Uh::, (0.3) I don't know I guess she's aw-she's awright [spp]

(TG:6)

B. =Did they geh ridda Kuhleznik yet hhh [fpp]

→A. No in fact I know somebuddy who has her now. [spp]

(SN-4:29)

M. So (yer da:ting) Keith? [fpp]
(1.0)

¹⁸ I have characterized the status of the sequence as "not closed," rather than "continuing," because I mean for the pattern to characterize what the sequence has come to by the time the speaker produces the anaphor in question (e.g., closed or not closed) rather than what the speaker is going to do with the sequence (e.g., continue it or start something else). This formulation is meant in part to capture the fact that speakers use fullNP's to continue an already fully closed sequence. Just continuing is thus not sufficient grounds for pronominalization.

→K. (He's a friend.)

-[spp]

In each of these cases, a pronoun is used in the second-pair-part of an adjacency pair when the referent is mentioned in the first-pair-part of the pair. By using a pronoun in this situation, speakers display their understanding that the same sequence is in progress.

Another situation in which a sequence is not yet closed is the turn expansion (Schegloff, class lecture). In a turn expansion, a single turn--which had come to a possible completion place--is continued by the speaker self selecting (following rule 1(c) of the turn-taking system). Here again we have the pattern of possible completion followed by continuation, where the continuation is done with a pronoun. Examples of this pattern follow.¹⁹

(AD:17)

G. I usetuh go over there wih my cousin (over that track),
(1.2)

→G. His name wz uh, Tucker.

Here a pronoun ("his name") is used for the continuing turn expansion.

Another example follows.

(AD:18)

G. I usetuh go over there the://n 'n, no:w, Rich Hawkins
from Bellview drives one, fer some guys frm up't Bellview.
M. ((clears throat))

¹⁹The fairly lengthy silences before the turn expansions in each of the following examples can be thought of as the "noise" of the turn-taking system going through its ordered rules --perhaps through more than one cycle--(until rule 1(c) is reached).

- (0.4)
- M. Yah.
- G. He's my:: liddle sister's brother'n law. [turn expansion 1]
- (0.5)
- G. He's a policem'n in Bellview [turn expansion 2]

In each of the turn expansions in this passage a pronoun is used.

Further examples:

- (US:15)
- V. When he gave me the ten my wife wz standin right deyuh 'n,
what'm I gonna tell ().
- (1.3)
- V. She wantstuh get intuh my business. [turn expansion]
- (SN-4:9)
- M. ...and then I've got s'mething planned on Sunday with Laura.
- (0.4)
- M. She she wa- she 'n I 're gonna go out en get drunk at four
o'clock in the afternoon [turn expansion]

The second-pair-part of an adjacency pair does not necessarily signal the end of a sequence, however. A second adjacency pair can be "tied" to the first in such a way that the sequence is heard as being continued rather than closed. Pronouns, as one show of continuing something already started, are used in these cases. A clear example of this use of pronoun can be seen in the following passage, in which an announcement first-pair-part is followed by its assessment second-pair-part, which is in turn followed by the first-pair-part of a new adjacency pair, and this last utterance contains a pronoun which refers to the person mentioned in the preceding pair.

(SN-4:10)

- M. A:nd () as far as that goes my father's on his
honeymoon.= [fpp (1,a)]
=(y:ah ha ha ha)
K. (Oh::.) Very//nice= [spp (1,a)]
→K. = Where'd he go. [fpp (2,b)]

The pronoun is used in this case because the adjacency pair is possibly complete after its second-pair-part has been produced, but it is not definitely closed. The pronoun in the second adjacency pair displays to the recipient that the speaker heard the unit as possibly complete but has extended it.

The ways in which an adjacency pair can be "tied" (Sacks, 1971) to a preceding pair seem to be fairly limited.²⁰ The first type of tying is called a series. In a series, one adjacency pair is meant to be of the same type as some preceding pair, that is, a next in a series of similar items. The series could be of any action-type; in other words, we can find instances of a series of topic proffers, or of solutions to a problem, or of relevant questions about something. It is clear that if an item is possibly a member of a series, then its appearance should not close the adjacency pair to which it is tied (when the last in the series is complete, the tied-to pair is possibly complete); hence a pronoun can be used in a next member of the series. In the following passages, for example, pronouns are used in the second member of a series (their referents appear in the first member).²¹

²⁰Throughout this discussion I will use the term tying to refer to the subsequent pair, and the term tied-to to refer to the preceding pair.

²¹The observation that members of a series are at the same level of structure--rather than one subordinate to another--is reflected in the annotations of the examples by keeping the structure-level character the same, e.g., [fpp (1,a)]

Examples illustrating the use of pronoun in the second member in a series are given below.

(TG:14)

- B. 'hh Hey do you see v- (0.3) fat ol' Vivian
anymouh? [fpp (1,a)]
- A. No, hardly, en if we do:, y'know, I jus' say hello
quick'n, [spp (1,a)]
- *hh y'know, jus' pass each othuh in th e hall.
- B. Is she still hangin aroun (with) Bo:nny? [fpp (2,a)]

(SN-4:29)

- M. So (yer da:ting) Keith? [fpp (1,a)]
(1.0)
- K. (He's a friend.) [spp (1,a)]
(0.5)
- M. What about that girl he use tuh go with fer
so long [fpp (2,a)]

In each of these cases, the first-pair-part of the initial adjacency pair is a topic proffer which is met in the second-pair-part with a response. The first-pair-part of the second adjacency pair is a second topic proffer, which represents a second attempt to get the matter talked about. In this way the second first-pair-part is another in a series started by the preceding first-pair-part.

A second way in which an adjacency pair can be tied to a preceding pair is by a relation I will call post-elaboration. In this relation, one pair gives a piece of news, or makes a report, and a subsequent pair gives or seeks (depending on who does the post-elaboration) details about that piece of news or report (compare this relation with the elaboration relation in rhetorical structure analysis). Once again the initial pair can be possibly complete when its second-pair-part is produced, but a post-elaboration

continues it, and this continuing of a not definitely closed unit is displayed by the use of a pronoun.

(SN-4:10)

- M. And () as far as that goes my father's on his
honeymoon.= [fpp (1,a)]
=(y:ah ha ha ha)
K. (Oh::.) Very//nice= [spp (1,a)]
→K. = Where'd he go. [fpp (2,b)]

(TG:27)

- 1.B. Oh Sibbie's sistuh hadda ba:by bo:way. [fpp (1,a)]
2.A. Who? [fpp (2,b)]
3.B. Sibbie's sister. [spp (2,b)]
4.A. Oh really? [fpp (3,b)]
5.B. Myeah, [spp (3,b)]
6.A. °(That's nice.) [spp (1,a)]
→7.B. She had it yestihday. Ien:: pou:nds. [fpp (4,b)]
8.A. °Ie:sus Christ. [spp (4,b)]

In this passage, an announcement is made at line 1, and this eventually gets its second-pair-part at line 6. The sequence is at line 6, then, possibly complete, but B continues it at line 7 with a post-elaboration first-pair-part, in which she gives details about the news announced at line 1. The speakers understanding that the announcement sequence was only possibly complete allows her use of a pronoun at line 7, in which she continues the sequence. Another example of post-elaboration and pronominalization is given below.

(Friedell:8-9)

- H. And there wz a ledder fr'm Da:ve. [fpp (1,a)]
(0.4)
S. Dave,
H. My brother Da:ve.
S. Oh. Okay. When you said Dayuv I went. First
Dave I think of is, (•) Dave Cantrun Dave Chu:n

(0.4)
 S. En the(h)en,
 (0.3)
 H. Then David Wiser 'n // then David Jones ('I// know)
 S. nhh!
 S. Yea:h.
 S. Well yer b-
 (0.4)
 S. He's not say//leeyent.
 H. He i:s Da:ve// 'yihknow.
 S. he- he's not sa(h)l(h)ie(h)nt.
 (0.6)
 H. °E:sh.
 (0.9)
 →S. What'd he haftuh say, [fpp (2,b)]

In this case, the post-elaboration (the last line) is produced by the recipient of the announcement, rather than by its speaker. Nonetheless, the post-elaboration is done with a pronoun, which is an indication from S that she has heard the announcement sequence as not definitely closed (in spite of the material intervening and the fact that she hasn't produced a second-pair-part for the announcement).²²

This is an appropriate time to point out that the mention of the referent in the initial adjacency pair does not have to come in the first-pair-part of that pair; it can come in the second-pair-part and still be pronominalized in the post-elaboration pair. An instance of this phenomenon is given below.

(AD:7)

C. (Oh-) how wz the aces las'night. [fpp (1,a)]
 (0.8)
 (). (ha-//uh)]=
 C. Who w'n //th' feature.] [fpp (1,a)]
 M. =A1 won,] [spp (1,a)]

²²It is also possible that S's last line is a second-pair-part to H's announcement; in this case, the pronoun occurs within the adjacency pair. Either of these analyses is consistent with the Basic Pattern proposed above.

(0.3)

C. [(Who)] =	[NTRI fpp (2,b)]
M. [A1.]	[repair spp (2,b)]
C. =A1 did?	[NTRI fpp (3,b)]
→C. Dz he go out there pretty regular?	[fpp (4,b)]

In this passage, the relevant referent (A1) appears in the second-pair-part of the initial adjacency pair and yet can still be pronominalized in the first-pair-part of the post-elaboration pair begun by C in the last line. It is by far more common, however, for the mention in the initial pair to come in the first-pair-part.²³

It is also possible, in the case of post-elaboration and the other tying relation discussed here, that the pronoun in the tying pair will come in the second-pair-part, rather than in the first. That is, it is possible to find cases in which a referent is mentioned in an adjacency pair and then pronominalized in the second-pair-part of the tying pair. An example of this situation is given below.

(HG:II:19-21)

- 1.H. =hhh Oh yih know w'n I wz talking
2. tuh Gra:ce.
3. (0.2)
- 4.N. °Gra//:ce,
- 5.H. Member Gra:ce? my fren Gra//:ce,
- 6.N. Ye::ah.=
- 7.H. =hhh Ay::u::n, hhhh she has, these best
8. frien's.=
- 9.N. =Uh hu:h,
10. (•)
- 11.H. tha:t live in: Minneap^olis. 'n they have a
12. so:n.=
- 13.N. [Oh:.
- 14.H. who's twunny:: four'r twunny fi//ve. Sumpn,
- 15.N. Uh hu:h,
- 16.H. =pthhhh 'n he's in gra:d school i:n uhhh (•) bio

²³This fact probably does not have a significant structural basis but is rather a coincidental aspect of the data examined.

17. chem 'r something like tha:t,=
 18.N. =Sounds good,=
 19.H. =A:n' hhhhhh hnh-hnh //sounds kosher? 'ihhhh=
 20.N. °(shhounds ghhood)
 21.H. A:n' he's coming ou:t. here,
 22. (0.3)
 23.H. January twunny seventh er // something.
 24. °thhh
 25.N. Mmm::: : : : : :.
 26.H. =So: en she awready wrote him about
 27. me en evrythi//ing en she'd like
 28.N. A w r i : g h t.
 29.H. =(t') f//ix us u:p.
 30.N. Does he wanna meet you?
 31.(H). (So),
 32. (°)
 33.N. I mean d//z he wanna-
 34.H. Well he doesn' have too much've a
 35. choi(h)oice=
 36.N. =Oh yeh that's truhh!=
 37.H. =i- 'u- 'e:hhh,
 38. ()
 39.H. 'u- 'uhhhh
 40.N. 'uhnuhhh
 41. (0.2)
 42.N. Well wt's () wt's he li://ke.
 →43.H. hhhhhhhh a- ah: she says

Here, we get an announcement (H's lines 26-29) and then a series of two post-elaborations initiated by N at lines 30 and 42 ("does he want to meet you" and "well what's he like"). The pronoun referring to Grace in the second post-elaboration (at line 43) comes not in the first-pair-part, but in the second-pair-part. It is clear from this sort of example--in which 11 lines separate the last mention of Grace from the most recent mention of her-- that mere distance between mentions by itself is not what determines anaphoric patterns; rather it is the structural properties of the talk that exerts this influence.

Two adjacency pairs do not have to be physically contiguous for one to be tied to,

as a "continuation" of, the other; they can be separated by adjacency pairs bearing one of the relations described above to the initial pair and to one another as long as the second of the pairs in question returns to the first of the pairs, that is, bears one of the above relations (i.e., series, post-elaboration or post-expansion) directly to that pair rather than to one of the intervening pairs. In essence what I am referring to here is a situation in which a pair "ties" to a pair other than the immediately preceding one. I will call this structure a return pop.²⁴ Let me illustrate the concept of return pop, and the types of anaphoric patterning associated with it, by looking at a few examples.

(AD:22)

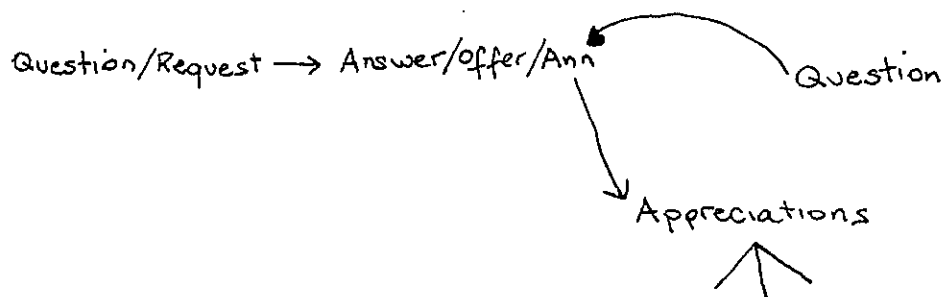
- 1.C. He:y. Where c'n I get a::, uh, 'member the old twenny
2. three Model T spring,
3. (0.5)
- 4.C. Backspring 't came up like that,
- 5.C. Dju know what I'm// talk] what I'm talkin a//bout,]
- 6.M. Ye:h,]
- 7.M. I thi]nk- I know whatchu mean,
- 8.C. Wh'r c'n I get o:ne.
9. (1.2)
- 10.G. Just use a regular one.
11. (0.7)
- 12.C. Mmm I'd like t'get a, high one if I could.
13. (0.7)
- 14.G. [I know uh-]
- 15.M. [Lemme ask] a guy at work. He's gotta bunch a'
16. old clu//nkers.
- 17.G. Y'know Marlon Liddle?
18. (0.2)
- 19.M. Well I can't say they're ol' clunkers he's
20. gotta Co:rd?
21. (0.1)
- 22.M. Iwo Co:rd, [repair]
23. (1.0)
- 24.M. [And
- 25.C. [Not original,
- 26.M. Oh yes. Very origi(h)nal
- 27.C. Oh::: reall//y?
- 28.M. Yah. Ve(h)ry origi(h)nal.

²⁴The term "pop" comes from the Augmented Transition Network grammar metaphor.

- 29.C. °Awwhhh are you shittin m//e?
30.M. No I'm not.
31. (0.8)
→32.C. What's his name.

In this example, C produces a request for information at line 8, which M responds to with an offer ("let me ask a guy at work"). M then makes use of this offer to do something of a sly announcement (lines 19-22), in the form of a self-repair. The relevant person is mentioned in this offer/announcement. Announcement sequences often contain within them insert appreciation pairs, and in this passage C initiates a series of 3 appreciation inserts (lines 25-30). Each of the three appreciation pairs is at the same level of structure as the others, and each is also "tied" to the announcement by the insert-expansion relation. None of them contains mentions of the person referred to in M's pseudo-announcement. Nonetheless, after these insert-expansions, C can do a post-elaboration on the announcement, that is, do a return pop, using a pronoun to refer to the person last mentioned in the announcement. In this case we have a nice instance of long-distance pronominalization sanctioned by the structure of the sequence.²⁵ A schematic representation of the passage may clarify the return pop pronominalization:

²⁵ The pronoun in line 32 contrasts with a fullNP of the form "that guy"--C could have said "What's that guy's name?"



Here then, as in the cases we have seen so far, the pronoun displays the speaker's understanding that the pair being returned to is, although possibly complete, not yet definitely closed. The pronoun helps to produce the feeling of "continuing" something that is still going on.

As I have formulated the pattern of return pop, it must be the case that the sequence which the pop returns to has not been closed down prior to the return pop. If a sequence has been closed down, then a subsequent retrieval of some portion of the talk of that sequence is not a return pop. The exact structural status that such a move should have is unclear to me, but at any rate it is not a return pop, as I have defined that notion here.

Another example of a return pop, with pronoun, appears below.

(HG:II:22-23)

- | | | |
|------|--------------------------------------|--------------------|
| 1.H. | Y'know w't I did las'ni://ght? | [Pre-Announcement] |
| 2.N. | Wha:t,= | [Clearance] |
| 3.H. | =Did a te:rrible <u>thi:::</u> //ng, | |
| 4.N. | You called <u>Si:m</u> , | [Guess] |
| 5. | (0.4) | |
| 6.H. | No:, | [Reject] |
| 7. | (.) | |
| 8.N. | What, | [Clearance] |

9. (*)
 10.H. 'thhhh //Well I hed-
 11.N. You called Richard,= [Guess]
 12.() =hh-hh=
 13.H. =(h)y(h)Yea(h)h en I h(h)ung up w(h)u he a(h)ns//wer
 14.N. Oh: Hyla why:::/:/:/:,
 15.H. 'hhh=
 16. =W'first'v all I wasn't about t'spen'seventy five cents fer
 17. th(h)r(h)ee(h)mi(h)//nni(h)ts'uh'eh=
 18.N. Yeah,
 19.N. =That's true,=
 20.H. =hihhh That's a l(h)otta money plus (-) uh then it's
 21. twunny five cents fer extra m:minute a(h)//fter that.
 22.N. Yea:h,
 23.H. =hhhhh y//ihknow,
 →24.N. How do you know he answered

This passage also illustrates long-distance pronominalization with a return pop. In this case, the sequence begins with H making a pre-announcement (lines 1 and 3), which N at first responds to with a clearance marker ("what"), but then guesses at once ("you called Sim"), gives up ("what"), then guesses at again ("you called Richard"), this time successfully. H's third position response to the last guess indicates that it is correct, and goes on to add more news (line 13). This is the crucial line for the upcoming return pop. At line 14 N produces the first-pair-part of a post-elaboration of line 13, and this gets a fairly lengthy answer from H (lines 16-23, with third position acceptances from N). At line 24 N returns to line 13 to do the first-pair-part of another post-elaboration; this return contains a pronominal reference to Richard, the person last mentioned at line 13. The gap of 10 lines does not cause N to use a fullNP for the reference, as one would expect in traditional theories of anaphora, because the item being returned to is not yet closed (although it is possibly complete before the return). The pronoun at line 24 displays N's hearing of H's line 13 as not yet closed, and serves to help accomplish a "continuing" of that line.

The connection between returns to earlier adjacency pairs and long-distance pronominalization is not a new finding of this thesis. It was first noted in the natural language processing literature (Grosz, 1977) that long distance pronominalization was possible iff there were certain structural properties which held concerning the last mention of the item and the intervening material. Some of the structural properties which have been said to "induce" such long distance pronominalization are given below.

1. In a situation of accomplishing a main goal by accomplishing smaller subgoals (e.g., as was the case in Grosz' work, building a pump), a return to the main goal after work on a subgoal could be done with a pronoun. For example, Grosz found that speakers in her experiments could use it to refer to the pump as a whole (the object of the main goal) even if it had just been used to refer to a subpart of the pump.
2. If a speaker is interrupted, either by him/herself or by someone else, with a sequence started by what Schegloff and Sacks (1973) call a misplacement marker (e.g., by the way), then the interrupted sequence can be returned to after the interruption is hearably complete using a pronoun. Reichman (1981) reports instances in which such an interruption goes on for 30 minutes and yet the interrupted sequence is picked up again with a pronoun.

These instances of long-distance pronominalization have been called "return pops" in the natural language processing literature, because the pronouns in these cases show a return to an on-going concern after some stretch of talk in which the discussion is about something else. I have chosen to retain the term "return pop" for the sake of continuity with this previous work.

In my own work I have found a much wider range of situations in which a return pop can be done than had been previously identified. In essence, if there is context in which there is a focal adjacency pair, with subsequent pairs tied to it (and to one another) by the adjacency-pair relations described earlier, then there can be a return

pop to the focal pair. That is, the returning utterance must continue the returned-to sequence; if an utterance simply mentions a referent from a preceding adjacency pair, that is not sufficient grounds for calling the utterance a return pop. With the exception of same-gender environments (see section (5.4.2) for a discussion of return pops in same-gender environments), the basic pattern is for such return pops to be done with pronouns.

It should be noted at this point that a return pop is not necessarily a return to the most recent mention of the referent, as can be seen from the following passage, in which the return pop is to a mention other than the most recent:

(TG:3-4)

- 1.A. Oh my mother wannduh know how's yer grandmother.
- 2.B. 'hhh Uh::, (0.3) I don't know I guess she's aw-she's
3. awright she went to the uh:: hhospital again tihda:y,
- 4.A. Mm-hm?
- 5.B. 'hh'tl'hh A:n:: I guess t'day wz d'day she's supposetuh
6. find out if she goes in ner not.=
- 7.A. =Oh. Oh::.
- 8.B. Becuz they're gonna do the operation on the teeuh duct.
9. -//fi:rs]t. Before they c'n do t//he cataracts.
- 10.A. Mm-hm,
- 11.A. Right.
- 12.A. Yeah,
- 13.B. 'hhh So I don't know I haven:'t yihknow, she wasn' home by
14. the t-yihknow when I lef'fer school tihday.=
- 15.A. =Mm hm,
- 16.B. Tch!'hh So uh I don't know,
17. (0.3)
- 18.B. En: =
- 19.A. =M//hm
- 20.B. Well my ant went with her anyway this time,
- 21.A. [Mm hm,
- 22.B. [My mother didn't go.
- 23.A. Mm hm,
- 24.B. t!'hhh But uh? I don't know=She probably haf to go in
25. soo:n though.

The return pop at line 24 is a return not to the last mention of the grandmother, which occurs at line 20, but to B's first round of answers at lines 2-6 (with A's continuers included).²⁶ Here again we see that the traditional theory of anaphora, which takes into account only the most recent mention of a referent, neglects a wide range of anaphoric patterns.

It is obviously crucial for this type of analysis that interactants, as well as analysts, be attuned to the differences between tying to the immediately prior talk and return pops. That is, it must be the case if this analysis is to be at all meaningful that recipients hear the difference between these two types of moves and, perhaps more importantly, that speakers produce their utterances so as to display whether they are of one or the other type. I would like to argue here that speakers do indeed build their utterances to display the level of structure at which they fit in: the "unmarked" level is the immediately preceding sequence; special techniques are used to indicate that the utterance returns to a superordinate adjacency pair.

The main technique that I have seen used by speakers to achieve the effect of a return pop is repetition of words used in the returned-to sequence/action. Examples of this design follow (the repeated words or phrases are enclosed in #'s).

(HG:II:23)

H. Yea(h)h en I h(h)ung up w(h)u he a(h)nswer

.
.
.

N. How do you know he #answered#

[RETURN]

²⁶ I give a full explication of how this structure is achieved below.

(Friedell:9-10)

H. He-He went to: one mixer. et some,

.
.
.

H. End he #went to one et some#

[RETURN]

(TG:3-4)

A. Oh my mother wannduh know how's yer grandmother.

B. hhh Uh::, (0.3) I don'know I guess she's aw- she's awright
she went to the uh:: hhospital again tihda:y,

A. Mm-hm?

B. hh t! hh A:n:: I guess t'day wz d'day she's supposetuh
find out if she goes in ner not.

.
.
.

B. t! hhh But uh? #I don'know#=She probably haf to #go in#
soo:n though.

[RETURN]

(Friedell:8-12)

H. And there wz a ledder fr'm Da:ve.

[repair sequence]

S. What'd he haftuh say,

.
.
.

H. He's:: (y'know) had two days of cla::sses 'n he #says#
he's already behi:nd.

[RETURN]

(Friedell:10-11)

S. Has he said anything about running into uh () Laws in
or () Da:ve?

.
.
.

H. He did #run indoo#, (1.2) guy he'd known in the
Philippines.

[RETURN]

In each of these cases, exact lexical repetition is built into the utterance to

indicate at what level it is to be heard at. Ties to the immediately preceding adjacency pair are not as regularly designed to overtly exhibit their ties, hence my characterization of them as the "unmarked" move.

It should not be inferred from this claim about the design of return pops that all return pops are built with lexical repetition to display their structural position; some return pops do lack this feature. That is, it is not the case that lexical repetitions are required in all instances to "accomplish" a return pop. Passages in which return pops are accomplished without lexical repetition are given below.

(AD:22)

- 1.C. He:y. Where c'n I get a::, uh, 'member the old twenny
2. three Model T spring,
3. (0.5)
- 4.C. Backspring 't came up like that,
- 5.C. Dju know what I'm// talk] what I'm talkin a//bout,]
- 6.M. Ye:h,]
- 7.M. I thi]nk- I know whatchu mean,
- 8.C. Wh'r c'n I get o:ne. [fpp (1,a)]
9. (1.2)
- 10.G. Just use a regular one. [spp (1,a)]
11. (0.7)
- 12.C. Mmm I'd like t'get a, high one if I cou:ld. [3pos (1,a)]
13. (0.7)
- 14.G. [I know uh-]
- 15.M. [Lemme ask] a guy at work. He's gotta bunch a'
16. old clu//nkers. [spp (1,a)]
- 17.G. Y'know Marlon Liddle?
18. (0.2)
- 19.M. Well I can't say they're ol' clunkers he's
20. gotta Co:rd? [fpp (2,b)]
21. (0.1)
- 22.M. Iwo Co:rd's, [repair]
23. (1.0)
- 24.M. [And
- 25.C. [Not original, [fpp (3,c)]
- 26.M. Oh yes. Very origi(h)nal [spp (3,c)]
- 27.C. Oh::: reall//y? [fpp (4,c)]
- 28.M. Yah. Ve(h)ry origi(h)nal. [spp (4,c)]
- 29.C. °Awhhh are you shittin m//e? [fpp (5,c)]
- 30.M. No I'm not. [spp (5,c)]

31. (0.8)
 →32.C. What's his name. [fpp (6,b)]

In this passage, the return at line 32 to the utterance at lines 19-20 does not repeat any of the lexical items in the returned to utterance.

(HG:II:19-21)

- 1.H. =hhh Oh yih know w'n I wz talking
2. tuh Gra:ce.
3. (0.2)
- 4.N. °Gra//:ce,
- 5.H. Member Gra:ce? my fren Gra//:ce,
- 6.N. Ye::ah.=
- 7.H. =hhh Ay::u::n, hhhh she has, these best
8. frien's.=
- 9.N. =Uh hu:h,
10. (.)
- 11.H. tha:t live in: Minneapolis. 'n they have a
12. so:n.=
- 13.N. [Oh:.
- 14.H. who's twunny:: four'r twunny fi//ve. Sumpn,
- 15.N. Uh hu:h,
- 16.H. =pthhhh 'n he's in gra:d school i:n uhhh' (.) bio
17. chem 'r something like tha:t,=
- 18.N. =Sounds good,=
- 19.H. =A:n' hhhhhh hnh-hnh //sounds kosher? ihhhh=
- 20.N. °(shhounds ghhood)
- 21.H. A:n' he's coming ou:t. here,
22. (0.3)
- 23.H. January twunny.seventh er // something.
24. 'thhh
- 25.N. Mmmmm::: ::::
- 26.H. =So: en she awready wrote him about
27. me en evrythi//ing en she'd like
- 28.N. A w r i : g h t.
- 29.H. =(t') f//ix us u:p.
- 30.N. Does he wanna meet you?
- 31.(H). (°So),
32. ()
- 33.N. I mean d//z he wanna-
- 34.H. Well he doesn' have too much've a
35. choi(h)oice=
- 36.N. =Oh yeh that's truhh!=
- 37.H. =i-'u-'e:hhh,
38. (.)

39.H. 'u- 'uhhhh
 40.N. 'uhnuhhhh
 41. (0.2)
 →42.N. Well wt's (·) wt's he li::/ke.
 43.H. 'hhhhhhhh a- ah: she says

In this passage, line 42 is a second in a series of post-elaboration questions from N about H's announcement (at lines 26-29); the first post-elaboration question from N comes at line 30 ("does he want to meet you?"). The two post-elaboration questions are thus tied to one another by the series relation, and are both tied to the announcement at lines 26-29 by the post-elaboration relation. By this analysis, line 42 returns to the announcement adjacency pair, even though it bears a series relation to the first post-elaboration pair (one could say that the post-elaboration relation is the primary relation in this case). Note, however, that line 42 does not repeat any of the lexical items of the announcement (or of the first post-elaboration question, for that matter).

In both of these cases, return pops are done with pronouns but without lexical repetition. We will see later that lexical repetition in return pops is most often utilized in the environment of same-gender referents. I will postpone discussion of that fact for section (5.4.1). In any event, lexical repetition is not required in return pops.

Furthermore, the presence of a pronoun after a long gap does not necessarily indicate that a return pop has been done. This fact is illustrated by the following passage, in which a pronoun is used after a referential gap but its utterance is not a return pop.

(HG:II:24)

- 1.N. Didn't you wanna rilly say hi:.,=
- 2.H. =Ye:s, but ez soon ez he said hello I hung up.=
- 3.N. [Oh: : : : : : ,
- 4.H. [So I don't know'f ah'll ge'charged the seventy
5. fi'c(hh)ents(h)'r not,=
- 6.N. =No I don't think you will but- (.) (you)
7. might git charged something,
8. (0.3)
- 9.H. ↓Oh:.=
- 10.N. =Unle:- you know w't you shoulda do:ne?=
 11.H. =Call'the operator en said I gotta wrong//number,
- 12.N. u-Y:e:a::h,=
- 13.H. =hhh
14. (.)
- 15.H. Ye::h I din't think of it I wz too upset
16. about hearing his vhhoi(h)ce,=

Lines 15-16 contain a pronoun ("his voice") which refers to a person last mentioned at line 2, a gap of 13 lines; yet those lines are not a return to line 2 (or to any other line containing a mention of the relevant person). Rather, they tie, by the relation of post-expansion, to the immediately preceding adjacency pair (lines 10-12). I conclude from this example that a pronoun in and of itself does not "accomplish" a return pop, nor does its mere presence entail a return pop; while there is a close interaction between return pop and pronominalization, it is not a causal relation in either direction. They are independent facts which in some cases become intertwined.

Having looked at pronominalization in return pops, I would like to present a remarkable passage in which one of the participants displays her understanding of a return pop by willfully misinterpreting it as "tying" to the immediately preceding action (instead of back to an earlier pair) in order to make a little joke. With this action we see that for the participants, and not just for the analyst, there is a very real difference between an utterance that goes back to an immediately preceding adjacency pair and a

return pop.²⁷

(TG:27)

- 1.B. Oh Sibbie's sistuh hadda ba:by bo:way.
2.A. Who?
3.B. Sibbie's sister.
4.A. Oh really?
5.B. Myeah,
6.A. *(That's nice.)
7.B. She had it yestihday. Ien:: pou:nds.
8.A. *Je:sus Christ.
9.B. She ha//dda ho:(hh)rse hh'hh
10.A. (ba:by.)
11.B. hhhuhh! hh (Guess) why-But theh-sh-I-She wz
12. ovuh-She's lo:ng-She wz long ovuhdue.
13.A. Mmm.
14.B. And she, She had gai:ned about fawty pounds
15. anyway. hh
16. They said she was treme:ndous.
17. (0.5)
→18.B. So I'm sure they're happy about that. [RETURN]
→19.A. Nyeh thet she's treme(h)ndous'hhh [joke interpretation]

At line 18 B does a return back to "Sibbie's sister had a baby boy" (line 1) with her "So I'm sure they're happy about that," where that refers back to the fact of the sister having had a boy. At line 19, A on the other hand jokingly "misinterprets" B's utterance as an expansion on "They said she was tremendous" (line 16).²⁸ That A's utterance can come off as a little joke is a strong indication that some structural fact is being manipulated for humorous effects: the structural fact involved here is a return pop.

²⁷ B does not indicate that she has heard A's utterance as a joke. This could be a result of any of a number of factors, including the possibility that B does not want to give A the satisfaction of having made a successful "funny." In spite of B's lack of response, however, we can hear A's utterance as a joke, based on a willful misinterpretation of B's "So I'm sure they're happy about that."

²⁸ I am using "native intuition" here in finding the referent of that in B's line 18.

There appears to be still another structural situation in which a sequence is not yet closed and a pronoun is used. In this case, there is an adjacency pair which is tied to by the following adjacency pair by one of the relations discussed above, which is in turn tied to by the subsequent adjacency pair, which is in turn tied to by the next adjacency pair, etc., in a "chaining" sort of pattern.²⁹ In fact, I will call this structure an adjacency pair chain. It seems that if there is a mention of a referent in the first adjacency pair of the chain and then a subsequent mention of that referent in a later pair in the chain (and no intervening mention of the referent), the subsequent mention is done with a pronoun. The speaker thereby displays an understanding that the sequence of the first adjacency pair is not yet closed, and in turn accomplishes the continuation of the sequence. An example of this pattern is given below.

(HG:II:24)

- 1.N. Didn't you wanna gilly say hi:.,=
- 2.H. =Ye:s, but ez soon ez he said hello I hung up.=
- 3.N. °Oh: : : : : ,
- 4.H. So I don't know'f ah'll ge'charged the seventy
5. fi'c(hh)ents(h)'r not,=
- 6.N. =No I don't think you will but- (.) (you) might
7. git charged something.
8. (0.3)
- 9.H. ↓Oh:.,=
- 10.N. =Unle:- you know w't you shoulda do: ne?=
- 11.H. =Call'the operator en said I gotta wrong//number,
- 12.N. u-Y:e:a::h,=
- 13.H. =hhh
14. (.)
- 15.H. Ye::h I din't think of it I wz too upset about hearing his
16. vhhoi(h)ce,=

²⁹In practice, of course, this adjacency pair "chaining" is limited.

17.N. =Aw-:::.,

The structure of this passage can be roughly diagrammed as follows:

pair 1

pair 2

pair 3

pair 4

By using a pronoun in the first-pair-part of the fourth adjacency pair H displays that she is continuing a sequence which is still ongoing, even though she is not tying directly back to the pair in which the preceding mention of the referent occurred.

In all of the preceding discussion I have presented cases in which it is a fairly straightforward matter, for the participants as well as for the analyst, that the sequence containing mention of the relevant referent is not yet closed. The pronoun in these cases is doing the routine work of showing that "nothing special" is being done. In the examples I will present now, on the other hand, the pronoun displays an interactional construction (or construal) of the sequence on the part of one participant which may not have been the construction of the other participant(s). These cases, in their different ways, fall into the category of re-opening a sequence which might well have been thought closed by the other participants.

In the first subgroup of this type, material intervening between the utterance in question and the talk that it "ties" to is, by the use of the pronoun, shown to be an interruption, even if it was not heard as an interruption when it was first produced. The pronoun thus creates a retroactive construction of what might otherwise have been

sequence 1 (closed) sequence 2

as

sequence 1 (not closed) interruption seq 1 (continued)

The following passage exemplifies this use of pronominalization.

(AD:19-20)

- 1.C. How's uh,
2. (0.7)
3.(G.) ((clears throat))
4.C. Jimmy Linder.
5. (0.6)
6.C. He's-he's pm the Usac. (0.1) trail//isn'e?
7.M. No. He isn't runnin Usac, he runs, just, (0.2)
8. mainly uh, asphalt now, h//hh
9.C. 'Oh r//illy?
10.M. =He does real well.
11. (0.7)
12.G. D'y' ever go down t'the S'ndusky track down,
13. the asphalt,
14.(C.) (No,)
15.M. I aven'been down there in years'n years.
16. I don't care much fer
17. asphalt. I like (// //).
18.C. I'd rather=
19.C. =I'd rather watch the dirt track racing yeh,=
→20.C. =How come he's r-what's:: is he tryina move up?

Lines 1-10 in this passage are basically a question-answer pair (with two tries at the first-pair-part, and notice that C's line 9 is overlapped by M's line 10). At line 10, then, the sequence is possibly complete. At line 12 G starts up another Q-A pair, but his first-pair-part is not tied to the preceding pair by any of the relations discussed above; it is, in fact, a new sequence (although G's deliberate repeat of the word asphalt in line 12

is no doubt intended to show that line 12 is in some way related to what went before it), which closes down the previously only possibly complete sequence. At line 12, then, what we seem to have is:

sequence 1 (closed)

sequence 2

This interpretation of the talk is further reinforced by the uptake by M and C that G's first-pair-part engenders: M and C both answer the question, thus indicating that they "buy into" the interpretation in which sequence 1 is closed. But at line 20 an interesting thing happens: C ties back to M's lines 7-8 by means of a post-elaboration relation, doing this with a pronoun. C thereby brings off that he understands sequence 1 to be not yet closed, which in turn shows that the Sundusky track adjacency pair is now to be heard as an interruption of a still on-going sequence, rather than as a new sequence following the close of the preceding sequence. C's use of a pronoun at line 20 thus accomplishes a reinterpretation of the talk into.³⁰

sequence 1 (not closed)

interruption

sequence 1 (continued)

In the second subgroup of the category of pronouns re-opening sequences, we have the most extreme use of the pronoun in accomplishing an interactional feat. In

³⁰It is probably the case that the sort of move C makes at line 20 has a limited range of distribution; that is, it probably could not have been done successfully if G's line 12 had engendered a lengthy discussion about Sundusky track. For such a move to come off it is almost certainly necessary for the party attempting it to nip the "interrupting" material in the bud, as it were.

this pattern the sequence containing mentions of the relevant referent is in the process of being closed (by one of the closing mechanisms--either of the sequence or of the conversation--available to parties; see Schegloff and Sacks (1973) for a detailed discussion of these mechanisms) but is subsequently strikingly re-opened when a pronominal reference to the relevant person occurs. An example of this pattern follows.

- 1.A. Hello
- 2.B. Is Jessie there?
- 3.A. (No) Jessie's over et 'er gramma's fer a couple da:ys.
- 4.B. A'right thankyou,
- 5.A. Yer wel:come?
- 6.B. Bye,
- 7.A. Dianne?
- 8.B. Yeah,
- 9.A. OH I THOUGHT that w'z you,
- 10.A. Uh-she's over et Gramma Lizzie's fer a couple days.
- 11.B. Oh okay,

Notice that B initiates a closing of the conversation at line 4. A appears to accept the initiation at line 5, and B continues with the final closing at line 6; at this point we would expect A to produce a version of "bye" at line 7, after which both parties could conceivably hang up. As Schegloff and Sacks (1973) note:

Once properly initiated, a closing section may contain nothing but a terminal exchange and accomplish a proper closing thereby. Thus, a proper closing can be accomplished by:

- A: O.K.
- B: O.K.
- A: Bye Bye
- B: Bye (p. 317)

For the conversation above to be properly closed, then, we would expect A to produce a final closing "bye." Instead, she overlaps B's closing with an utterance that

clearly calls for the conversation to be re-opened (a first-pair-part). B confirms the identification in the second-pair-part (line 8). The conversation is now clearly open for both parties, and at line 10 A creates the additional re-opening of the topical talk of the call (lines 2-3) by referring to the person mentioned in lines 2-3 with a pronoun. This is a striking instance of the "use-determines-context" mode of operating, inasmuch as A clearly accomplishes a re-opening of the relevant sequence by using a pronominal form.

5.2.3 FullNP's used to display that a sequence is understood as closed

If pronouns are used to display a participant's understanding of a sequence as not yet closed, then it follows that fullNP's are used to display an understanding of a sequence as closed.

An example of a fullNP being used to refer to a person last mentioned in a closed sequence is given in the following passage. The argument for viewing the relevant sequence as closed runs as follows: whenever a return pop is done, the material which is "popped over" is closed off.³¹ In the following passage, the touched-off comment at lines 3-4 is closed by a return to the preceding pre-closing move at lines 7-8 (M is about to leave the scene of the interaction). Notice that M's return pop at line 7 is signalled by "so anyway," a common right-hand parenthesis device. When the person introduced in the now-closed touched-off comment is re-referenced at line 10, the reference is done with a fullNP.

(SN-4:32)

³¹Reichman (1981) notes that if a claim is made, after which some evidence is given to support the claim, a return to the claim will close the evidence off. Returns after interruptions are also said to close off the interrupting material.

- 1.M. W'l (anyway listen) I gotta (go), I gotta(-) do
- 2. alotta-studying
- 3. (0.3)
- 3.M. Oh en Hillary said she'd call me if- she was
- 4. gonna go t'the library with me
- 5. (0.9)
- 6.M. But- (0.1) I don't think she will
- 7.M. So ennyway (0.2) Tch. I'm gonna go have these xeroxed
- 8. 'n I'll come back inna little bit.
- 9.(M) (hhhh/hh)
- 10.R. (Oka//y. Say]) hi t'Hillary for me.
- 11.S. Okay.]
- 12.M. Okay I will.

Thus although the last reference to Hillary is only 3 lines away from the most recent mention, it is done with a fullNP because of the structure of the material between those two mentions. Here again the traditional theory of anaphora, which uses distance as the main criterion for anaphoric selection, turns out to neglect the fundamental issues faced by interactants when they choose among various ways of referring to people.

The following passage also illustrates the claim that return pops close off the material over which the pop.

- (AD:22)
- 1.C. He:y. Where c'n I get a::, uh, 'member the old twenny
 - 2. three Model T spring.
 - 3. (0.5)
 - 4.C. Backspring 't came up like that.
 - 5.C. Dju know what I'm// talk] what I'm talkin a//bout,]
 - 6.M. Ye:h,]
 - 7.M. I thi]nk- I know whatchu mean,
 - 8.C. Wh'r c'n I get o:ne.
 - 9. (1.2)
 - 10.G. Just use a regular one.
 - 11. (0.7)
 - 12.C. Mmm I'd like t'get a, high one if I cou:ld.
 - 13. (0.7)
 - 14.G. [I know uh-]

15.M. [Lemme ask] a guy at work. He's gotta bunch a'
 16. old clu//nkers.
 17.G. Y'know Marlon Liddle?
 18. (0.2)
 19.M. Well I can't say they're ol' clunkers he's
 20. gotta Co:rd?
 21. (0.1)
 22.M. Iwo Co:rd's,
 23. (1.0)
 24.M. [And
 25.C. [Not original,
 26.M. Oh yes. Very origi(h)nal
 27.C. Oh::: reall//y?
 28.M. Yah. Ve(h)ry origi(h)nal.
 29.C. *Awhhh are you shittin m//e?
 30.M. No I'm not.
 31. (0.8)
 32.C. What's his name.

[two stories intervene]

1.G. Getta piano s//tring en cut 'er nipples off.]
 2.C. Jesus Chri:st Mi:ke?
 3.G. hhh'hhhh
 4. (0.5)
 5.C. Kesh!'hh
 6.G. 'hhh hhhh!
 7.C. I que::ss.
 8. (0.7)
 9.G. *That's pitiful.
 10. (1.0)
 →11.G. Nah this Marlon Little's been building, roadsters,
 12. in th'str- considered street roadsters he builds.
 13.C. Nh.
 14.G. B'tche aftuh ra:ce 'em o//n the tra:ck]s (//).]
 15.C. Oh Little.
 16.C. Little. Ou:t]et uh:m
 17.M. Yah right up, Por'//Clin' Roa:d.
 18.C. on Por'Clin' Road.
 19.C. Ye:h.
 20.M. He usetuh get dow//n there.
 21.G. He works over et the plant.He's (in the plant.)
 22. (0.7)
 →23.C. Well I see I got my T bucket startih=
 24.C. =Well I // didn't get it started I got it- I'm ta:lkin
 25. about it now I'm, tryina get things lined up for it.
 G. ((clears throat))
 (1.2)
 M. You wanna mo:del, what?
 (0.5)

- M. Te//e?
- C. You know what you know the kinda spring I'm talkin about.
(0.3)
- C. Th'muh-thē o//ld model t]e//e-
- M. Yah they're]=
- M. =They're
- C. Yea//h.
- M. They're a hi:gh arch spr//ing.
- C. High arch spring.
- G. Oh: jist across the back end?
- C. Any-any high arch.
- C. °Yeh.
- C. Yeh but-
- G. Well see (uhmy ex) father'n law down'n Port Clint'n has one thet's (not) started. He's, got the engine (out) 'n evything.
(0.5)
- G. 'N eez got- a spring thet comes, (0.7) way up, all- from one wheel t'the other.
- C. Yeah, 't's right,
- G. Big hi:gh en this is a twu: I think it's a twunny seven, 'r::
- C. We::ll anyways if I cain' get it- I mean I'm just lookin fer so//methin. If ehy if it//s substitute, yihkno:w,=
- G. twenny ei//ght
- G. But-
- G. Uh: hh
- C. =If I can' get that I'll just haftuh go, to a lower spring.// ()
- M. You c'n get'em ma:de.
- G. S'm guys in Bellview bui//lt a frame (en it cost] em),
- C. Yea:h, fer a fortune,]
- (another page of talk)
- M. 'F you needed a spring, yo//u wannid a certain type a' spring°you c'go out'n get it made.
- C. Mm-hm?
- C. I heard Little wz makin um, was makin frames'n sendin 'm t'California.

This amazing passage consists of essentially four parts: C's request for information about a spring for his model T and the talk that engenders; two stories about men who own cars (one told by M and the other told by C); G's return to talking

about Marlon Little (which picks up his question of line 16 of the first fragment); and C's return to talking about his model T and spring (at line 23 of the second fragment). C's return at line 23 to his much-previous talk about his model T pops over the Marlon Little sequence (which runs from line 11 to line 21 of the second fragment), and according to the pattern should close off this sequence. Indeed, the next mention of Little (in C's last utterance in the second fragment) is done with a fullNP.³²

In the following passage, a fullNP is used after a sequence has come to a possible completion place, and a large lapse (5.0 seconds) has grown. Under these conditions, it is very likely that the participants will treat the relevant sequence as closed, since it has come to a possible completion place and all of the parties have "passed" on the opportunity to continue it. The fullNP in the next passage thus signals the speaker's understanding that the relevant sequence had been closed.

(Friedell:15-16)

1. H. Is//n't Peterson giving a, (·) talk t'day,
2. S. Ih-
3. S. Yeah// I'm s'posetuh go to it,
4. H. °(et noon),
5. (0.6)
6. H. Et noon,
7. (0.2)
8. S. No.
9. H. O//h. When °izzit ().
10. S. It's the three uh'clock seminar.
11. H. °Oh.
12. (0.2)
13. S. 'n I have a glass frm three tuh four en
14. that leaves me in the Frieze Building at four
15. te:n,
16. (0.7)

³²Admittedly, this last mention of Little might well have been done with a fullNP even if a return pop had not intervened because of the adjacency-pair "chain" that occurs between the two relevant mentions. This other possibility does not, however, negate the possibility that the return pop closes off for pronominalization the Marlon Little sequence of lines 11-21).

17. S. Trying to run through th'rain over tuh,
 18. H. You c'd- (0.2) C'dn you skip French one day?
 19. (0.4)
 20. (S). *(Yhe::::h.)
 21. (5.0)
 →22. H. Dz Petersin have a copy'v the paper.th't
 23. you c'd read.

The sequence is possible complete at line 20, and the feeling of completion is further reinforced by the long lapse at line 21. By line 22, then, H has every reason to expect that the sequence started at line 1 has been closed.

These are the major types of closed sequences followed by fullNP's in my data. There are almost certainly other varieties which await description.

5.3 Anaphora in the Environment of Different-Gender Referents

It has often been proposed in the literature (see for example Givon (1983)) that the appearance of a second referent in the discourse can cause the first referent to be referred to with a fullNP. In the next two sections I examine the patterns of anaphora associated with environments in which other referents are introduced. In the present section I explore the anaphoric patterning within environments in which referents of different genders are mentioned.

The basic pattern presented in section (5.2) seems to hold for the environment of different gender referents. The statement of this pattern is repeated here:

The first mention of a referent in a sequence is done with a fullNP. After that, by using a pronoun the speaker displays an understanding that the sequence has not been closed down.

That is, pronominalization seems to be possible as long as the sequence containing mention of the appropriate referent is not yet closed; if this sequence has been closed, presumably a fullNP is used.³³

5.3.1 Pronominalization in a not-yet-closed sequence

As we saw in section (5.2.2) above, a sequence is most definitely not closed if a first-pair-part has been produced and awaits its second-pair-part. We thus find that if a person is mentioned in the first-pair-part of an adjacency pair, even if there is a different-gender referent also present in that utterance, the basic pattern is for that person to be pronominalizable in the second-pair-part. Examples of this pattern follow.

(HG:II:2)

N. Y'dō wanna see his forty four year o//l'? [fpp]
 H. hhhhhhh.=
 H. =u:h-uh 'k
 ()
 H. 'hhhh I c'n live without her. 'hhhhh [spp]

In this example we have two referents, one male and one female, in a first-pair-part of an adjacency pair; the female is referred to with a pronoun in the second-pair-part.

Another example follows.

(SN-4:28)

S. Djiju tell her you had sympathih-sympathy pai//ns
 for him? [fpp]
 () (*heh)

³³I say presumably because I have no evidence from my data to support, or not support, this pattern. I would expect, based on the rest of the findings, however, that anaphora in different-gender environments is similar in this respect to the environment of no "interfering" referents.

→M. (h(h)h No.) I din' tell her anyth(h)ing.'hhh [spp]

Here again, we have a male referent and a female referent mentioned in the first-pair-part; the female is pronominalized in the second-pair-part.

The only other example of pronominalization in the environment of different-gender referents I have found is the following passage, in which (1) the first-pair-part of a post-elaboration contains a pronominal reference to the (male) person mentioned in the tied-to core pair, and (2) the second-pair-part of a return pop adjacency pair contains a pronominal reference to the (female) person mentioned in the returned-to pair:

(HG:II:19-21)

- 1.H. =hhh Oh yih know w'n I wz talking
2. tuh Gra:ce.
3. (0.2)
- 4.N. °Gra//:ce,
- 5.H. Member Gra:ce? my fren Gra//:ce,
- 6.N. Ye::ah.=
- 7.H. =hhh Ay::u::n, hhhh she has, these best
8. frien's.=
- 9.N. =Uh hu:h,
10. (.)
- 11.H. tha:t live in: Minneapolis. 'n they have a
12. so:n.=
- 13.N. [Oh:.
- 14.H. [who's twunny:: four'r twunny fi//ve. Sumpn,
- 15.N. Uh hu:h,
- 16.H. =pthhhh 'n he's in gra:d school i:n uhhh () bio
17. chem 'r something like tha:t,=
- 18.N. =Sounds good,=
- 19.H. =A:n'hhhhh hnh-hnh //sounds kosher? 'ihhhh=
- 20.N. °(shhounds ghhood)
- 21.H. A:n' he's coming ou:t. here,
22. (0.3)
- 23.H. January twunny seventh er // something.
24. 'thhh
- 25.N. Mmm::: : : : : .
- 26.H. =So: en she awready wrote him about

27. me en evrythi//ing en she'd like
 28.N. A w r i : : g h t.
 29.H. =(t') f//ix us u:p.
 →30.N. Does he wanna meet you?
 31.(H). ('So),
 32. (.)
 33.N. I mean d//z he wanna-
 34.H. Well he doesn' have too much've a
 35. choi(h)oice=
 36.N. =Oh yeh that's truhh!=
 37.H. =i- 'u- 'e:h hh,
 38. (.)
 39.H. 'u- 'uhhhh
 40.N. 'uhnuhhhh
 41. (0.2)
 →42.N. Well wt's (.) wt's he li://ke.
 →43.H. 'hhhhhhh a- ah: she says (.) he y'know,
 44. th'las'time she saw him which wz (.) three years
 45. ago he wz pretty good looking

The core pair in this fragment appears at lines 26-29 (an announcement and an assessment). The preceding lines provide leading-up, background information for the announcement (note N's anticipation of the announcement by at least line 13, and certainly by line 15). Notice that two referents, one male and one female, are mentioned in the announcement of line 26. Lines 30-36 stand in a post-elaboration relation to the core pair, and, as we would expect from the basic pattern, a pronoun is used in the first-pair-part of the post-elaboration to refer to one of the people mentioned in the core pair. The pronoun here displays N's understanding that the sequence is not yet closed and in fact that she is continuing it. At lines 37-40 we have laughter, which can indicate the end of a sequence. At line 40, then, the sequence is possibly over. At line 42, however, N continues the sequence with another post-elaboration (the second in a series with the first one) of the core pair. Since this post-elaboration returns to an earlier pair (and not to the immediately preceding pair), it is a return pop. In the first-pair-part of this post-elaboration, N uses a pronoun to refer to the male mentioned

in the core pair, again displaying her understanding that while the sequence may have been possibly closed at line 40 it was not definitely closed, and she is continuing it. Then, at line 43 H uses a pronoun to refer to the female mentioned in the core pair, even though this person was not mentioned in the first-pair-part of the current adjacency pair (and in fact had not been mentioned for 11 lines). In using this pronoun, H clearly exhibits an understanding that the sequence in which the core pair belongs is not yet closed. Of course, we can also say that by using a pronoun in this situation she creates an understanding for herself and her interlocutor that the relevant sequence was not closed.

We can conclude from these examples that the appearance of a different-gender referent does not alter the basic pattern of pronominalization established for the situation in which no "interfering" referents are mentioned.

I have no examples of fullNP's used in the environment of different-gender referents, so no claims can be made about that portion of the pattern.

5.4 Anaphora in the Environment of Same-Gender Referents

In this section I examine the patterns of anaphora for the situation in which referents of the same gender are present. We will see in this discussion, as in the preceding section, that simple introduction of another referent does not necessarily produce "ambiguity"; it is the structural organization of the talk that determines what will count as "interfering" and what not.

The pattern for anaphora in the environment of same-gender referents seems to

be something like the following. As we will see in chapter 7, and following Reichman (1981), a discourse unit is in an active state if it is being tied to by the current adjacency pair. For example, in the following passage, the first adjacency pair is active while the second pair is being produced:

(SN-4:10)

- | | | |
|-------|--|-------------|
| 1. M. | A:nd () as <u>far</u> as that goes my father's on his | |
| 2. | honeymoon= | [fpp (1,a)] |
| 3. | =(y:ah ha ha ha) | |
| 4. K. | (Oh:..) Very nice= | [spp (1,a)] |
| 5. | Where'd he go. | [fpp (2,b)] |

Even if the two pairs are not physically contiguous, as long as the second ties (in one of the relations we have described here) to the first--and this could be via a return pop to the first--then the first is in an active state while the second one is being produced.

Given those descriptions of active, the pattern for anaphora in the environment of same-gender referents can be stated as:

By using a pronoun when two referents of the same gender are present in the talk, the speaker displays to the hearer that the referent intended is to be found in an adjacency pair which is currently in an active state. If there are two referents of the same gender that are in pairs that could both be considered active (depending on what it is the speaker is doing), then the speaker will use other devices in addition to the pronoun (such as repetition of key words) to guide the recipient to the intended referent; if the speaker chooses (for whatever reason) not to use such devices, then a fullNP will be used for the reference.

This pattern is examined in detail below.

5.4.1 Pronominalization for pairs in an active state

According to the pattern above, we should expect to find pronouns--perhaps in conjunction with other linguistic devices--used to perform references to persons mentioned in "tied-to" pairs, even if there are other referents of the same gender physically closer to the pronominal mentions.

The major subgroup of this class is return pops to one referent "over" a referent of the same gender. An illustration of this use of pronominalization follows.

(TG:3-4)

- 1.A. Oh my mother wannduh know how's yer grandmother.
2.B. 'hhh Uh::, (0.3) I don'know I guess she's aw-she's
3. awright she went to the uh:: hhospital again tihda:y,
4.A. Mm-hm?
5.B. 'hh t! hh A:n:: I guess t'day wz d'day she's supposetuh
6. find out if she goes in ner not.=
7.A. =Oh. Oh::.
8.B. Becuz they're gonna do the operation on the teeuh duct.
9. -//fi:rs]t. Before they c'n do t//he cataracts.
10.A. Mm-hm,
11.A. Right.
12.A. Yeah,
13.B. 'hhh So I don'know I haven:'t yihknow, she wasn' home by
14. the t-yihknow when I lef'fer school tihday.=
15.A. =Mm hm,
16.B. Tch!'hh So uh I don't kno:w,
17. (0.3)
18.B. En:=
19.A. =M//hm
20.B. Well my ant went with her anyway this time,
21.A. [Mm hm,
22.B. [My mother didn't go.
23.A. Mm hm,
24.B. t!'hhh But uh? I don'know=She probably haf to go in
25. soo:n though.

This passage consists basically of one question that receives three rounds of answers. The first round starts at line 2 and runs through line 9 (to line 12 if A's

continuers are included); the second round begins at line 13 and runs through line 22 (line 23 if A's continuer is included); and the third round begins at line 24. The second and third round are tied to one another and to the first answer as members of a series, and they are all in a sense second-pair-parts to the question of line 1. Notice that each round begins with "I don't know." Now the critical pronoun that I am interested in here occurs at line 24 ("she probably have to go in soon though"): this pronoun unambiguously refers to the grandmother, and yet the nearest female referent in the passage is B's mother (mentioned at line 22), and in fact at line 20 another female referent (B's aunt) is mentioned. Why does B use a pronoun in this case, and how is it that the pronoun is unambiguous?

The answer to the first question is, in my opinion, directly tied to the answer to the second; that is, I am assuming that speakers use pronouns in same-gender environments whenever they can assume that the reference will be unambiguous. In other words, the claim is that speakers use pronouns whenever they feel they can "get away" with it. How is it then that a pronoun can be unambiguous in a same-gender environment? Quite simply, because of the structure of the talk, and the way the speakers display their understandings of this structure to one another.

verA!

In the passage at hand, B does two return pops (the second and third rounds of answers) to her first answer. Notice that each of these later answers displays its relation to the first answer by repeating exactly a phrase from the first answer--i.e., "I don't know." B thus clearly indicates the structure of the talk she is producing by using the linguistic device of lexical repetition to mark which utterance she is tying to. The pop is in this sense accomplished, at least in part, by the repetition of guiding lexical items.

Now note that the pronoun I am focusing on here occurs in one of these return pop answers marked by "I don't know". My claim about this pronoun is thus the following: a pronoun can be used in a same-gender environment (assuming for now that the referents are mentioned in different adjacency pairs) if the it is clear which adjacency pair contains the antecedent mention of the referent, that is which adjacency pair is being tied to by the relevant utterance. The pronoun at line 24 is therefore unambiguous because the antecedent locus of the utterance at line 24 (and 25) is unambiguous--the utterance is clearly not tied to the immediately preceding talk but goes back to the answer started at line 2 (notice that lines 24-25 also repeat the phrase "go in" from line 6). And the only female referent mentioned in lines 2-12 is B's grandmother, thus B clearly displays that the grandmother is the intended referent of the pronoun. The return pop makes the returned-to item active, and closes the "popped over" material, and the referential source of the pronoun lies in the returned-to material. What is critical here is the speaker's use of a linguistic device other than the anaphor itself to signal to the recipient the pair to which the utterance is to be tied.

Another similar example of return pop with pronoun in a same-gender environment appears below.

(HG:II:4-6)

- 1.N. 'n that made me feel good he-I guess he sees some
2. pretty bad ca:ses=
3. [intervening material]
- 4.
- 5.N. Also he sid that (0.3) 't what you ea:t, (0.2) end
6. how you wash yer face has nothing tih do with it,
7. (0.8)
- 8.H. Yer kiddin//g.
- 9.N. nNo: ,
10. (0.4)
- 11.N. He says 't's all inside you it's 'n emotional

12. thing'n, hhh e//n,
13. [intervening challenges, supports of claims, assessments]
- 14.N. I- c- I rilly b'lieve him cz another doctor tol' me that
15. ↓too:,
16. (0.4)
- 17.N. A doctor et school tol' me the exac'same thing he said
18. it's j's something new they're discoverin:g y'know hhh
19. 's like-
20. (.)
- 21.H. Mean I c'n eat all th' candy bars I want//nhhow?hh
- 22.N. ↑Yeah. And, en the fact that you, you feel guilty about
23. eating them tha:t's what makes you break ou:t b'cuz
24. it's (0.4) 't's all inside you,=
- 25.H. ='t'hhh So people who've broken out ther just very
26. emotional //peo(h)ple ha:h?
- 27.N. hhhhh hih 'hhhh En ther worried a//bout it,
- 28.H. 'ih'uh 'eh'eh 'e:h'e//h'eh
- 29.N. 'hhh hh=
- 30.N. =I don'know it sounds kinda cra:zy=
- 31.H. =hh//hhhh]=
- 32.N. bu:t
- 33.H. =Jista liddle.
34. (.)
- 35.N. We:::ll,
36. (0.3)
- 37.N. He may me feel bet//ter anywa(h)y

Here again we have a case in which the pair that an utterance ties to is clearly signalled by the speaker, and this signalling makes the use of a pronoun unambiguous. In this passage, one male doctor is discussed, and N says of him and what he said "and that made me feel good." Later, at lines 14-18, another male doctor is introduced, as a source of authority to support what the first doctor said. Between lines 19 and 36 no mention is made of either doctor, and then at line 37 we find a pronoun referring to the first doctor. Notice that in line 37 N repeats (although not exactly) the phrase used in line 1: "he made me feel better anyway." The unambiguous pronominalization is thus possible at line 37 because N clearly signals her return at to an earlier utterance (line 1)

in which only one male referent was mentioned (the first doctor). The referent mentioned in lines 14-18 does not in any way compete for the anaphor.

This particular passage makes another critical point about the nature of anaphora in conversation: contrary to popular belief, the referent of a given pronoun is not necessarily the referent of the last use of that same pronoun. Recall that in the present example the most recently mentioned male referent (that is, before line 37) is the other doctor, not the real referent of the pronoun. It should be clear that we must look to the structure of the talk, and how interactants display their understandings of the structure, if we are to account for the anaphoric patterning in conversational discourse.

Another instance of return pop done with pronoun and repeated lexical items follows.

(Friedell:8-12)

- 1.H. And there wz a ledder fr'm Da:ve.
2. [repair sequence]
- 3.S. What'd he haftuh say,
4. [3 pages of answers and more questions]
- 5.S. Has he said anything about running into uh (.)
6. Lawsin or (.) Da:ve?
7. [some answers to this question]
- 8.H. ...hhh En he did- run into a guy who wu- went tuh
9. highschool with me:, who's- (0.6) now a senior at Yale.
10. (2.0)
- 11.S. Highschool with you:.
- 12.H. °Mm-hm,
- 13.S. Same year 'r,
- 14.H. One year behin//d me.

- 15.S. Oh:.
 16. (5.0)
 17.S. Hm:.
 18. (0.7)
 19.S. B't nobody we know, ().
 20.H. No:.
 21. (0.4)
 →22.H. He's:: (y'know) had two days of classes'n he says
 23. he's already behi:nd.

There are two male referents in this passage: Dave, who is first mentioned at line 1, and "a guy," who is first mentioned at line 8. According to traditional theories of anaphora, the pronoun at line 22 should thus be ambiguous, since there are two same-gender referents in close proximity to the pronoun. But once again we see the power of structural indicators for "disambiguating" anaphora: the pronoun in line 22 is part of an utterance which is a member of an answer series to the question posed by S at line 3; that is, line 22 pops right over the lines in which the other male referent is mentioned and picks out, by repeating the key word say, the item to which it is tied. The lexical repetition helps to accomplish a return pop to a specific point in the preceding talk, and this return pop allows the use of a pronoun to be unambiguous.

One last instance of this pattern is given below.

(AD:32-34)

- 1.C. I heard Little wz makin um, was makin frames'n sendin
 2. 'm t'California.
 3. [2 pages of intervening talk]
 4.G. That's all- he don't have any ki:ds, him en his wife
 5. never had any kids'n,
 6.C. ((clears throat))
 7.G. (Whatta) they go:t*y'know ()
 8. (0.5)
 9.C. W'l,=

- 10.G. =I guess-
 11. (0.7)
 12.C. T!//Nah he helped,]
 13.G. He's got] he's got eight units thet he rents ou:t 'n,
 →14.C. He helped uh, Merkie build his T bucket up. I saw
 15. Merkie's is un is a, darn nice lookin little bucket.
 16. (1.0)
 →17.C. En then I, ez I heard det- you know he built a couple
 18. of'm up'n he usetuh build frames fer gu:ys=
 19.C. 'n then he, uh:: seh-uh sent a couple of'm t' California.

Using repetition of the words heard, frames, send to California, C signals a return at lines 17-19 to the pair started at line 1, thereby "popping over" mentions of a same-gender referent, Merkie. The pronoun in line 17 is unambiguous, for the reason that C has clearly signalled the pair to which the utterance is tied, and that pair includes mention of only one referent--Little.

This pattern of repeating lexical items in a return pop in a same-gender environment is a striking fact about the way interactants organize their talk for their interlocutors. The crucial data are given below for emphasis (the relevant lexical items are enclosed in #'s):

(TG:3-4)

- A. Oh my mother wannduh know how's yer grandmother.
 B. 'hhh Uh::, (0.3) #I don'know# I guess she's aw-she's awright
 she went to the uh:: hhospital again tihda:y,
 A. Mm-hm?
 B. 'hh t!'hh A:n:: I guess t'day wz d'day she's supposetuh
 find out if she #goes in# ner not.
 .
 .
 B. t!'hhh But uh? #I don'know#=She probably haf to #go in#
 soo:n though.

(Friedell:8-12)

H. And there wz a ledder fr'm Da:ve.

[repair sequence]

S. What'd he haftuh #say#.

[3 pages of answers and more questions]

H. He's:: (y'know) had two days of cla:sses'n he #says# he's
already behi:nd.

(Friedell:10-11)

S. Has he said anything about #running into# uh ()
Lawsin or () Da:ve?

H. He did #run indoo#, (1.2) guy he'd know in the
Philippines.

H. hhh En he did-#run into# a guy who wu-went to highschool
with me:.

(HG:II:4-6)

N. 'n that #made me feel good# he-I guess he sees some
pretty bad ca:ses

.

N. We:::ll,
(0.3)

N. He #may me feel better# anywa(h)y

(AD:32-34)

C. I #heard# Little wz makin um, was makin #frames# 'n
#sendin 'm t'California#.

.

C. En then I, ez I #heard# det- you know he built a couple of
'm up'n he usetuh build #frames# fer gu:ys=

C. 'n then he, uh:: seh-uh #sent a couple of 'm t' California#.

It is thus clear that speakers build their utterances to indicate the pair they are tied to; and the main technique used in this design is lexical repetition of the words used in the returned-to talk.

Another, less obvious, technique that seems to be used in this design is the slight "hitch" that occurs in the returning utterance, that is, a small self-repair, a sound-

stretch, an utterance internal pause, or a phrase such as "But uh" or "um" or "you know." Such hitches are common in return pops, and could in a sense be a design feature of those moves; they need not be repetitions of hitches in the original utterance. Examples of this phenomenon are given below.³⁴

B. t! hhh But uh? I don't know=She

C. En then I, ez I heard det-you know he built

H. He's:: (y'know) had two days of cla:sses

H. He did run indoo, (1.2) guy he'd known

H. hhh En he did- run into a guy who wu- went to highschool

N. We:::ll, (0.3) he may me feel better anywa(h)y

It is an intriguing possibility in same-gender environments that the hearer, upon hearing a pronoun, for example he in "He's you know had two days of classes," does not immediately find the referent, since the speaker could have in fact produced further talk on the immediately preceding adjacency pair; rather, it could be the case that the recipient suspends resolution of the pronoun until the locus of "tying" of the entire utterance is clear. This possibility is completely in keeping with the treatment of anaphora I am developing here; since it is the structural relation of the utterance to the preceding talk that determines patterns of anaphora, and not surface-given facts like topic continuity or referent ambiguity, then resolution of an anaphoric device must depend on the recipient's understanding of the particular structural pattern currently

³⁴Schegloff (1979) has noted a similar phenomenon at the beginning of new topics.

under development. If the recipient cannot make a determination about the structural pattern at the time that the anaphoric device is used, then s/he may suspend resolution, or may make a tentative guess at the referent, until enough of the utterance has been produced to indicate the structural relation.

A second subgroup of the class of cases in which pronouns are used to refer to items in an active adjacency pair occurs when two referents of the same gender are mentioned in the same adjacency pair, or even in the same pair-part. In this case, lexical repetition indicating the tied-to pair for an utterance is not sufficient, since the referents appear in the same pair. Here, lexical repetition combines with grammatical role continuity and lexical/semantic plausability to create an utterance in which reference is unambiguous.

Consider, for example, the following passage, in which two same-gender referents are mentioned in one utterance, and in a turn-expansion of that utterance pronouns are used to refer to them.

- 1.H. Dz Peterson have a copy'v the paper.th't you c'd read.
2. (1.2)
- 3.S. Evidently Wa:rd's not letting him, (0.6) talk about
4. what he wannid t'talk about,
5. (0.5)
- 6.S. M-he's making him talk about sumhing else th(h)et
7. evrybody's hea:rd.

S's turn at line 3-4 contains references to Ward and to Peterson, and both are

pronominalized in her turn-expansion at lines 6-7. The pronouns are unambiguous in this case because of the semantic and grammatical structure of the utterance. That is, Ward has been established as the causer in a causative clause (line 3) while Peterson has been the causee. Furthermore, Peterson has been established as the agent of an event of talking. In lines 6-7 these semantic/grammatical roles are maintained: someone is causing someone else to be the agent of talking. Since the roles are explicitly maintained by the use of parallel phrases and structures ("letting him talk about" vs. "making him talk about"), the pronouns are unambiguous, inasmuch as they can be heard as referring to the entity that filled their slot in the preceding utterance. Here, as before, we see that pronominalization is possible in same-gender environments if other linguistic devices are utilized to guide the interpretation.

5.4.2 FullNP's used when other linguistic devices aren't used

Above it was claimed that pronominalization is possible in the environment of same-gender referents if other linguistic devices besides the anaphor itself are used to guide the recipient to the intended referent. In cases where other devices are either not available or for some reason are not used, fullNP's will be used.

Below I present an instance in which a return pop over same-gender referents is done with a fullNP, in contrast with the examples of return pops we saw in the preceding section. A fullNP is used in this case, it is argued, because the returning utterance is not built (for whatever reason) to indicate what exactly is being returned to. The fullNP makes the reference clear given that there is no help from the structure of its utterance.

(AD:17-19)

1. C. Keegan usetuh race uhr uh- er ih was um, (0.4) usetuh
2. run um,
3. (2.7)
4. C. Oh:: shit.
5. (0.4)
6. C. Uhm,
7. (0.4)
8. C. Fisher's car.
9. M. Three en//na quarter?
10. C. Thr//ee enna quarter.
11. M. Yeh,
12. (1.0)
13. C. (When I) wz foolin around.
14. G. I usetuh go over there wih my cousin,°(when he
15. had a car),
16. (1.2)
17. G. His name wz uh, Tucker.
18. G. (They had a-) McGill from,°(Knotsville)
19. G. Sam's from Bellview.°He had a Oh Two. Ih wz a,
20. modified.
21. Six cylinder::?
22. M. Oh yeah th//at's goin way ba:ck.
23. G. °(That's a lo:ng time ago).
24. G. Tha wz a lo:ng time a//go.
25. M. Yeah.
26. (1.0)
27. G. I usetuh go over there the://n 'n, no:w, Rich Hawkins
28. from Bellview drives one, fer some guys frm up't
29. Bellview.
30. M. ((clears throat))
31. (0.4)
32. M. Yah.
33. G. He's my:: liddle sister's brother'n law.
34. (0.5)
35. G. He's a policem'n in Bellview b't he- (0.4) I guess he's,
36. not afraid t'drive a ca:r.
37. (1.0)
38. G. I d'know what they have tuh dri:ve I haven't even been over
39. tuh see (im//lately)
40. M. It's a pretty good ca:r.
41. (4.2)
42. G. Evry time I wen over there I froze m'nu:ts.
43. (1.0)
44. M. °hh hh//hh!
45. G. You always go over en ni- nice in the afternoon en you
46. go over there wi//th jus::]t shirtsleeves on 'er just a,
47. 'short sleeve shirt'n fore the night is over yer
48. freezin t'death.
49. M. Yeah.]
50. G. Yer not allowed t'dri:nk,

→51. M. Hawkins the one that hit A1 last year over in
Finley

Although the exact structure of this passage is not clear to me, it is apparent that there are at least three male referents mentioned: Keegan (line 1), Tucker (line 17)³⁵, and Hawkins (line 27). Each of G's utterances seems to be a turn-expansion of his own preceding turn, and so we seem to have something of a turn-chaining effect:

Keegan

Tucker

Hawkins

When M comes to produce his line 51, then, he must contend with the fact that there seems to be a chain of at least three male referents in the preceding talk. Now we can see that the lexical/semantic nature of M's line 51 could not distinguish what pair he means to be "tying" to: first, there is no repetition of lexical items from any of the preceding turns; and second, since all of the men mentioned in the fragment are race-car drivers in Ohio, hitting someone over in Finley is not a feature that distinguishes among them, especially since both Keegan and Hawkins have been associated with the agent role in events of driving ("Keegan used to race..." and "Rich Hawkins from Bellview drives one"). Given the structure of M's utterance at line 51, then, and the structure of the preceding talk, a pronominal reference would have been ambiguous; M

³⁵ It is probably the case that the "Sam" mentioned at line 17 is Tucker; it cannot be conclusively shown, however, that Sam and Tucker are not two different people.

thus uses a fullNP.³⁶

Another instance of fullNP used in a return pop where no other linguistic devices are used to guide the recipient to the intended referent follows.

(AD:14-15)

- 1.G. hhOh my Go-o-d that's a, topnotch society over the:re,
2.C. eh heh heh
3.M. ((sniff//sniff))
4.G. eh-heh-heh eh(h) living aroun Bidwell en Greensprings
5. (with th(h)e // be(h)st)'hhh hh
6.M. Yea:h.
7.M. We:ll,
8.G. They got nice ca:rs th.
9.() °(Yeh)
10. (3.0)
11.G. ((clears throat))
12. (0.5)
13.G. Fraid tih g- (0.2) ((swallow)) go down there after
14. da:rk, specially walking. hh
15. (0.6)
16.C. ((v1)) Ahhhhhhh
17. (1.7)
18.C. Well Doug isn't too bad a gu:y.
19.M. No.
20.M. His bro//ther's a] n=-
21.C. He usetuh,]
22.M. =(Yeh) brother's a pretty nice guy I// spoze
23. probly the younger kids thet'r raisin hell over
24. there,
25.C. I::-
26. (0.5)
→27.C. I know. I d- I know Dou:g en he isn't.

Two male referents appear in this passage, Doug (line 18), and his brother (line 22). At line 27 C does a return pop to line 18, but uses a fullNP to perform the

³⁶It is also possible that M hears that the sequence containing mention of Hawkins has been closed down by the lengthy lapse at line 41 and the talk at lines 42-48 about the weather. In this case, the fullNP would reflect M's understanding that the sequence had been closed rather than anything having to do with competing referents. In fact, both of these factors may in some sense operate at once.

reference. He uses a fullNP here (1) because the utterance does not indicate, through use of lexical repetition, what pair it is tying to, and (2) because neither of the male referents has been associated with the role of being known by someone. The return pop by itself thus does not uniquely select out a given piece of talk to return to, and the reference must therefore be done with a more explicit form than a pronoun.

The same situation holds if two referents of the same gender are mentioned in the same utterance or adjacency pair: if there is no repetition of lexical items, and if the semantic/grammatical roles associated with each referent provide no help, then a fullNP will be used to perform the reference. Examples of this pattern follow.

(AD:34)

- C. He helped uh, Merkie build his T bucket up. I saw
Merkie's is un is a, darn nice lookin little bucket.

We can treat the second sentence as a turn-expansion of the first sentence. In the first sentence Little [he] is associated with the role of helping someone build something, while Merkie is associated with the role of building. That is, both referents are involved in an action process in the first sentence. The second sentence, on the other hand, says nothing about the process, or the roles associated with the process; it is an assessment of the quality of the thing built. Given the lack of reference-helpful information gleanable from the utterance itself, a fullNP is necessary to make the reference to Merkie successful.

Another example of this pattern is given below (see pages 49-50 for the earlier lines in this fragment).

(AD:19)

- 1.G. Yer not allowed t'dri:nk,
- 2.M. Hawkins the one thet hit Al last year over in Finley en,
3. (1.0)
- 4.M. flipped him 'n put Al³⁷ in that bad accident.
- 6.G. [Wzee
- 7.C. [Oh rilly?
- 8.M. Yah. (2.0)
- 9.C. "Al's a pretty damn good driver.

In this fragment we have two male referents mentioned, Hawkins and Al. Both are known to be race-car drivers. Through M's talk at lines 2-5 we associate Hawkins with the agent role in a transitive event and Al with the patient role in that event. The reference I am focusing on here is the fullNP in C's line 9. The claim being made about this fullNP is that (1) C's utterance at line 9 does not repeat any of the lexical items from the preceding utterances, and (2) does not utilize the semantic/grammatical roles we have already associated with each referent (in fact, since both are drivers, either one could be a "pretty damn good driver"). The utterance itself does not help the recipient to pick out a unique referent, so to make the reference successful, C uses a fullNP.

The passages presented in this section are the only examples of anaphora in the environment of same-gender referents that I found in my data. Perhaps other patterns of anaphora will be uncovered in the future if a larger database is used.

³⁷This reference will be discussed later.

5.5 Non-Structural Factors in Anaphora

In the preceding sections of this chapter, we have seen the basic structural patterns which correlate with the distribution of anaphoric devices. In this section I would like to demonstrate that, while those patterns are basic, they are not always followed; that is, there are other, non-structural, factors which influence anaphora. These non-structural factors are rarely discussed in the literature on anaphora (Linde (1979) and Duranti^{UC} (1983) are exceptions) and thus it is particularly important to examine them here.

The non-structural factors I have isolated do not seem to form a coherent group; at least at this point I don't see any common principle at work in them. I have therefore presented them below in a list format.

5.5.1 Disagreements

I found a few cases in which a referent was mentioned in a statement from one participant and was then mentioned again in a disagreement to that statement from the other participant; and this second mention was done with a fullNP.

(US:24)

- R. Those'r Alex's tanks weren't they?
V. Podn' me?
R. Weren't-didn' they belong tuh Al//ex?
→V. No: Alex ha(s) no tanks Alex is tryintuh buy my tank

(AD: 8)

C. Oxfrey runnin-I heard Oxfrey gotta new ca:r.
G. Hawkins is ru//nnin.
→M. Oxfrey's runnin the same car he run last year.

(US:90)

M. Beer is even bedder den wine. Cause it give you more
nutrition. Joe lives on beer.
() Hnh
→V. No. Joe don' live on beer.// Joe lives on, Joe eats.

(SN-4:4)

(Karen is co-present person)

S. You didn't come tuh talk tuh Karen?
(0.5)
→M. No (0.2) Karen: (0.3)
→M. Karen'n I 're having a fight after she went out with
Keith

(US:7-8)

(M) °(W't about Vinny. Did he talk about money?)
(2.0)
→V. (B't) Vinny didn' talk no money wid me

- 1.A. Hello
- 2.B. Is Jessie there?
- 3.A. (No) Jessie's over et 'er gramma's fer a couple da:ys.
- 4.B. A'right thankyou,
- 5.A. Yer wel:come?
- 6.B. Bye,
- 7.A. Dianne?
- 8.B. Yeah,
- 9.A. OH I THOUGHT that w'z you,
- 10.A. Uh-she's over et Gramma Lizzie's fer a couple days.
- 11.B. Oh okay,

In each of these examples, a statement or question is made by one speaker, which is then disagreed with by the other participant, and the references in both the statement/question and the disagreement are done with fullNP's. This environment does not always induce the use of a fullNP, however; a passage in which such a disagreement is done without a fullNP is given below.

(AD:19-20)

- C. How's uh,
(0.7)
- (G) ((cle//ars throat))
- C. Jimmy Linder.
(0.6)
- C. He's he's pm the Usac. (0.1) trail//isn' he?
- M. No. He isn't runnin Usac, he runs, just, (0.2) mainly
uh, asphalt now

Notice in this passage, though, that C's statement (which becomes a question through the use of a tag) contains a pronoun and not a fullNP; in the examples above,

both parts--the statement/question and the disagreement--were done with fullNP's (with the possible exception of the Vinny example). I don't have enough instances of this phenomenon to know if the presence of the fullNP in the statement/question is crucial for the anaphoric form used in the disagreement.

An investigation of the interactive work being done by this anaphoric pattern is beyond the scope of this study. I point it out here because it appears to go against the pattern discussed above which says that if there is a mention of a referent in an open sequence, then a pronoun can be used to do a next mention of that referent.

5.5.2 know + NP: Overt recognitionals

In one of the transcripts, I found several instances of a fullNP being used when a pronoun would have been predicted by the patterns presented earlier in the grammatical context of know + NP, or in some related context in which the identity of a person is overtly displayed and negotiated. That is, instead of saying something like (a), speakers were often found to say something like (b):

- (a) A. Mary is visiting me this week.
B. I know her.
- (b) A. Mary is visiting me this week.
B. I know Mary.

In this pattern, a person is mentioned, either pronominally or with a fullNP, and then is mentioned again in the same sequence in an utterance (produced by any party) which stops the flow of talk to overtly establish that the person's identity is known. The latter mention is done with a fullNP.

The exact nature and motivation behind this pattern is not apparent to me at this time. I have given examples of the pattern below to demonstrate that it is a real pattern.

(US:2)

V. En he ro:de] away on his bi:cycle.

M. Didju find Jim?

(0.5)

V. P(h)eddelin away yuh see,=

→M. =Oh:: dey-dih-yeh- I-I know dih cat,

(US:43)

V. Yes, en I've seen the person before in your building becuss I cornered them once, thinking it was the father// of the son I wz// very mad.

J. e(hh)h!

→J. Yeh. Uh-I dis wantuh know de person. That's all.

(US:66)

J. He-he-he's got- Yeh, yeh right! Jus// like that,

M. Hmmhh!

J. You know what I mean?

M. hh hh hih-hih-// hih-hih-hih

J. The hippy- type,

(1.0)

→J. 'hhh I know, he's onna top floor. I know dih guy

(US:67)

- M. =No. I know (who) the guy. I know who d'//guy is.=
 V. Yeh.
 V. [He's ba::d.
 →J. [You know deh gu:y,
 →M. I know deh//guy.

(Clacia:16)

- D. 'hhh] Cathy McCo:n]nen. Iha:t's th'name I'm// tryina
 think of]=
 C. Yeah, right.]
 →D. =Dju r'//member Ca:thy,]
 C. Right. I: r'me]mber// her.]=
 D. Yeah.]
 C. =Right.

(AD:8-9)

- P. =Mkke siz there wz a big fight down there las'night,
 C. Oh rilly?
 (0.5)
 P. With Keegan en, what. Paul// de Wa::ld?]
 M. Paul de Wal]d. Guy out of,=
 →C. =De Wa:ld yeah I// (know]//him.)³⁸

It seems that something about the environment of overtly discussing the

³⁸This example contains not just a simple know + fullNP but rather fullNP + know + pro--something like a left-dislocation. The point here is that in the context of overtly determining the recognitionality of a referent, a fullNP is likely to appear.

recognizability of a referent triggers the use of a fullNP, even if the conditions are such that the patterns given in preceding sections would predict that a pronoun would be used.

5.5.3 Assessments

It has been noted by other researchers (e.g., Duranti, 1983) that a speaker's attitudes towards characters can be displayed through the anaphoric devices chosen to refer to those characters. In my own data, I have found something similar, in that it seems that speakers tend to use fullNP's to refer to people in an assessment situation, especially if the assessment is negative (negative affect). Examples of fullNP's in assessments are given below. Notice that in each case we would have expected, based on patterns discussed earlier, that a pronoun would have been used.

(US:11)

- V. Don' haftuh be a value whenever I do anything not
fuh my wife, my wife wantstuh know why, I did (it).

(Friedell:24)

- S. Just think what good training it-u Besides
Bill Steffie lives underneath th'm. (·) Pay
a hundrd'n fifty (h)en l(h)ive o(h)ver Bill Ste(h)ffie
'hhhh

(US:68)

M. (He's got a m- He got a bicycle.)

M. (Y'get it) all the time. He always// bring his bicycle in en outta the house.

V. En he does-

(0.7)

V. He does his // ().

J. (Onna) bicycle?

M. Ye//h.

V. Him.

(0.4)

R. Yeh.=

V. =Yih know,

→J. But I cain't figyuh this guy with a bicycle

It is not clear to me why assessments should "induce" the use of fullNP's. Nonetheless, there seems to be a demonstrable pattern of this association in the data I have examined.

5.5.4 First mentions

We noted at the beginning of this chapter that the first mention of a referent in a sequence is done with a fullNP. This pattern seems obvious enough. In several instances in my conversational data, however, I found first-mentions that were done with pronouns. These pronoun first-mentions fell into one class: first mentions whose referents belonged to a general class of referents which was evoked by a frame.

This type of first-mention with pronoun is something like the familiar frame-evoked definite noun phrases, as in .

I read a really good book last night. The author was Dutch.

where author can be definite because of the mention of book--books tend to be

associated with authors, pages, covers, pictures, etc; the first mention of 'author' is thus definite because of the frame associated with 'book'.

In the instances of frame-evoked pronoun first-mentions, the exact identity of the referent seems to be unimportant; in a somewhat paradoxical way, then, a pronoun is used when the recipient is incapable of identifying the specific referent, and is in fact not expected to even try to identify the referent. The class of referents is identifiable, however, and it is perhaps this identity which the recipient is being invited to "resolve" by the use of the pronoun (where all members of the class are seen as being basically the same). Examples of this phenomenon are given below.

(TG:11-12)

B. I'nna tell you on:e course.

(0.5)

A. [()]

B. The mah- the mah:dern art. The twunnieth century a:rt
there's about eight books,

A. Mm//hm,

B. En I wentuh buy a book the other day I //went'hh went=

A. (mm)

B. =downtuh N.Y.U. tuh get it becuz it's the only place thet
car//ries the book.

A. Mmm

A. Mmh

B. Tch! En it wz twun::ty do::lliz.

A. Oh my god.

(0.4)

→B. Yeuh he- ez he wz handing me the book en he tol' me twunny
dolliz

In this passage, B is describing going to a bookstore to buy a book. Bookstores have associated with them people who tell you how much the books cost and who take the money from you; hence through the bookstore frame such entities as tellers,

checkers, etc. are as a class identifiable, although no individual is directly identifiable through this frame. He in the last line of this example refers to some member of one of these classes (probably a clerk of some sort). His exact identity is utterly unimportant to the report that's being made--it is his identity as a member of a class of people who know things like the price of a particular book that is important here.

(TG:13)

B. Ih wz, I don't know what I'm gunnuh do. hEn all the reading
is from this one book so f(h)ar the(h)t I haven' go(h)t!

A. hhhhhhhh!

→B. 'hhhh So she tol' me of a place on Madison Avenue 'n Sevendy
Ninth Street.=

The university class is associated with several items--teacher, books, chairs, work, etc. In this example, we seem to have a first reference to the teacher done with a pronoun. Here again, the exact identity of the teacher is unimportant (and in fact unavailable to the recipient).

(HG:II:2)

N. u-h↓Qh::,
(.)

H. [Bu:t

N. [My f: face hurts;=

H. =w't-°
(.)

→H. Qh what'd he do tih you.

It is shared knowledge for H and N that N has had an appointment to do something about her acne. Face here is thus a frame for dermatologist, so even though the exact identity of the dermatologist may be unknown to her, H can use a pronoun to refer to the dermatologist.

(HG:II:24)

N. Eh least you know he was ho:me,=
H. =nihh phhig thhea(h)l=
N. =qn a // Thursday ni(h)ght (hn).
→H. 'hihh ()'hhhhh She coulda been ly(h)ing ri'next to him

Although the pronoun in the last line of this passage could refer to a specific person known to both H and N, it is more likely that it is just one of a class of entities that is being referred to with the pronoun. If this ethnographic assumption is correct, then this passage is another instance in which a pronoun is used to refer to "just another" member of a category.

In each of the passages above, the pronoun in question could be replaced with a category label, such as clerk, doctor, teacher, etc. It is not clear to me why the speakers in these cases have chosen pronouns over category labels, but the pattern is real nonetheless.

5.5.5 Demarcating a new unit

We saw in earlier sections that it is the basic pattern in conversation for a reference to be done with a pronoun if the sequence containing mention of the relevant referent is not yet closed, even across adjacency pair boundaries. There seem to be situations, however, in which the new adjacency pair is treated as a somewhat separate unit from the preceding material; the new unit can be demarcated with a pre-pre (Can I ask you a question?, Let me tell you something, etc) or some other demarcating device. In addition, it seems that the reference in such a new unit can done with a fullNP

instead of the expected pronoun.³⁹

There are obvious weaknesses with this particular analysis. For one thing, it is not clear how one can provide independent support--aside from the fullNP--that the unit being constructed is viewable as a new unit; after all, not every new adjacency pair starts with a fullNP. What makes one pair a separate unit while another is to be considered a non-separate unit? For the instances in which another demarcating device besides the anaphoric form appears (e.g., a pre-pre), the issue of circularity is less pressing; in other cases, even if the analysis is valid for the interactants the issue of circularity might make it untestable and hence not terribly useful as a hypothesis about the world. In spite of these difficulties, however, I feel that this analysis is worth exploring.

Consider the following examples.

(US:76-77)

- V. I getta attitude behind dis, Jim came in heuh befa:w,
→M. If I git into- y'know y'know now I'll tellyuh
[d'reason.
V. Jim came down tuh flash his money.
(0.5)
M. If I // git into-
V. Y'know he got his income tax tuhday, 'hh en his wz,
saying, c'mon// let's chip in fuh the boddle en he//
threw money- hh
M. °Yeh.
M. Okay.
R. Yeah.
V. Now he threw money onna ta:ble.
M. Who//o.
J. He's no:t uh, he's not a spendthrift Jim.
→M. Oh wuh lemme tellyuh now.

³⁹The reason for starting a new unit with the marked member of an opposition (in this case, fullNP) is unclear; nonetheless it is a documentable phenomenon across languages (see Fox, to appear).

- M. I put fi'dolluhs'n Jim gave me ()//
 yesterday I'm goin tuhnight.=
 V. Okay.
 M. =You'll have 'em- eh you'll have 'm tuhnight. Seven uh
 clock eight uh'clock I'll bring 'em over t'yer house.

In this passage, the new unit is marked first with "now I'll tell you the reason" and then with "Oh well let me tell you now" (a type of pre-pre, presumably) and contains a fullNP even though the unit is tied to an action in which the same referent (Jim) is mentioned.

(SN-4:10-11)

- M. A:nd () as far as that goes my father's on his honeymoon.=
 = yah ha:h hah
 K. Oh:: Very//nice Where'd he go.
 M. (Ye:ah)
 M. Well I hed thought he was going tuh Acapulco because it was
 such a hush hush se//cret where he'd be go:ing.
 ((door closing))
 (0.8)
 M. 'n I thought he didn' want anybody t'know er sum'ing
 (0.3)
 M. But
 (1.1)
 M. Indee:d he did not go t'Acapulco. Where did he go? He
 went up north.
 (0.5)
 M. They just, travelled up north end u::m,
 (0.5)
 M. I guess it's okay he's gonna be gone fer about another
 week
 (0.8)
 K. You like the lady?
 (0.4)
 M. She's nice. She's a nice lady. I like her.
 (0.3)
 K. Ah//hh
 M. Friendly.
 (1.0)
 →M. B't-the ba:d thing was thet um::, (0.3) I hadtuh
 mo:ve my dad's furniture

- (0.7)
 M. from his place in Sanna Monica=I had tuh have
 let the movers in (-) so.
 (0.7)
 M. Being to:tally drunk from that orgy on Saturday night
 I (h'd) t'get up (0.2) en go do:wn. (0.2) (Sanna)
 Monica with Hillery.

In this instance, M starts a new unit--a story--with "but the bad thing was that I had to move my dad's furniture." Although this new unit contains a mention of a referent that had appeared in the preceding talk, the mention is done with a fullNP because the beginning of a new unit is a place where fullNP's can be used for otherwise retrievable referents. It is thus my claim that the motivation for using a fullNP ("my dad") is to display that the utterance produced here begins a new unit (a story that also serves as a complaint).

Another example of this pattern follows.

- (SN-4:29-30)
 M. So you dating Keith?
 (1.0)
 M. He's a friend.
 (0.5)
 M. What about that girl he use tuh go with fer so long
 K. A:lice?
 K. I//don't-] think (they're about).
 M. °myeh]
 (0.4)
 M. (Wha-?)
 K. I dunno where she is but I-
 (0.9)
 K. Ialks about her evry so often but I dunno where she is
 (0.5)
 M. hmh
 (0.2)
 →S. Alice was stra:nge
 (0.3)
 M. Very o:dd. She usetuh call herself a prostitute

Here we have a return pop (S's last utterance, back to M's question "What about that girl he used to go with for so long") done with a fullNP, even though there are no competing referents. Again, it is claimed that the unit started by S's utterance is displayed as separate from what has gone before.

(AD:8)

- 1.C. ...Keegan still go out?
- 2.M. Keegan's
- 3.M. out there he's,
- 4.M. He run,
5. (0.5)
- 6.M. E://r he's uh::
- 7.G. Wuhyih mean my:.]
- 8.G. My//brother in law's out there,]
- 9.M. doin real good this year'n] M'Gilton's doin real
10. good

In this passage, M uses a fullNP in a second-pair-part (line 2) even though we have seen that usually a pronoun is used in a second-pair-part if the same referent is mentioned in the first-pair-part. M's fullNP here (i.e., Keegan) is used to begin a new unit--a list unit of who all is around and doing well, which he then continues with M'Gilton. It is the separateness of M's unit (that is, that he is not just answering C's question but also creating an internally complex unit on his own) that facilitates the use of a fullNP here.

5.5.6 Replacing an action

In producing an utterance, a speaker may not be doing "more" of what has come before; s/he may be replacing, or producing a "substitute" for, an utterance which was previously produced. One way the speaker can show that the current utterance is a replacement for a previous utterance is to use the same anaphoric device that was used

in that previous utterance; in other words, the speaker will not shift from a fullNP to a pronoun, as we might expect from our structural rules, but will re-use the fullNP. In addition, in most cases of replacing, other words besides the fullNP will be re-used. These repeats of lexical items are another clue to the replacement nature of the utterance. Several examples of this replacement phenomenon are given below.

(US:4)

- V. My wife//caught d'kɪ:d,=
 R. Yeh.
 V. lightin a fiyuh in Perry's 'cel:luh. last year
 deh usetuh be a lotta fiyuhs in 666.
 V. Remember?
 →V. My wife caught th'kid lightin a fiyuh.

Here there is a nearly exact repeat of the utterance, done with the same anaphoric forms as in the original utterance. My claim here is that V's last utterance is intended to be a replacement for his first.

A common type of replacement occurs when an utterance is in overlap with someone else's talk, or is not sequentially implicative for the subsequent talk; in this case the utterance is treated by its speaker as if the other parties had not "heard" it and it is reproduced (possibly with some variation from the first try) using the anaphoric form used in the original utterance. An example of a speaker replacing a previous try with a new one is given below (the replacements occur at lines 11 and 13):

(AD:8)

- 1.M. Keegan's
 2.M. out there he's
 3.M. He run,
 4. (0.5)
 5.M. E://r he's uh::
 6.G. Wuhyih mean my:,]

- 7.G. My//brother in law's out there,]
- 8.M. doin real good this year'n] M'Gilton's
- 9. doin real good thi//s year,
- 10.C. M'Gilton still there?=
 →11.G. =hhHawki//ns
- 12.C. Oxfrey runnin-I heard Oxfrey gotta new ca:r.
- 13.G. Hawkins is runnin

The next example represents an interesting switch on the part of the speaker from one perspective (Fillmore, 1968) on an event to another perspective on that same event. That is, selling and buying are merely two sides of the same coin; in one, the person with the money appears grammatically in an oblique phrase, while in the other that same person appears grammatically in a subject phrase. For whatever reason, in this instance M has chosen to replace the first utterance with a clause that treats the person with the money (Vinny) as the subject of the clause, rather than as an oblique phrase. The second sentence also replaces the imperative structure of the first sentence with a reassurance structure. The second sentence does not redo exactly the first sentence; rather, it is meant as a replacement for the first.

(US:8)

- M. =Th'barbuh pole sell tuh Vinny. Y'know- Vinny'll buy the barbuh pole.

The following passage further illustrates the use of fullNP in accomplish a replacement utterance.

(HG:II:5)

- N. I- c- I rilly b'lieve him cz another doctor tol' me that too.,
 (0.4)
- N. A doctor et school tol' me the exac'same thing he said it's j's something new they're discoverin:g y'know

'hhh 's like-

N first uses the phrase another doctor in "another doctor told me that too." She then says "a doctor at school told me the exact same thing"; are we to infer from this that she has talked to two other doctors who told her the same thing? Clearly not. What we are meant to hear with N's "a doctor at school" utterance is a replacement of her earlier utterance "another doctor told me", with some additional information (adding authority?) about the doctor and a re-characterization of what was told.

Two adjacent fullNP's can thus be heard as coreferential, in a sense, if the second is designed to be a replacement for the first.

Another instance of a type of replacement is given below.

(AD:19)

- M. Hawkins the one that hit Al last year over in Finley en,
(1.0)
M. flipped him 'n put Al in that bad accident.

In this passage, M gives a characterization of a complex event (someone getting hit in a racing accident), then goes on to give a detail of that event (someone getting flipped). He has thus moved from a general, higher-level, view to an action-by-action view. In the next clause, however, he returns to the higher-level view to re-characterize the complex event (a bad accident). Since he returns to the general view after starting an action-by-action view, he can be heard to be replacing his original characterization of the general view with a new characterization (possibly to indicate that the accident was worse than was suggested by his first characterization). In this last clause he goes

back to the fullNP (further indication that he is replacing the first clause and not the second: the first contains a fullNP while the second contains a pronoun, and since we have seen that a replacement utterance uses the same anaphoric form as the utterance it is replacing, the replacement (which uses a fullNP) must in this case be replacing the clause with the fullNP.

One final example of this phenomenon is given below.

(US: 45)

M. Soon ez Sonny gets back frm the stoh.=Sonny's up et the stoh.
J. [Uh hu//h?
M. [Wait'll he gets back.

In this passage, the first sentence from M is "replaced" by the next two sentences from M: in the first sentence, the fact that Sonny is at the store is presupposed (you can't come back from someplace unless you're already there); in the replacement sentences, this presupposition is made explicit, and what had been done in one clause⁴⁰ is now broken up into two main clauses. The point to be made here is that M starts the replacement sentence with a fullNP, even though the referent had just been mentioned in the immediately preceding clause.

5.5.7 Interim Summary

We have seen in this section that while structural factors establish the basic patterns of anaphora in conversation, they are not the only factors involved in any given choice of anaphoric device. That is, there are factors outside of sequences, adjacency pairs, return pops, etc. that influence in particular environments which device will be

⁴⁰ Arguably one main clause and one subordinate clause

selected. These other factors represent a wide range of conditions, and it is not yet clear that there is any single feature which would hold them all together; nonetheless, they function for our purposes here as a group because they have the interesting effect of "inducing" the use of one anaphoric device in a structural environment in which we could have expected the other device. Thus although structural properties are crucial in understanding the overall patterns of anaphora in conversation, our description would be misleading and incomplete if we ignored the influence of factors such as disagreements, assessments, overt recognitionals, and the like.

5.6 Summary

In this chapter we have identified and traced various patterns of anaphora in English conversations. It was claimed that as long as a sequence is not yet closed--if it is not a same-gender environment-- a referent within that sequence could be mentioned using a pronoun. The methods by which speakers create the interpretation of a sequence being opened (or closed) were examined in relation to the general issue of anaphora.

In order to understand certain types of long distance pronominalization and instances of pronominalization in the presence of same-gender referents, we identified a structural organization which was called return pop. With a return pop the speaker ties not to the most recent adjacency pair but to a pair that is superordinate to that; with this move, the intervening material is rendered closed down. In most cases a return pop is done with a pronoun. These findings are in keeping with the work on anaphora done by researchers in natural language processing (Grosz, 1977; Reichman, 1981).

It was also shown that if two referents of the same gender are mentioned in the

same sequence, then the device used for any next reference to one of them will be constrained by lexical and grammatical associations with them. In addition we saw that under certain conditions both same-gender referents could be realized by pronouns. This finding goes against the claims made by Reichman (1981) in her study of anaphora; in that work Reichman proposes that only one referent can be in high focus at any given time and that a pronoun can only be used if its referent is currently in high focus, thereby disallowing the possibility of two non-coreferential pronouns in the same utterance.

Finally, in contrast with the proposals of most researchers, it was shown here that structural properties alone do not account for all of the patterns of anaphora exhibited in English conversations; environments such as disagreements, assessments, new units, and overt recognitionals are places where one type of anaphoric device is used when structurally we could have expected the other type.

6. Rhetorical Structure Analysis

This chapter provides an introduction to the fundamental concepts of Rhetorical Structure Analysis which will be utilized in chapter five. The approach is not yet well-developed and the following discussion is offered only as a first approximation to what such a framework would look like in its complete form. In spite of this preliminary shape, the framework has more potential for modeling texts than any other framework I have encountered (see chapter 2 for a review of the relevant literature).

6.1 Rhetorical Structure Concepts

The basic assumption underlying Rhetorical Structure Analysis is that texts are not merely strings of clauses but are instead groups of hierarchically organized clauses which bear various informational and interactional relations to one another. The model thus has in its apparatus a basic unit--the proposition--and a class of text-structures which describe the structures which the propositions display. I will present each of these components in turn.

6.1.1 Propositions

The smallest unit of text in this framework is called the proposition. A proposition is more abstract than a clause or sentence and is intended to represent the smallest unit that enters into informational and/or interactional relationships with other parts of the text and the reader. Propositions are often equivalent to clauses but need not be; for example, relative clauses are treated as belonging with their modified clause in one proposition, rather than as their own propositions. The same is true for most complement clauses. The motivation behind this treatment of relative and complement clauses is the belief that these clauses do not bear with other text-units the

relationships of the structural type which this model attempts to capture. In addition, complements and relative clauses tend to be governed by principles of grammar rather than principles of discourse and hence are less closely involved with principles of organization. The use of an abstract unit is not necessary for the application of the rest of the model, however; clauses could be used just as effectively.

6.1.2 R-structures

We have seen that within this model of discourse texts are treated as hierarchically organized groups of propositions (or clauses). The groups into which the propositions are arranged are represented here by what are called R-structures (which stands for rhetorical-structures). Most R-structures consist of a core portion and an ancillary portion, called the nucleus and adjunct, respectively. The nucleus realizes the main goals of the writer, and the adjunct provides supplementing information for the material in the nucleus. Not all R-structures have this internal make-up however; there are a few that consist only of nuclei (the List structure, for example), and at least one that has a nucleus and several adjuncts. R-structures are drawn with their label at the top (such as CONDITIONAL), and several lines descending from the top. The nucleus is represented in the diagrams with a straight vertical line coming down from the R-structure label, and the adjunct is represented with an arcing line coming out of the bottom of the nucleus line. The arcing line is labeled with the name of the relation which holds between the nucleus and the adjunct (e.g., reason). This relation-label is usually identical to the label for the R-structure itself; in some cases, however, the relation carries a different label than the structure. A table listing all of the R-structures

used in this study and their internal structure is given below.⁴¹

Table 1.0 R-structures

<u>R-structure Name</u>	<u>Internal Structure</u>
ISSUE	One nucleus, 3 optional adjuncts
CONDITIONAL	One nucleus, one adjunct
CIRCUMSTANCE	One nucleus, one adjunct
LIST	Unlimited number of nuclei, no adjuncts
NARRATE	Unlimited number of nuclei, no adjuncts
REASON	One nucleus, one adjunct
CONCESSION	One nucleus, one adjunct
OPPOSITION	One nucleus, one adjunct
PURPOSE	One nucleus, one adjunct
RESPONSE	One nucleus, one adjunct
CONTRAST	Unlimited number of nuclei, or: one nucleus, one adjunct

Each unit can be realized either by terminal nodes--i.e., propositions--or by another R-structure. That is, R-structures build upon one another to construct the entire text. We therefore have simple R-structures, with all of its slots (nuclei and

⁴¹For most of the structures which contain an adjunct and a nucleus, either ordering of these elements is possible--that is, under certain conditions, the adjunct can precede the nucleus, and under other conditions the nucleus can precede the adjunct. For some of the structures, however, different orderings are not possible; for example, it would be odd to find the evidence supporting a claim (adjunct) before the claim (nucleus). These asymmetries in ordering are not germane to the present study, however, and so play no role in the following discussions.

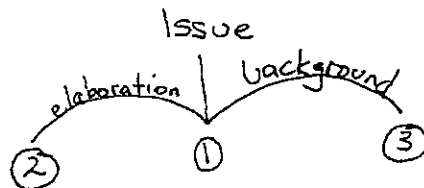
adjuncts) realized by propositions and complex R-structures, which have at least one of their slots realized by an embedded R-structure. The notion of embedding⁴² will be crucial in the discussion of anaphora and text-structure in chapter 7.

The R-structures are described and illustrated below.

⁴²Embedding here is used to refer to text-structural embedding, not syntactic embedding.

6.1.2.1 Issue

The Issue structure⁴³ is the most powerful organizing unit within the model and usually occurs as the top-most unit of the text. The Issue structure presents a claim and provides at least one of three types of supplemental material: details about the claim (called an elaboration adjunct); evidence in support of the claim (called an evidence adjunct); and background information for the claim (called a background adjunct).⁴⁴ For example, a typical structure for a short obituary is to present the news of the death (the nucleus of the Issue structure), plus some details about the circumstances of the death (an elaboration adjunct on the nucleus), and then to give background information about the deceased which makes the death "newsworthy" (a background adjunct). The structure of such a text would be diagrammed as follows.

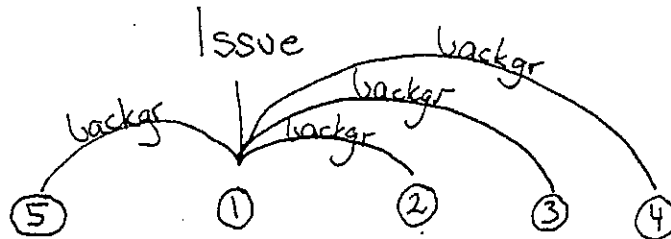


A real example of the Issue structure is given below (the propositions are numbered so that the diagram can be more easily followed).

⁴³I have taken the term issue from Reichman (1981), who uses it to refer to the main claim of an argument.

⁴⁴As with all instances of categorization, the prototype cases of each adjunct-type are clearly distinguishable from one another; in some cases, however, it is hard to make a convincing argument for an adjunct being one rather than another of these types. That is, it is often hard to say why something is being claimed to be an Elaboration adjunct rather than a Background adjunct. The lack of clear boundaries between these relations does not affect the basis of the claims about anaphora given in the next chapter, though, so I will not be overly concerned here with arguing for one interpretation or another. If there are defining criteria, they have not yet been fully established.

1. Naftaly S. Glasman has been appointed dean of the Graduate School of Education at Santa Barbara.
2. A professor of education, Glasman has been a member of the UCSB faculty since 1968 and acting dean of the School of Education since January.
3. He has served as chairman of the faculty committee on effective teaching
4. and has chaired and organized two national conferences on effective teaching.
5. Recently he was appointed to a statewide committee on the professions, as part of the UC graduate student affirmative action program. (University Bulletin, 7/28/80)



The entire text can be represented with an Issue structure. The first proposition is the nucleus of the text, in that it provides the news which the text is intended to convey. The other four propositions are background adjuncts--they do not provide evidence for the claim "X has been appointed dean," nor do they provide details about the appointment; rather they provide background information which elucidates the

claim. This fact is represented by four separate background adjuncts.⁴⁵

The Issue structure thus has a unique internal structure (one nucleus and many adjuncts) and often occupies a unique place in the structure of a text--the top-most node.

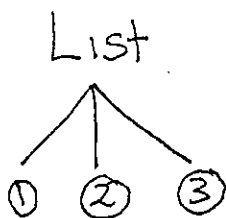
6.1.2.2 List

The List structure is another of the most prevalent and powerful organizing units. It has an unlimited number of nuclei (as many as there are items in the list) and no adjuncts. Each item is seen as a member of the List unit rather than as a separate adjunct because of the impression they create of each being one in a series (hence they are each only part of a larger unit). In addition, the members of the list are presented as equal. Syntactic parallelism is extremely common in this structure.

1. He knew his Rousseau;

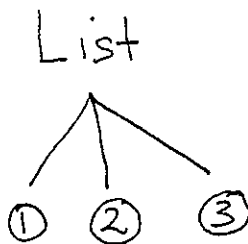
2. he knew his Voltaire;

3. he even knew his President de Brosses! (A House of Lions, p.39)



⁴⁵These adjuncts are probably better analyzed as members of a List structure--i.e., members of the same adjunct node--but in order to avoid confusion I have temporarily analyzed them as separate adjuncts.

1. He spoke continuously for three hours from a platform in Memorial Park during Claremont's 1979 Fourth of July festivities.
2. The next year, at the same rostrum, he stretched it out four hours.
3. The next Fourth of July, on a similar platform half a continent away, he talked nearly six hours. (Los Angeles Times, 7/3/83)

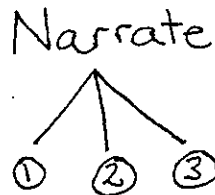


In these examples, each piece is one in a series. Note the strong parallelism in syntactic and lexical structure within each List structure.

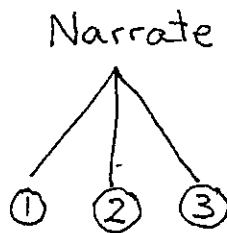
6.1.2.3 Narrate

Narrate is the third and last of the higher-level R-structures. Like the List structure, Narrate has an unlimited number of nuclei and no adjuncts. Within this structure, however, each piece describes a temporally-situated action which follows the last action in the temporal sequence. This structure allows a short narrative to be part of an expository text.

1. Word reaches him that his masters..have changed their minds yet again on a major issue.
2. Rochac dictates a new strategy ...
3. One more crisis overcome, he cuts the tension with his favorite catchphrase (People, 3/26/84)



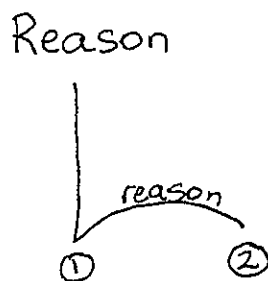
1. Within seconds, Chico has spotted the van.
2. He is walking toward it, crying, "Where is my little buddy? Where's my little Trevor?"
3. Soon the derelict is hugging and kissing the boy (People, 3/26/84)



6.1.2.4 Reason

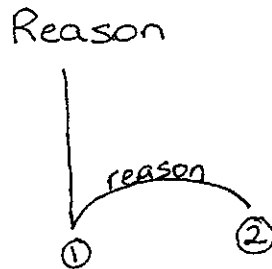
Unlike the preceding structures, the Reason structure usually occurs at the lower levels of the text and often is realized directly by terminal nodes (propositions). This R-structure has a nucleus which makes a statement about something and an adjunct which provides the reason for that statement (either the reason for making it or the reason for it being so). Examples of the Reason structure appear below.

1. Last year the Irish government boycotted the celebration
2. because the grand marshal was IRA fundraiser Michael Flannery. (People, 3/19/84)



Here the second proposition provides the reason for the situation described by the first.

1. Buy only enough for immediate use
2. as they spoil rather easily (from Joy of Cooking, cited in Mann, Matthiessen and Thompson, 1982)

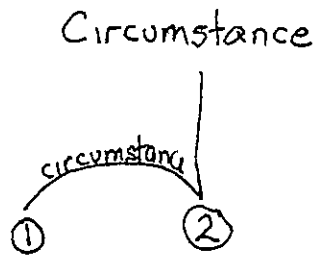


Here again the second proposition provides the reason for doing the action described in the first.

6.1.2.5 Circumstance

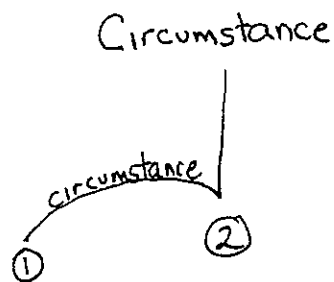
The Circumstance structure is another of the lower-level structures. In it the nucleus describes a situation and the adjunct gives information about the circumstances under which the situation occurred (or will occur). Circumstance differs from the background relation in that Circumstance immediately situates a process in time or space, while background gives information of various types which helps the reader understand the nuclear material. Examples of the Circumstance structure are given below.

1. When Victoria came to the throne,
2. he was living in a comfortable house in or near Tavistock Square (A House of Lions, p.19)



In this passage, the first proposition provides the circumstances and the second provides the situation. The first proposition is thus diagrammed as the adjunct of the structure, and the second is the nucleus.

1. When we visited our in-laws in Florida a couple of years ago,
2. a sign flapped on the front door that read... (Erma Bombeck column, cited in Mann, Matthiessen and Thompson, 1982)

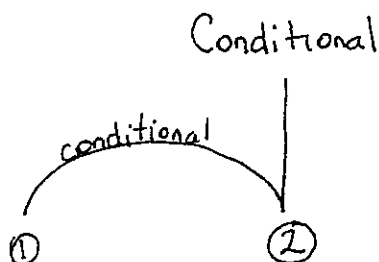


Here again the first proposition is the adjunct of the Circumstance structure and the second proposition is the nucleus of the structure.

6.1.2.6 Conditional

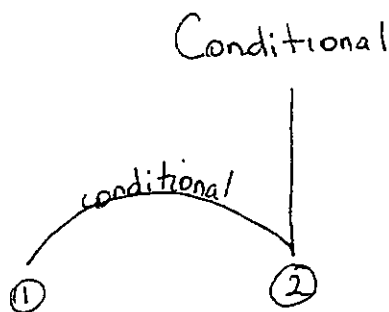
The Conditional Structure is very similar to the Circumstance structure: the adjunct provides the conditions under which the nucleus holds. The conditions in this case are usually hypothetical. Examples follow.

1. If Judy Blume were the protagonist of a novel,
2. she'd be pretty hard to stomach. (People, 3/19/84)



In this piece of text the first proposition is the adjunct stating the conditions under which the nucleus, realized by the second proposition, holds.

1. If you have any options or suggestions concerning outdoor dances,
2. the Associated Students would be interested in hearing them. (Cal State Chronicle, San Bernardino, 5/30/84).

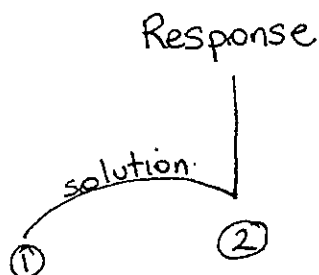


Again, the first proposition is the adjunct and the second is the nucleus.

6.1.2.7 Response

In the Response structure, a problem or question is posed by the writer which is then responded to with some sort of solution or answer. In this structure the answer is the nucleus and the question is the adjunct.

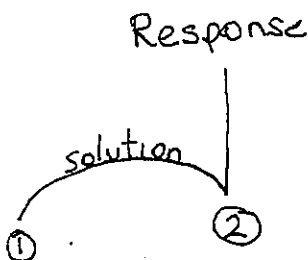
1. What if you're having to clean floppy drive heads too often?
2. Ask for SYNCOM diskettes (Byte magazine, cited in Mann, Matthiessen and Thompson, 1982)



ad-hoc.

The first proposition, the question, is the adjunct and the second proposition, the answer, is the nucleus.

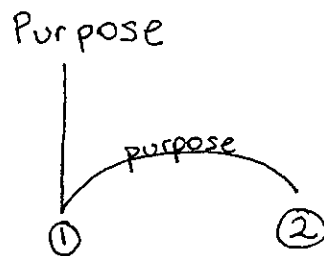
1. What was this carapace which Leonard Woolf carried for seventy years...?
2. He had above all an unusual capacity to control his feelings (A House of Lions, p.24)



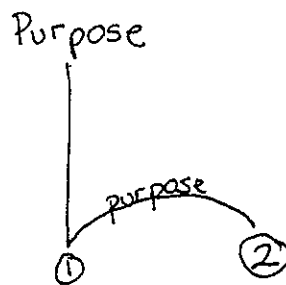
6.1.2.8 Purpose

As one would expect, the Purpose structure has a nucleus which describes some situation and an adjunct which describes the purpose which that situation is intended to fulfill.

1. Allow the terrapin to cool on its back
2. in order to trap the juices (Joy of Cooking, cited in Mann, Matthiessen and Thompson, 1982)



1. Ana Maria stayed,
2. to work within the system. (People, 3/26/84)

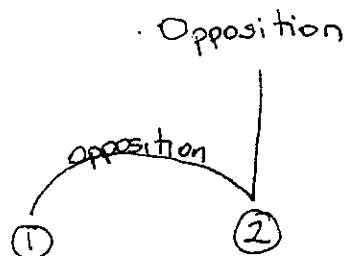


In both of these examples the purpose adjunct occurs as the second proposition; the first proposition is the nucleus.

6.1.2.9 Opposition

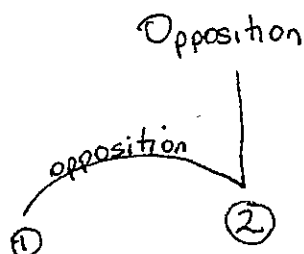
With the Opposition structure, the writer presents two sides of a situation--one, the adjunct, is the side not sympathized with, and the other, the nucleus, is the side the writer really supports. This structure is often realized with the phrase rather than; or with the pattern "not X but Y."

1. Rather than winning them with arms,
2. we'd win them by our example (a letter to the editor of the Christian Science Monitor, cited in Mann, Matthiessen and Thompson, 1982)



1. But I don't think endorsing a specific nuclear freeze proposal is appropriate for CCC.

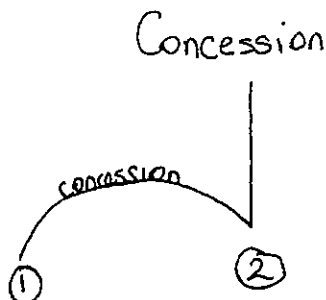
2. We should limit our involvement in defense and weaponry to matters of process (Common Cause The Insider, 7/82)



6.1.2.10 Concession

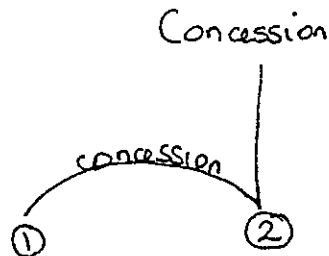
The Concession structure differs from the Opposition structure in that it offers material in the adjunct which is possibly at odds with the material in the nucleus and concedes that this conflicting state may hold. The writer thus does not reject the validity of the material in the adjunct in this case.

1. While FitzGerald doesn't have a quarrel with this year's grand marshal...
2. he is annoyed by the selection of IRA fugitive Michael O'Rourke (People, 3/19/84)



1. While we believe the distribution of this information is of benefit to our subscribers,
2. we firmly respect the wishes of any subscriber who does not want to

receive such promotional literature. (a note to subscribers of Byte magazine, cited in Mann, Matthiessen and Thompson, 1982)

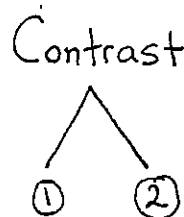


In each case, the conceding adjunct is given in the first proposition and the nucleus material is given in the second proposition.

6.1.2.11 Contrast

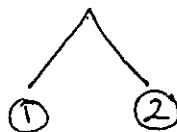
The Contrast structure comes in two forms: in the first, all of the contrasted items are of equal status in the presentation of the material; in the second, one item is being contrasted with another item, where the latter has more focal status than the former. In the first case, the Contrast structure consists of multiple nuclei, in the second case of a nucleus and an adjunct. Examples of the multiple-nuclei Contrast are given below.

1. One was deep and manly;
2. the other was tiny and a squeak. (A House of Lions, p.34)



1. One airport source said the gunmen may have gone to a nearby Shiite shanty-town called Hayya Seloum,
2. but authorities weren't sure what happened to them. (news item in the UCLA Daily Bruin, cited in Thompson, class lectures)

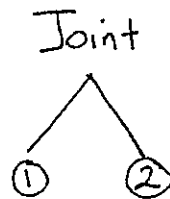
Contrast



6.1.3 The Joint

The Joint schema is similar to the List structure in that it is multi-nucleid, but is different from List in that the pieces are not presented as members of a series. The pieces of a Joint structure simply work together to realize whatever R-structure they are embedded in. Any R-structure can have either its nucleus or its adjunct realized with a Joint schema. The effect is something like rhetorical conjunction (which not always equivalent to syntactic conjunction). An example of the Joint schema is given below.

1. I personally favor the initiative
2. and ardently support disarmament negotiations (Common Cause The Insider, 7/82)



6.1.4 Floating Relations

In addition to the relations which exist within R-structures--e.g., Reason, Circumstance--there are floating relations which are not associated with any particular R-structure. These floating relations can occur between a proposition of any R-structure and another proposition. The floating relations used in this study are Summary, Conclusion, Result and Assessment. A brief description of each follows.

Summary. The Summary relation provides a summary of the material to which it is scoped. The summarizing material can have any R-structure as its realization, and can be as simple as a single proposition or as complex as a multi-layered embedding.

[At the end of a lengthy article entitled "'No First Use'" of Nuclear Weapons":]

The adoption of a no-first-use policy would have profound consequences. In contrast to arms-control measures, which rarely constrain the actual use of weapons, a no-first-use policy would transform the conceptual foundation on which military strategy and planning rest.... (Scientific American, 3/84)

The structure of this passage in relation to the text it summarizes can be represented as follows:

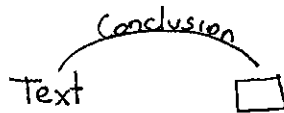


Conclusion. The Conclusion relation provides information which is inferred from other facts already presented (by whatever method of reasoning the author cares to use, not necessarily deduction). It thus differs from the Summary relation in that it offers information which has not yet been brought up, while the Summary relation merely repeats in capsule form what has already been presented.

[At the end of a book review:]

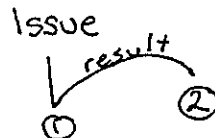
All in all, given the difficulty of keeping up with even basic research of the caliber that these authors produce, it is hard to see why the editors bothered publishing this collection. (Language, 60.1, 1984)

The structure of the relationship between this passage and the material it draws its inferences from is given below.



Result. The Result relation describes circumstances which are the result of some set of other circumstances.

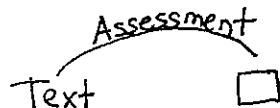
1. For years Leonard knew how not to feel--how to distance himself from intimacy.
2. This made for an uneasy calm (A House of Lions, p.24)



Assessment. The Assessment relation gives the author's comments and evaluations to the material on which it is scoped. In some instances an Assessment looks very much like a Conclusion, since the author uses a group of propositions on which to base an inferenced statement; in the case of an Assessment, however, the statement is clearly evaluative (either positive or negative), while in the case of Conclusion the statement can be simply informational. An example of the Assessment relation follows.

"When I left for St. Paul's in 1894," he wrote with a note of distinct pride years later, "the atmosphere had changed from that of a sordid brothel to that more appropriate to fifty fairly happy small boys under the age of fourteen." Leonard was a reformer from the first. (A House of Lions, p.23)

In this passage the line "Leonard was a reformer from the first" is in an Assessment relation to the material that precedes it. This relation can be diagrammed in the following way.

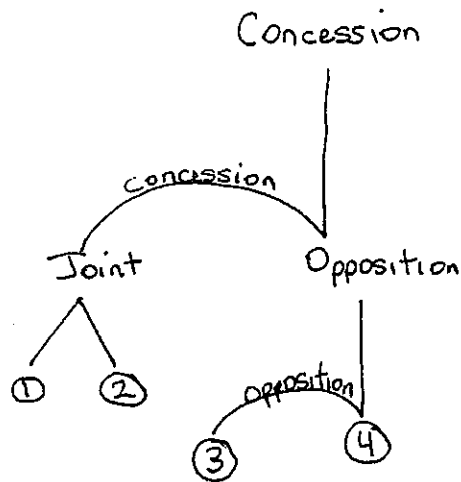


6.1.5 Embedding

The examples given above have illustrated R-structures using simple data, that is, structures realized by terminal nodes. In this section, we'll examine some more complex data--i.e., texts that exhibit embedding.

Any of the pieces of an R-structure can be realized by another R-structure; that is, either the nucleus or the adjunct (or any of the nuclei in a multi-nuclei structure) can be realized not directly by a proposition but textually by an embedded R-structure. Short examples of embedded structures appear below.

1. I personally favor the initiative
2. and ardently support disarmament negotiations to reduce the risk of war.
3. But I don't think endorsing a specific nuclear freeze proposal is appropriate for CCC.
4. We should limit our involvement in defense and weaponry to matters of process (Common Cause's The Insider, 7/82)

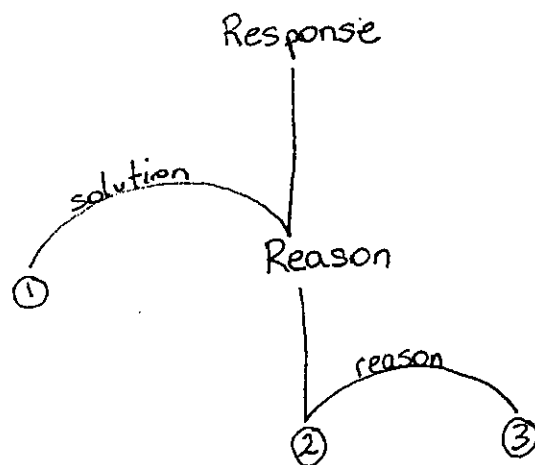


The structure which encompasses this entire chunk of text is a Concession structure. The Concession structure displays embeddings at both slots; its nucleus is realized by an Opposition structure, and its adjunct is realized by a Joint structure. The Joint structure is realized directly by propositions 1 and 2 (they present the material which is conceded), and the Opposition structure is realized by propositions 3 and 4 (the real viewpoint against which the concession is made). The Opposition structure itself consists of a proposition which presents a side of the argument not adhered to by the writer (proposition 3) and a proposition which presents the author's real point of view (proposition 4). Since proposition 4 is the nucleus of the embedded structure which realizes the nucleus of the higher structure, it is the nucleus of the entire passage. Taken together, all of the propositions realize the Concession structure.

This passage, being complex, raises the interesting issue of rhetorical scope. That is, if propositions 1 and 2 are adjuncts, what are they adjuncts to? Are they adjuncts to just proposition 4 (the main nucleus of the passage), or are they adjuncts to

the entire nucleus of their structure, which happens to be realized by an embedded R-structure? The answer is clearly the latter. An adjunct has within its scope its nucleus, even if that nucleus is realized by another R-structure (and even if that R-structure is realized by another R-structure, and so on, indefinitely); and of course the reverse is also true: a nucleus has within its scope its adjunct, regardless of the internal structure of that adjunct. Using scoping arguments of this type often helps to understand the relative levels of R-structures and in turn the hierarchical organization of texts.

1. What to do?
2. Simply send for Harry Fujita, 47, the founder of Iwasaki Images of America and the Picasso of fake foods.
3. Fujita's Torrance, Calif. factory can turn out munchable-looking wax-and-vinyl copies of virtually anything (People, 3/19/84)



In this passage the highest structure is a Response structure (question-answer), with the adjunct realized by proposition 1 and the nucleus realized by an embedded

Reason structure, which is realized by propositions 2 and 3. Note that propositions 2 and 3 are in a response relation to proposition 1, not a reason relation (they are in a reason relation to one another). The nucleus of the embedded Reason structure is proposition 2, and since the Reason structure realizes the nucleus of the higher structure, proposition 2 is the nucleus for the passage.

6.2 Validity in the Analyses

In analyzing the texts for this study, it was my goal to find the rhetorical structures intended by the author; that is, the rhetorical structure analyses which I have posited are not meant to represent one of the many possible readings of each text, but are rather meant to indicate the one structure the author intended for the text. This goal is obviously not perfectly attainable, since the author's exact intentions are never available to an outside interpreter; this fact, however, should not be misconstrued as indicating that the task of finding a possibly unique interpretation for a text is futile. Whenever we read a text, we are engaged in trying to find the author's intended meaning. As Hirsch (1967) says:⁴⁶

If a text means what it says, then it means nothing in particular. Its saying has no determinate existence but must be the saying of the author or the reader. The text does not exist even as a sequence of words until it is construed; until then, it is merely a sequence of signs. (p.13)

We must therefore seek to know the author's intended structure. This cannot be known with certainty, of course, but it can be known with some probability:

The most important argument to consider here is the one which states that the author's intended meaning cannot be certainly known. This argument cannot be successfully met because it is self-evidently true. I can never know another person's intended meaning with certainty because I

⁴⁶Hirsch is speaking here about literary interpretation; but since such interpretation is based, at least implicitly, on a structural interpretation of the text in question, I have taken his comments as providing insight into the type of interpretation attempted in this study.

cannot get inside his head to compare the meaning he intends with the meaning I understand, and only by such direct comparison could I be certain that his meaning and my own are identical. But this obvious fact should not be allowed to sanction the overly hasty conclusion that the author's intended meaning is inaccessible and is therefore a useless object of interpretation. It is a logical mistake to confuse the impossibility of certainty in understanding with the impossibility of understanding. (p.17)

How, then, is a highly probable interpretation of a text's structure to be inferred?

Hirsch offers some extremely general guidelines:

To establish a reading as probable it is first necessary to show, with reference to the norms of language, that it is possible. This is the criterion of legitimacy: the reading must be permissible within the public norms of the language in which the text was composed. The second criterion is that of correspondence: the reading must account for each linguistic component in the text. Whenever a reading arbitrarily ignores linguistic components or inadequately accounts for them, the reading may be presumed improbable. The third criterion is that of generic appropriateness: if the text follows the conventions of a scientific essay, for example, it is inappropriate to construe the kind of allusive meaning found in casual conversation. When these three preliminary criteria have been satisfied, there remains a fourth criterion which gives significance to all the rest, the criterion of plausibility or coherence. (p.236)

It should thus be clear that the types of analyses offered in the remainder of this thesis are not random construals of the texts; they are valid attempts at arriving at the structure intended by the authors.

6.3 Summary

In this chapter I have presented the basic concepts and tools of Rhetorical Structure Analysis. In the next chapter, we will see how these elements are used in the analysis of naturally-occurring written English expository texts and will determine what relationships can be discerned between the structural analyses and the patterns of anaphora exhibited.

7. Anaphora in Expository Written English Texts

7.1 Introduction

In this chapter I examine the distribution of pronouns and full noun phrases in some expository written English texts. The structural analysis technique used will be Rhetorical Structure Analysis.

The anaphoric patterns established in this chapter are presented in the two modes discussed in chapter 5. These two modes, it will be recalled, are the context-determines-use mode and the use-determines-context mode (see also chapter 5 for a discussion of these modes). I argued in chapter 5 that both of these modes are always present for conversationally interacting parties, although in any particular instance one may be more strongly felt than the other. The argument for this view runs as follows:

1. Anaphoric form X is the unmarked form for a context like the one the participant is in now.
2. By using anaphoric form X, then, the participant displays an understanding that the context is of that sort.
3. If the participant displays an understanding that the context is of that sort, then the other parties may change their understandings about the nature of the context to be in accord with the understanding displayed.

I would like to propose now that this same cycle of factors lies behind anaphora in writing as well. Even though the parties (writer and reader) are not co-present at either the time of writing or the time of reading and hence cannot directly participate in such an a fluid display of understandings, each feels the other's presence in a way that strongly influences their behavior towards the text. That is, for a text to be successful

(at least in our audience-oriented culture) the writer must anticipate the reader's understanding of the text, which is a development understanding (since the reader cannot have full access to the writer's plans from the outset), and guide the reader to an understanding of the structure of the text which is in accord with the writer's understanding of the text. Similarly, the reader must try to form guesses about the structure of the text as it was intended by the writer and must therefore be able to form understandings and then abandon them when they seem not to fit. In this indirect way, then, the reader is guided to an interpretation based on what the writer displays, and the writer displays an understanding based on what s/he wants the reader to understand (see the work of literary critic Wolfgang Iser (e.g., Iser (1975) for a similar view of the reading process).

It should be kept in mind that while some of the statements of distribution sound as if they belong in one mode rather than the other, all of the patterns are meant to accomodate the cycle of modes described above.

As in chapter 5, the structural patterns offered are meant to be the basic patterns, that is, the patterns which will be used when "nothing special" is being done with the reference. The non-structural factors discussed at the end of the chapter, on the other hand, enter into the picture when something besides the signalling of structure is going on. The latter uses of anaphora are treated as "marked," then, because something extra is being done.

7.2 Anaphora in Some Expository Written English Texts

The basic pattern for anaphora in my expository texts can be stated as follows:

A pronoun is used to refer to a person if there is a previous mention of that person in a proposition that is active or controlling; otherwise a fullNP is used. In other words, by using a pronoun the writer displays to the reader that the intended referent is in an active or controlling proposition, whereas by using a fullNP the writer indicates to the reader that the intended referent is outside of these units.⁴⁷

This formulation of the pattern contains two subparts, each of which will be explored in detail below. They can be stated as:

1. A pronoun is used to reference a person mentioned in an active or controlling proposition.
2. All other mentions are done with fullNP's.

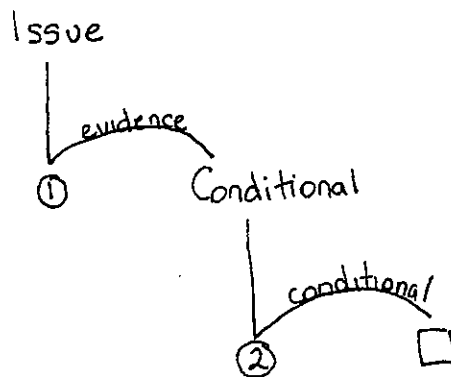
7.2.1 Pronouns for referents in active or controlling propositions

I have taken the terms active and controlling from Reichman (1981) and will be using them with essentially their original meaning, though somewhat modified for my own purposes. I will use the term active to refer to a proposition in an R-structure (either the adjunct or the nucleus) whose R-structure partner (the nucleus or the adjunct) is being produced. That is, the adjunct of an R-structure is active while its nucleus is being produced; similarly, the nucleus of an R-structure is active while its adjunct is being produced.

A proposition is controlling while its R-structure partner is active. In the following diagram, for example, the nucleus of the Issue structure is controlling while the nucleus of the Conditional structure is active (i.e., its adjunct is being produced):

⁴⁷The terms "active" and "controlling" will be defined shortly.

*according to this, a proposition
can be controlling & active
at the same time.*



The underlying motivation for these basic patterns is almost certainly reader expectations (or the writer's anticipation of those expectations): the more likely it is that a proposition containing mention of a referent will be elaborated on in some way, the more that proposition is treated as a source for pronominal anaphora, hence the more likely it is that the next mention of the referent will be done with a pronoun. For example, if one finds a sentence like the following in a text, one can be almost positive that the next clause will make some mention of the referent:

Elizabeth was a strong ruler:

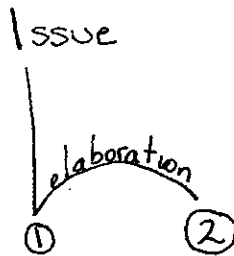
As the structure gets complex in a direction that suggests no return to the proposition, then the reader may come to assume the upcoming clauses will not contain mentions of the referent, hence the referent "falls" from the class of pronominalizable referents.

Reader expectations of this sort are molded by the structure of the text as the reader perceives it, and not by simple measures of distance or prominence. It is for this reason that structure plays such an enormous role in anaphora. But while reader expectations are vague and non-precise notions, text structure can be made clear and precise, and hence structure is the natural starting point for any discussion of anaphora.

The claim made here about the basic pattern of pronominalization in expository written texts is that pronouns are used when their referents are in propositions which are either active or controlling. The first pattern we'll look at is the active pattern.

If there is a mention of a person in the nucleus of an R-structure, then a pronoun can be used in the adjunct of that structure. Examples of this pattern follow. Propositions are numbered for ease of reference.

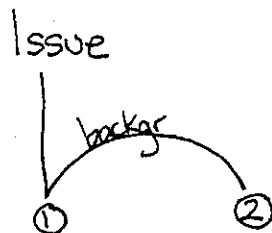
1. MacPike will use the second half of her day to complete an administrative fellows program.
2. She will work under vice president Gerald Scherba in the areas of resource allocation and academic personnel. (The Sun, 7/83)



The R-structure used in this passage is an Issue structure: the first sentence is the nucleus of the structure and the second sentence is an elaboration adjunct (it provides details for the main claim). There is a mention of MacPike in the nucleus of the structure, and in the elaboration adjunct she is referred to with a pronoun. In something more resembling the use-determines-context mode, we could say that the pronoun here creates an interpretation in which the referent is found in an active proposition.

Another example of pronominalization of a referent in an active proposition follows.

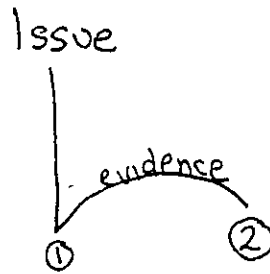
1. Kenneth Vincent Hollywood, who spent his life opening doors for filmdom's rich and famous after flopping big in his own stage debut, has died of cancer.
2. He would have been 61 years old today. (Los Angeles Times, 8/21/83)



The R-structure used in this passage is again an Issue structure: the first sentence is the nucleus (in fact of the whole article) and the second sentence is a background adjunct (information which helps the reader interpret the nucleus). A pronoun is used in the adjunct.

Another example follows.

1. ...Hunter does what he can to keep elocution alive.
2. He spoke continuously for three hours from a platform in Memorial Park during Claremont's 1979 Fourth of July festivities. (Los Angeles Times, 7/3/83)



In this passage we have a claim (nucleus) and an evidence adjunct (providing support for the claim). A pronoun is used in the adjunct after a mention of Hunter in the nucleus.

A final example of pronominalization in the adjunct of an R-structure when the referent is mentioned in the nucleus is given below.

He never gave us the story of his childhood; he was impatient with "those indefatigable searchers after truth who concern themselves with the small beginnings of things." (A House of Lions, p.28)

The structure exhibited by this example appears to be a Reason structure, in that the second sentence is given as the reason for the situation described in the first sentence (the two sentences could have been connected with the subordinator because). The first mention occurs in the nucleus of the Reason structure, and the second mention, in the adjunct, is done with a pronoun.

This pattern also includes instances in which the referent is mentioned in the first member of a List structure or a Joint schema--a second mention in the next member of the List or Joint can be done with a pronoun:

1. She was also the uncompromising woman.

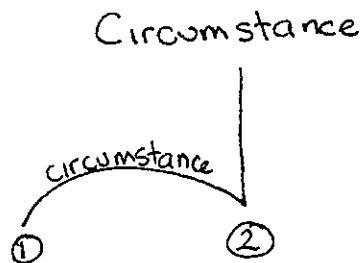
2. There could be no deviation from her high personal standards.
3. Lady Ottoline Morrell likened her to a Watts painting,
4. and she discerned melancholy in her face. (A House of Lions, p.77)

The second mention of Lady Ottoline Morrell in this passage is a next member of a Joint schema and is done with a pronoun.

I have shown in this section that a referent mentioned in the nucleus of a simple R-structure can be pronominalized in the adjunct of that R-structure. We can thus see that the nucleus-adjunct pattern is well-documented (covering approximately 63% of the pronouns in the environment of no interfering referents).

The active pattern also holds if the person is mentioned in a pre-posed adjunct of an R-structure and a subsequent mention of that person occurs in the nucleus of the R-structure (this pattern covers approximately 8% of the total number of pronouns in the environment of no interfering referents). The second mention is done with a pronoun. Examples of this type of active pattern follow.

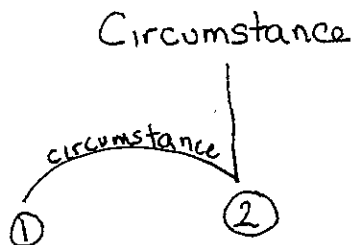
1. But as he was approaching 60,
2. a chance encounter with humanistic psychologist Dr. Carl Rogers made him think about a change. (Los Angeles Times, 7/11/83)



This example manifests a Circumstance R-structure, in which the first clause is the adjunct and the second clause is the nucleus. Notice that the reference in the nucleus is done with a pronoun. Here again in a more use-determines-context mode we could say that the pronoun helps to create the active R-structure relation between the first mention and the second mention, inasmuch as it signals to the reader that the referent is to be found in an active (or controlling) proposition.

Another example of this phenomenon follows.

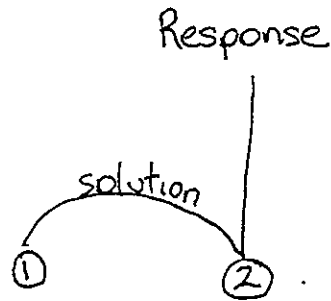
1. James Sanford was running in a park in the fall of 1981
2. when he stepped in a hole. (Los Angeles Times, 7/19/83)



In spite of the subordinator when appearing before the second clause, it is the first clause that is the adjunct in this Circumstance structure; the second clause is the nucleus of the structure. We thus have here a mention in an adjunct followed by a mention in the nucleus, done with a pronoun.

Another example:

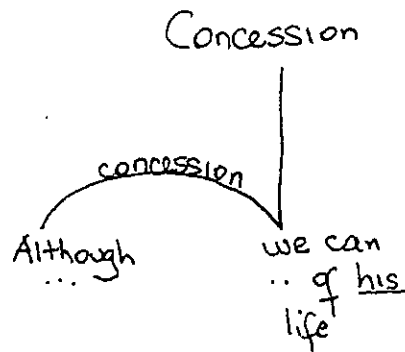
1. What was this carapace which Leonard Woolf carried for seventy years as if his nerves were sheathed in armor?
2. He had above all an unusual capacity to control his feelings. (A House of Lions, p.24)



This passage is modeled with a Question-Response structure (in which the question is the adjunct and the response the nucleus). Here the question comes first (obviously enough)--the entire first sentence poses the question. The second sentence begins to answer that question, and hence is the nucleus of the structure. Leonard Woolf is mentioned in the question adjunct and pronominalized in the nucleus.

Further illustration of this pattern follows.

Although Leonard Woolf has not documented this, we can discern in the later patterns of his life how profound were the insecurities and the rage created by sudden loss... (A House of Lions, p. 20)



We find in this passage the same pattern: the first clause gives the adjunct material (this time of a Concession structure) and the second clause gives the nucleus material, and the reference in the nucleus is done with a pronoun.

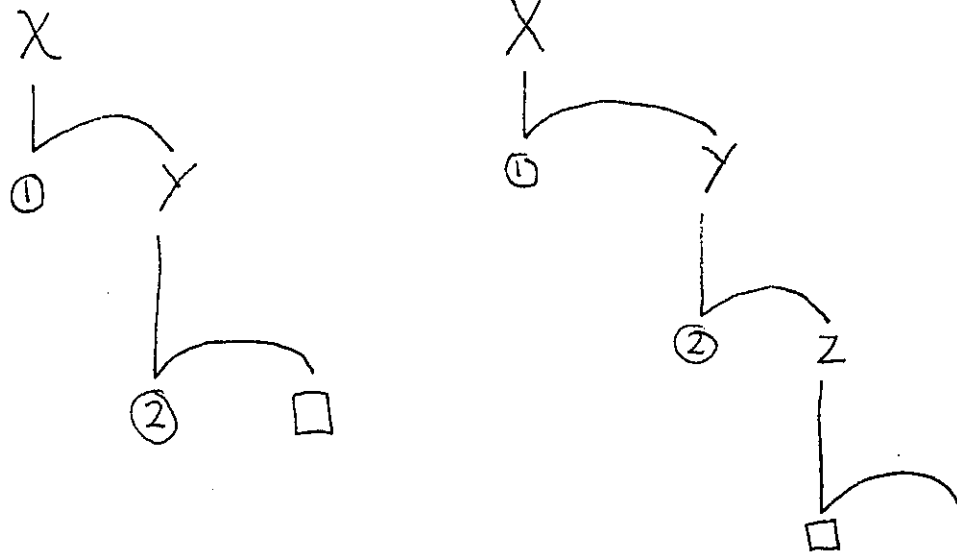
I have demonstrated here that a referent mentioned in the adjunct of a simple R-structure can be pronominalized in the nucleus of that R-structure. The simple active pattern thus appears to be well-motivated and fully documentable.

It should be noted here that the use of pronouns discussed above could also have been predicted by theories of distance in that there tends in these cases to be a short distance (one or two clauses) between the pronoun and its most recent antecedent mention. We will see later, however, that while theories of distance in anaphora seem to account for a large number of the pronouns used, overall they cannot handle the range of anaphoric patterns exhibited by expository texts.

The second pattern of pronominalization in the expository texts I examined is the controlling pattern: in this case, a pronoun is used to refer to a person mentioned in a proposition that is controlling. Recall that a proposition is controlling if its R-structure partner is active.

For our purposes here, I will say that a proposition is active only while the first member of the embedded R-structure is being produced (rather than during the entire embedded structure); thus when the embedded partner is being produced, the previously active proposition becomes controlling. This pattern does not distinguish between the following two patterns, in which the second-level adjunct is a terminal node, the other in which it is the source of a further embedded structure.

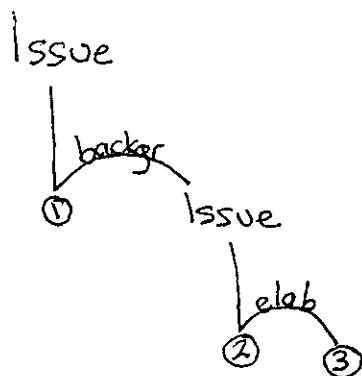
Embeddings with the appropriate pattern of references are fairly rare in my texts, probably because many of the texts are short, and possibly because the types of people-oriented texts I have chosen to look at in this study display a flatter structure



than other types of texts. The one example I have found comes from a longer, non-journalistic text.

1. Leonard saw these as a "series of psychological curtains which one interposed between oneself and the outside world of 'other people.'"
2. It was all a part of the process of growing up and also a means of self-concealment and self-defense.
3. Particularly valuable in this process was his learning of a peculiar ecstasy which comes from "feeling the mind work smoothly and imaginatively upon difficult and complicated problems." (A House of Lions, p.25)

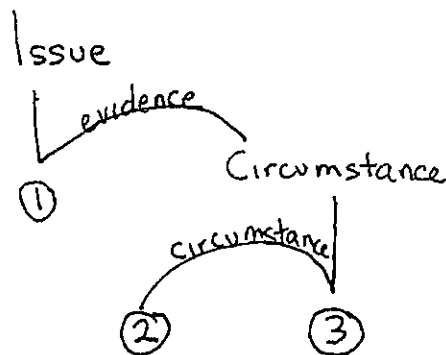
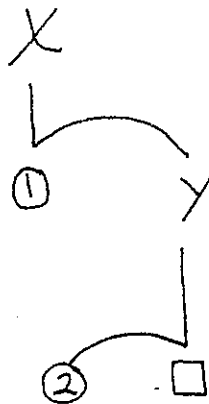
The structure of this passage follows.



We have a nucleus, "Leonard saw these...", which is active while the nucleus of the embedded realization for the adjunct is being constructed ("It was all a part..."). When the adjunct of this embedded nucleus is being constructed, the first nucleus becomes controlling. Notice that the reference in the embedded adjunct is done with a pronoun, thus supporting our claim that referents in controlling propositions can be pronominalized.

The controlling pattern also extends to cases in which a referent is mentioned in a nucleus, with its adjunct realized by an embedded structure, and the embedded adjunct is done first (with no mention of the referent). If the subsequent embedded nucleus contains a mention of the referent, then a pronoun can be used to perform the reference. Here again we have an instance of a referent in a controlling proposition being the source of a pronominal reference. An example of the structure for this situation is given below.

1. He prospered.
2. When Victoria came to the throne,
3. he was living in a comfortable house in or near Tavistock Square (A House of Lions, p.19)



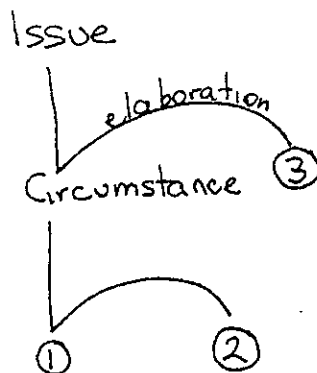
We find in this passage a claim with an evidence adjunct. The evidence adjunct itself contains an adjunct and a nucleus, and the adjunct comes before the nucleus. In this case the Issue nucleus is active while the Circumstance adjunct is produced, becoming controlling when the Circumstance nucleus is being constructed. A pronoun is used for the reference in the Circumstance nucleus.

This pattern differs from the preceding one in the rhetorical status of the "intervening" material; in one case it is the nucleus of an R-structure, and in the other it

is the adjunct of an R-structure. This difference is almost sure to have an impact on anaphora, since an adjunct is produced "on behalf" of its nucleus (and hence does not necessarily introduce the next frame for discussion) while the nucleus is the core of the structure. The adjunct thus could be treated as less of an "intrusion" for the purposes of anaphora than the nucleus of an embedded structure. As we'll see somewhat later, this difference between adjunct and nucleus does have an influence on some patterns of anaphora.

Pronominalization is also possible if the nucleus is realized by an embedded structure. For example, in the following passage, a referent is mentioned in the nucleus of the embedded structure (i.e., the nucleus of a Circumstance structure), and a subsequent mention of the referent in the adjunct of the higher structure (i.e., the adjunct of an Issue structure) is done with a pronoun

1. MacPike joined the Cal State faculty in 1978 as a lecturer
2. after teaching three years at the University of Hawaii.
3. She received an appointment as an associate professor in 1981. (The Sun, 7/83)

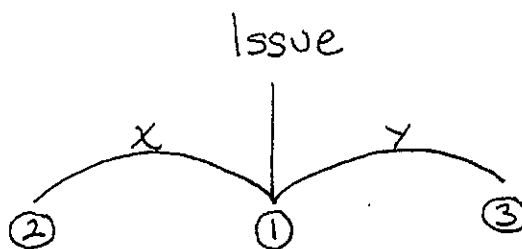


The embedded nucleus ("MacPike joined..") contains a mention of the referent.

The higher adjunct ("She received an appointment...") also contains a mention of the referent; this second reference is done with a pronoun.

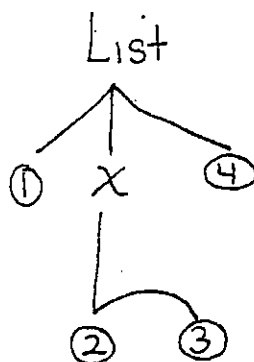
The controlling pattern is fairly minor in the texts I examined, covering only approximately 2% of the pronouns in the environment of no interfering referents.

In the preceding discussion we have seen that a proposition is treated as controlling if a physically contiguous R-structure is being developed; now we will see that a physically distant R-structure can "tie" back to an earlier proposition and thereby make that proposition controlling. This pattern of tying to a proposition other than the immediately preceding one is called a return pop, because the writer is returning to an earlier, superordinate, node.⁴⁸ In my texts, a pattern that is seen frequently is nucleus, adjunct, adjunct, where the second adjunct is an adjunct for the nucleus rather than for the preceding adjunct. A diagram of this type of structure is presented below, where the adjuncts are numbered in their order of occurrence.



A return pop can also occur if a list of items is being enumerated and there is a side adjunct on one of the list members, followed by a return to the list structure:

⁴⁸See chapter 5 for a thorough discussion of return pops and anaphora in the conversational texts.



As we would expect from the formulation of the basic pattern above, propositions which are put into a controlling state by virtue of a return pop can be the sources of pronominalization. The use of pronouns in return pops is quite a delicate matter, however, in that any complication of structure appears to prevent their appearance in this situation. That is, whether a return is done with a pronoun or not depends heavily on the intervening "popped over" material.

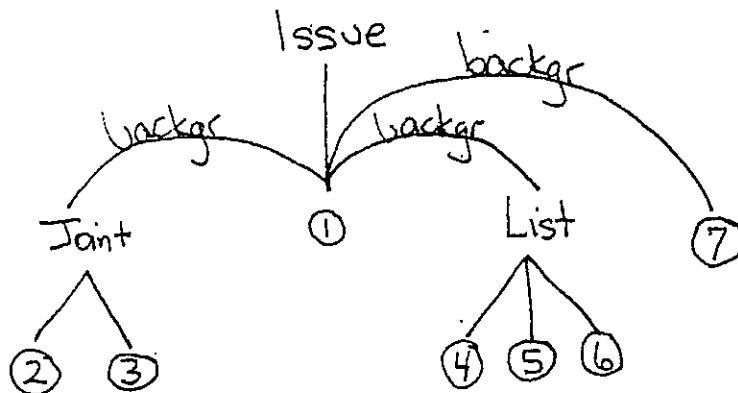
The first pattern of return pop that I have identified can be stated as follows: a pronoun is used in a return pop if the "popped over" material contains mentions of the pronoun's referent. In this case the degree of structural complexity of the popped over material can be considered for now⁴⁹ somewhat irrelevant. Examples of returns done with pronouns in the case of same-referent mentions in the popped over material are given below.

1. Bob "Smitty" Smith will be installed as the 1984 president of the Monrovia Chamber of Commerce at the annual January dinner.
2. He has been a partner in the Monrovia Travel Agency with Bob Bennett since 1974,

⁴⁹But see the later discussion on internal articulation in general.

3. but after the first of the year, when Bennett retires, Smith will become the sole owner.
4. An 11-year member of the Chamber, Smith serves on the Ambassadors committee, a group which systematically visits the over 600 members of the Chamber in a series of two- or three-day "blitzes."
5. He has served on the Chamber's Board of Directors for three years,
6. and he is a member of the public relations committee.
7. His most recent community involvement has been appointment to the Centennial Committee... (Monrovia Today, January 1984)

For now we will consider only the underlined reference in this passage. The structure for the whole text is given below (the position in the diagram of an adjunct to the right or to the left of a nucleus is unimportant and usually reflects limitations on space).



The nucleus of the passage is the first sentence--that is, the fact of Smith's installment is the "news" which the article is meant to convey. The next sentence, represented by a Joint structure, is a background structure on the nucleus of the

passage. The next three propositions (in a List structure) are another background structure on the main nucleus (hence a return pop, but not the one we are concerned with now). The proposition containing the underlined pronoun is a third background adjunct off of the main nucleus, and is the return pop we want to examine now. In this text we thus have a nucleus and three adjuncts on that nucleus, each produced after the other. Notice that the second and third adjuncts are not adjuncts of the first adjunct, but tie directly to the nucleus. This is what makes them return pops.

The third adjunct (the second return pop) contains a reference to Smith that is done with a pronoun. It is my contention here that the reason for this pronoun return pop is the fact that the two preceding adjuncts, as well as the nucleus, contain multiple references to Smith. The pronoun in the third adjunct thus correlates with the appearance of references in the first and second adjuncts.

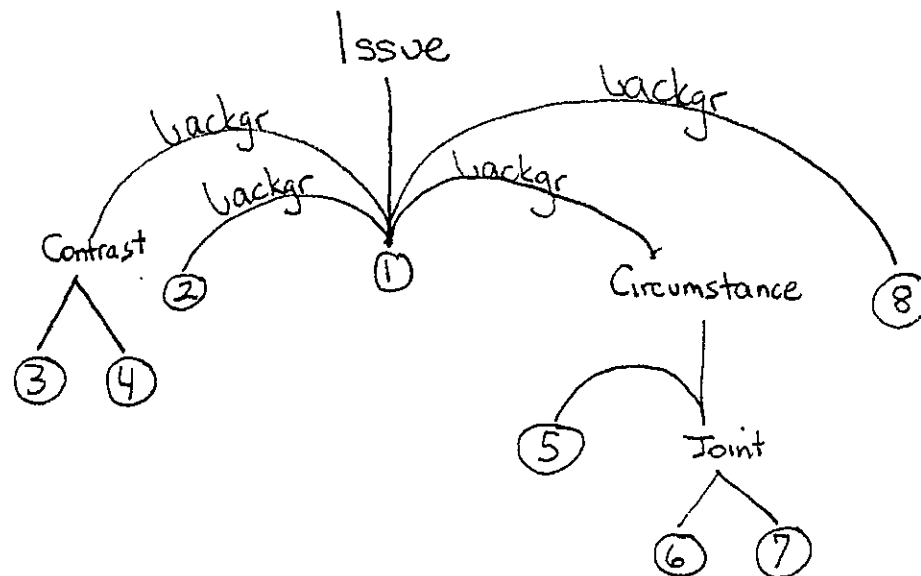
Although from a use-determines-context point of view it would be tempting to say that the pronoun in this case accomplishes the return pop, I do not think that such a strong statement is warranted by the data. There are two reasons for this belief. First, we saw many examples earlier in which pronouns were used in contexts other than return pops; second, we will see later on that return pops are often done with fullNP's. Pronouns are thus neither necessary nor sufficient for the achievement of a return pop.

Another example of a pronoun used in the context of a return pop is given below.

1. Jo Anne Brannen, a six-year employee of Security Pacific Bank, was presented with the Chamber of Commerce courtesy award by Betty Sandford, chairman of the public relations committee.
2. Nominees are suggested by residents or customers.
3. Mrs. Brannen started as a part-time teller

4. and now serves as the branch auditor.
5. If she has a secret to getting along with people,
6. she believes it is that she has worked with the public all of her life,
7. and really enjoys people.
8. She has two children, ages 19 and 17, and five stepchildren, all grown.
(Monrovia Today, January 1984).

The structure of this passage follows.



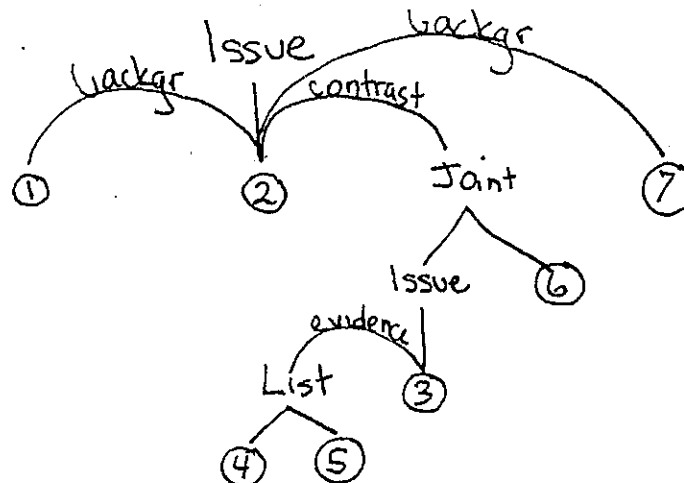
The first sentence represents the nucleus of the passage--Brannen's receiving the award is the news of this little article. The second sentence (and second paragraph) is a background structure off of the nucleus. The third paragraph is a further background structure off of the nucleus, and the final sentence given is a third background structure. This passage thus has the basic structure of the preceding passage: a nucleus and three background adjuncts. The second and third adjuncts are return pops. The last pop is done with a pronoun.

Again, it is my argument here that a pronoun is used for this particular return pop because the immediately preceding adjunct, which has been popped over (as well as the nucleus), contains mentions of the relevant person. It is this intervening mentioning of the referent that allows the use of a pronoun in the return.

Another example of this pattern follows.

1. In the background was his father, whom Leonard remembered as "a little man with a very beautiful head."
2. He was a general--a British general who had been in India.
3. But no man looked less like a general.
4. He did not clank;
5. he did not pace.
6. A sedentary stooping man, he resembled a studious college professor.
7. He had been heroic in the Army when young... (A House of Lions, p.34-5)

A possible rhetorical structure for this piece of text is given below.

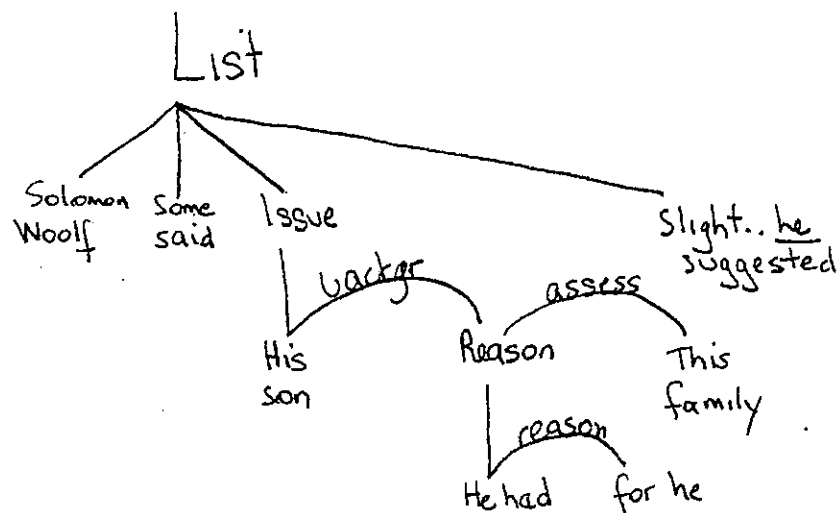


The first sentence is the nucleus of this piece of text--it is the shoot off of which the rest of the passage is built. "He was a general" is the nucleus of another Issue

structure, and it has a complex adjunct which begins with "but no man looked less like a general" and runs through "he resembled a studious college professor." A second adjunct off of "he was a general" is started with "he had been heroic in the Army." This second adjunct is a return to the nucleus, popping over the first adjunct, and the reference within it is done with a pronoun. The reason for this pronoun should be clear: the intervening, popped over, adjunct contains references to the relevant person.

One more passage illustrating this pattern is given below.

Solomon Woolf, the man of law, was slight, dapper, studious, a barrister of dignity and courage. Some said he had "an eager and nipping air" as he went about his duties. His son remembered that "he practically never stopped working" save in the moments when he presided over the bountiful family table, the Sunday roast beef in Lexham Gardens. He had purchased a big house and extravagantly added a large wing, for he had married a Dutch woman who bore him ten children. This family, with its servants, nursemaids, governesses, needed a great deal of space. Slight, his face masklike, especially when framed by its legal wig, with sunken, shadowed, melancholy eyes, he suggested soft speech and hardheadedness. (A House of Lions, p. 20)



This passage exhibits a List structure--basically a list of characteristics (some

reported) of Solomon Woolf. Before the last member of the list, however, we get a section about the big house he purchased and his large family. Notice that this material contains mentions of the relevant referent in it, and when the return to the list comes, the next reference is done with a pronoun. Again, I am claiming that there is a connection between the fact that the popped over material contains mentions of the referent and the fact that the return pop contains a pronominal reference to that person.

This first pattern of pronominalization in return pops is the second most common pattern for pronominalization, covering roughly 23% of the pronouns counted in the environment of no interfering referents.

The second pattern of pronominalization in return pops can be described as follows: pronouns can be used in return pops even if there is no mention of the referent in the popped over adjunct iff very special circumstances hold. In essence, the popped over material must be extremely limited in structure: it must not contain a new Issue structure or any other structure with its own complex nucleus-adjunct structure. The most common type of intervening material in this case is a single node--e.g., a terminal background node, or a terminal elaboration node--although in a few instances I found intervening material which contained a few equal-status terminal nodes (as in a List structure or a Joint structure). Anything of greater internal complexity "induces" a fullNP in the return pop. This second pattern of pronominalization in return pops is fairly rare, accounting for only about 3% of the pronouns in the environment of no interfering referents.

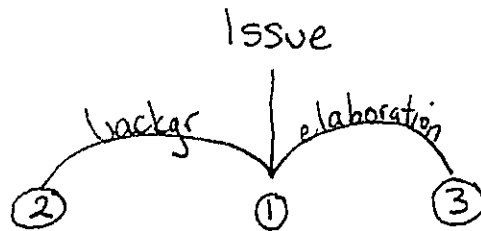
My guess about this restriction on anaphora is that when a complex adjunct is being developed, the reader may begin to assume that the nucleus is not going to be returned to, hence the nucleus loses its potential status of active for the reader.⁵⁰ That is, the nucleus becomes, in a sense, closed off for the reader, so that a return must be done with a fullNP. If, on the other hand, the adjunct is clearly limited in complexity, then there may be fairly high expectations that the writer will return to the nucleus, and therefore the referent in the nucleus remains pronominalizable. The nucleus in this case retains its potential active status even while other propositions are being constructed. Here again we see that reader expectations (and writers' anticipation of those expectations) form the mold for patterns of anaphora.

Examples of pronouns in return pops with no mentions of the referent in the popped over adjunct are given below.

1. As important in Leonard's rearing as the Old Testament sense of virtue and goodness were large chunks of diluted Baptist doctrine imparted by his favorite nurse some years earlier.
2. The nurse was a Somersetshire woman, with straight-parted black hair and a smooth, oval farm-girl face.
3. She read to him in the nursery at Lexham Gardens... (A House of Lions, p.22)

The structure of this passage is something like the following:

⁵⁰See Reichman (1981) for a discussion of return pops "re-activating" the items to which they return.



The nucleus of this chunk of text is the first sentence. The second sentence is a background adjunct off of the nucleus and the third sentence is an elaboration adjunct off of the nucleus. The third sentence is thus a return pop which pops over the second sentence. The first adjunct (second sentence) contains no mentions of Leonard, and yet the return pop can be done with a pronoun⁵¹ because the structure of the first adjunct is so simple--a terminal background node.

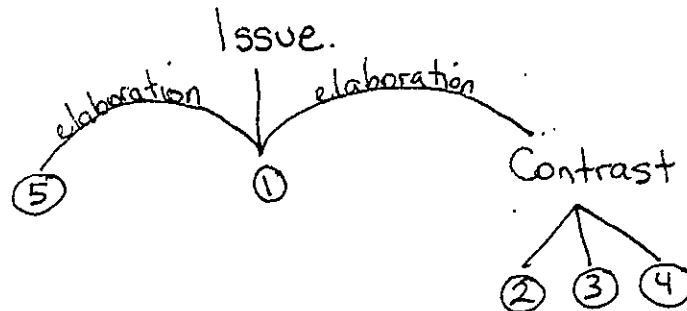
1. Like most hedonists, he preferred to look neither backward nor forward.
2. The here and now, the picture in front of him, the woman he was with, the bird in flight--this was life:
3. the rest was history.
4. The future could assuredly take care of itself.
5. He found himself at one with Proust in the thought that "the only certainty in life is change." (A House of Lions, p.28)

The nucleus of this passage is the first sentence, which contains a reference to Clive Bell. From "The here and now" to "the future could..." we have an elaboration adjunct with three equal parts (a Contrast structure: now vs. past vs. future). The last

⁵¹ The pronominal reference to the nurse in the return pop follows the first pattern of pronominal return pops discussed above.

sentence is a second adjunct on the nucleus, thus a return pop. This return pop can be done with a pronoun because of the relatively simple structure of the intervening adjunct; although it has some internal structure, it does not begin something new (as would a new Issue structure) and it does not have a complex nucleus-adjunct structure.

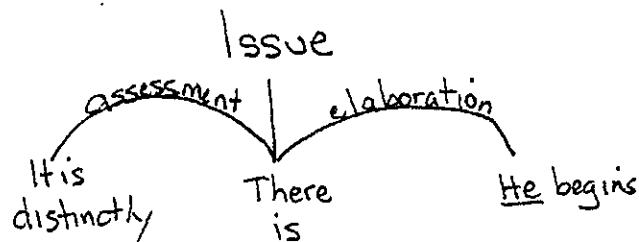
The structure of the passage follows.



A further example.

There is a passage in Clive Bell's book Civilization which suggests his center of conflict, the part of him that makes him much more than the gadfly and hedonist of so many pages of Virginia's diaries and Lytton's and Leonard's condescensions. It is distinctly autobiographical. He begins by saying... (A House of Lions, p. 30)

The structure follows.



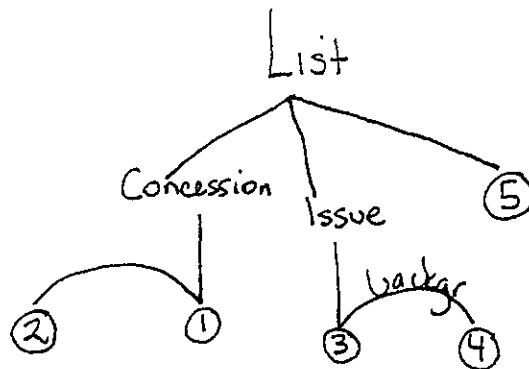
The first sentence is the nucleus of the passage. The second sentence is clearly a comment or background piece of information, thus an adjunct on the nucleus. The last sentence is a second adjunct on the nucleus, this one an elaboration structure. Since it is a second adjunct on one nucleus, it is a return pop. The popped over material is a simple terminal background node and as such poses no block to pronominalization in the return pop; and indeed we find a pronoun in the return pop.

With this pattern of return pop we are stretching the limits of distance-based theories of anaphora. Notice that in some of the passages above there are gaps of two or three clauses between the pronoun and the most recent mention of the referent. Theories like Givon's Continuity Hypothesis could still predict pronouns under these conditions, but critically could not distinguish these cases, in which 3 clauses does not induce the use of fullNP, from cases in which 3 clauses could--for structural reasons--cause the writer to use a fullNP. Thus, while distance theories could predict the uses of pronominalization I have presented so far, they could not selectively predict these cases, as a structure-based theory can. Givon et al in fact predict more pronominalization than is actually displayed by the expository texts I examined for this study.

I suggested earlier that if a List structure were being created and there was an adjunct off of one of the members of the list, then a return to the List structure is done with a pronoun. This pattern holds only if the adjunct is structurally simple (like the adjuncts in the examples above). Examples of this pattern are given below.

1. His re-entry into Hollywood came with the movie "Brainstorm,"
2. but its completion and release has been delayed by the death of co-star Natalie Wood.

3. He plays Hugh Hefner of Playboy magazine in Bob Fosse's "Star 80."
4. It's about Dorothy Stratton, the Playboy Playmate who was killed by her husband.
5. He also stars in the movie "Class." (Los Angeles Times, 7/18/83)



In this passage we get a list of the movies Robertson starred in after his temporary exile from Hollywood. Thus even though the first member of the list has an adjunct which does not mention Robertson ("but its completion..."), the next member of the list can contain a pronoun. This pattern is repeated between the second and third members of the list: the second member has a background structure off of it that does not mention Robertson ("It's about Dorothy Stratton...") but the third member starts right up with a pronoun. Notice that in a strictly linear view of this text we might think that he could be ambiguous in the last sentence, since there is another male referent in the immediately preceding clause (the husband). The hierarchical approach, which sees the text as a list structure, makes a more accurate prediction about pronominalization.

The patterns examined in this section describe the major uses of pronouns in return pops. In the next section we'll see how fullNP's tend to be used in returns.

7.2.2 Interim Summary

In the preceding sections we have established the basic conditions under which pronouns can occur and under which fullNP's must occur. The most common structural pattern for pronominalization is what was called the active pattern, in which a referent in a nucleus or adjunct could be pronominalized in the R-structure pair. However we also saw that in a few cases more deeply embedded structures allowed pronominalization. In addition, I showed that in some extremely restricted environments return pops could be done with pronouns; this pattern of anaphora is possible if the "popped over" adjunct either (1) contains references to the relevant person, or (2) is structurally simple. These few patterns represent the full extent of pronominalization in the expository written texts I examined.

It should be kept in mind that the approach adopted here has, as one of its conclusions, that the second of two adjacent mentions of a referent is not necessarily pronominalizable simply because of the string adjacency; it is the structural relation between the two adjacent propositions (and their relation to the rest of the text) that influences whether or not pronominalization is possible.

7.2.3 FullNP's elsewhere

When the structural relation between two mentions of a referent (or the propositions containing those mentions) is one other than the relations we have seen above--i.e., other than active, controlling, and certain types of return pops--fullNP's are used.

Passages illustrating the use of fullNP in relations other than active and controlling are given below.

Clive looked and thought about pictures through his ambivalence of conformity and rebellion, often tinged also with unconscious pomposity in his endeavor to be "serious"--seeing what the painter had done in his own effort (like Clive's) to make something out of the world, to give life some shape other than the patterned shapes of convention. He had, said Virginia Woolf, an odd gift for making one talk sense. All Clive's life was a quest for a superior "civilization." Clive needed answers to questions that occurred neither to Leonard nor Lytton, nor to the Stephen girls, since they had been bred from the first to possess the answers.

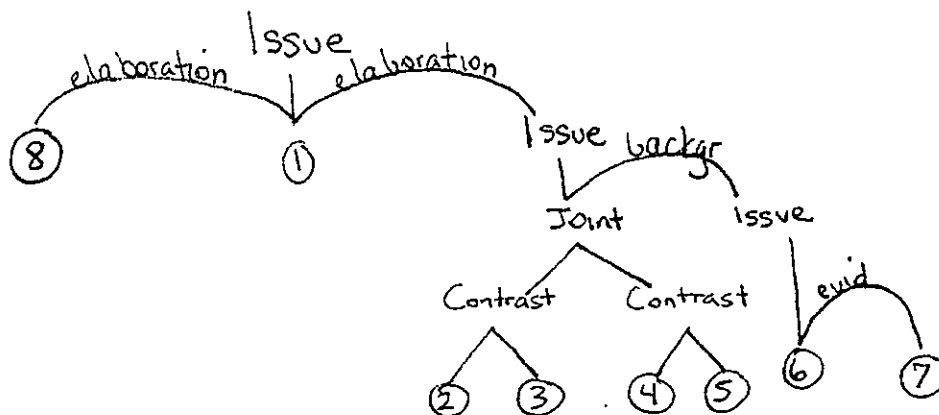
Much of this seems to have been latent in the boy, who in a good-natured way accepted and rebelled against his mother's religious precepts and his father's concrete world. And yet he wanted approval. He wanted to be right, gentlemanly, proper; the improprieties would come later. Virginia, in her continuing remarks about him, said he had the mind of "a peculiarly prosaic and literal type"...(A House of Lions, p. 31)

In this passage, the first mention of Virginia Woolf is part of a proposition that provides support for a claim about Clive. In the following sentence we have another claim about Clive, which thus pops over the proposition containing reference to Woolf. As we saw in chapter 5, a return pop closes off the material over which it has popped; thus after the pop back to claims about Clive the material in which Woolf is mentioned is closed, and hence certainly not active or controlling. The next mention of her, again in an evidencing proposition, is done with a fullNP, as we would have expected.

Return pops are also done with fullNP's if the constraining criteria described above for pronominalization in return pops are not met. That is, if there are no mentions of the relevant referent in the popped over material, and/or the popped over material is structurally complex, then the return pop will contain a fullNP reference. Examples illustrating this pattern are given below.

1. He spoke, as all his friends have testified, with two voices.

2. One was deep and manly;
3. the other was tiny and a squeak.
4. One had warm baritone notes filled with emotion;
5. the other was somehow the piping voice of childhood, perhaps learned from a bevy of sisters who filled the Strachey home.
6. It has been said that the entire Strachey family possessed this kind of squeak.
7. Leonard Woolf remarked that after being with a Strachey one somehow went away squeaking a little inside.
8. However that may be, the two voices of Lytton Strachey were the voices of the masculinity to which he generally aspired--but without real struggle--and the femininity that was his by virtue of his rearing and environment...(A House of Lions, p.34)



In this passage, the complexity of the structure starting with "one was deep" and going to "went away squeaking a little inside" contraindicates the use of a pronoun in the return pop (the proposition containing the underlined fullNP).

Another example of fullNP used in a return pop which pops over structurally complex material follows.

Leonard was a young Spartan in the heart of chaotic London. Behind him

were centuries of persecution, violence, death. No more, I suppose, than the centuries behind the Irish or the Huguenots--or the Puritans, before these also became persecutors. Yet with important differences. Leonard's people had a longer history of dispersal, an ingrained learned toughness, a curious mixture of inferiorities and stubbornness, pride and consciousness of race and status. They had seemed at first "outlandish" in England; this was a grave handicap in a society with strong boundaries, cultivated stratifications. Leonard Woolf's heritage was strong: a Biblical ethic, a sense of the importance of work, a built-in discipline of strength, of control. One had to be proof against life's insults. For the centuries had piled insults on the Jews and made them prize tenaciously a heritage of righteousness that is the world order imposed on chaos by the Old Testament--which itself is a record of chaos, crime, rapacity, persecution and privilege.

Leonard Woolf combined Old Testament virtues with an ingrained English sense of "fair play"... (A House of Lions, p.21)

Although it is not altogether clear which nucleus the last line ties back to (probably either "Leonard was a young Spartan" or "Leonard Woolf's heritage was strong"), it is clear that in any case the material popped over is structurally complex, as we have defined that notion here.

We have seen in this discussion that the basic pattern is to use fullNP's when the proposition containing the relevant last mention of a referent is not in an active or controlling state, or if the criteria for pronominalization in return pops are not met. Below I present a discussion of fullNP's in yet another structural context: that of indicating breaks in the rhetorical structure of the text.

7.3 Rhetorical Structure Breaks and Anaphora

We saw in earlier sections that pronouns commonly occur in the following environments:

1. In the nucleus or adjunct of an R-structure, if the relevant referent is mentioned in the R-structure partner.
2. In a return pop adjunct, if the adjunct "popped over" (a) contains mentions of the relevant referent, or (b) is structurally non-complex.

It is clear when one examines expository texts, however, that pronouns are not used on every occasion in which they are structurally warranted; fullNP's are rampant in such texts. What then determines when fullNP's will be used when pronouns would have been structurally possible?

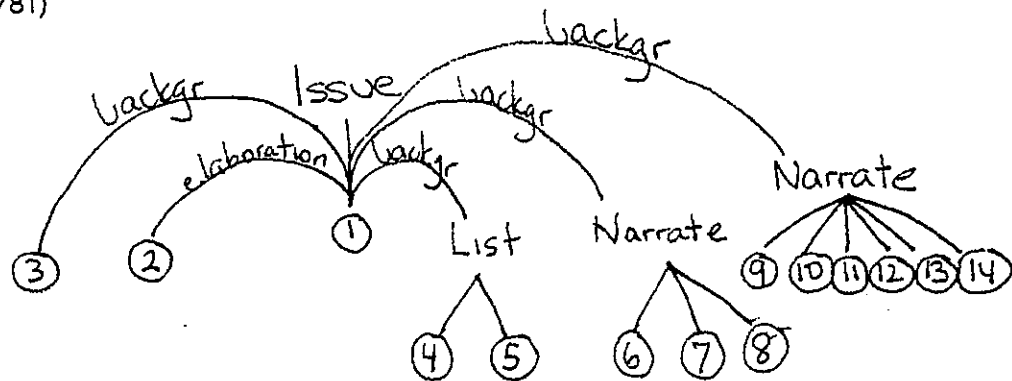
The proposal I would like to offer here suggests that it is another type of structural property that "induces" the use of fullNP in these cases.⁵² The structural property at work is one of demarcating new rhetorical units.

Consider the following short text and its rhetorical structure diagram. Propositions are numbered to ease the task of following the schema.

1. James S. Albertson has been appointed acting academic vice president by the Regents following President Saxon's recommendation.
2. The appointment is effective from March 1 until a permanent academic vice president is named.
3. Academic Vice President Donald C. Swain earlier was named president of the University of Louisville.
4. Albertson will be responsible for academic planning and program review, student affairs, financial aid, admissions, student loan collections, student affirmative action, basic skills, the Education Abroad Program, library plans and policies and UC Press.

⁵² See section 7.6 for a discussion of non-structural factors in the choice of fullNP over pronoun.


5. He also is responsible for UC Extension, summer sessions, instructional media, Continuing Education of the Bar, and liaison with the Academic Senate, the Student Body Presidents' Council and the California Postsecondary Education Commission.
6. Albertson has been special assistant to Swain since 1978.
7. For four years prior to that he was assistant academic vice president.
8. He joined UC in 1973 as director of analytical studies.
9. Albertson is a graduate in classics at St. Louis University.
10. He earned his M.A. in philosophy there in 1953
11. and received the Ph.D. in physics in 1958 at Harvard.
12. He joined the faculty at Loyola University of Los Angeles in 1962
13. and became chairman of the department before he left in 1968 to join the faculty of the University of Santa Clara as professor of physics.
14. He was also academic vice president at Santa Clara. (University Bulletin, 3/23/81)



I claimed in chapter 6 that the Issue structure is the dominating (i.e., top-most)

structure in most texts, as it is in this short article. I would like to propose now that each of the adjuncts of an Issue structure holds the possibility of being a new rhetorical unit, and each of these new units tends to be associated with a fullNP, even though by other structural criteria a pronoun would have been appropriate. Notice that all of the adjunct-initial propositions (propositions 4, 6, and 9) which could have had a pronoun⁵³ in fact contain fullNP's, while the propositions which do not begin a new Issue adjunct (propositions 5, 7, 8, 10, 12, 13, and 14--these continue either List structures or Narrative structures) are done with pronouns. That is, fullNP's (at least in the texts I examined for this study) appear to be associated with the beginnings of Issue adjuncts, even though pronouns can also be used in those slots.⁵⁴

This type of pattern strongly represents the use-determines-context mode: by using a fullNP at a particular point in a text, especially if the referent's identity is easily retrievable from the immediately preceding material, the writer creates the effect of beginning a new rhetorical unit. It is thus not merely the case that the context of a new unit induces a writer to use a fullNP; the writer actively creates that new unit through the use of the anaphoric form.



Notice with this association of new rhetorical unit and fullNP that it would not be accurate to say that pronouns are used when the referent is mentioned in the immediately preceding text and that fullNP's are used when the referent is mentioned

⁵³ Proposition 4 would probably have been done with a fullNP in any case, because of the same-gender referent in the preceding adjunct. See section for a discussion of same-gender referents.

⁵⁴ It is clear that this formulation of the association between fullNP and rhetorical structure could lead to circularity: the analyst could easily postulate that every time a fullNP is encountered a new rhetorical unit has been started. In future studies this circularity could be minimized by selecting several non-biased analysts familiar with the text-parsing technique to do the relevant analyses, or by first replacing all of the appropriate NP's with blanks before doing the analysis. I feel that the association will stand, but it needs to be demonstrated in more rigorously non-circular ways before it can be counted as fully documented.

further back in the text (see Givon (1983) for a presentation of this hypothesis). In my expository texts, fully 38% (204/541) of the fullNP's had their referents mentioned in the immediately preceding clause, so it is not simple distance that triggers the use of one anaphoric device over the other. Rather, it is the rhetorical organization of that distance that determines whether a pronoun or a fullNP is appropriate. Here we find a clear instance in which the non-selective formulations predicting pronominalization whenever the referential distance is small simply fail to account for a widespread anaphoric phenomenon.

It should be kept in mind that the pattern in this section, is in a sense hierarchically superordinate to the other basic patterns and would, in a rule ordering system, have to be ordered before the basic patterns in order to ensure correct output.

Below I have given a table supporting the claim that new rhetorical units are associated with the use of fullNP. Twenty short expository articles were used as the basis for the figures.

Table 1.0

	New Rhetorical Unit	Same Rhetorical Unit	Total
fullNP	77 (93%) (65%)	6 (7%) (10%)	83
pronoun	41 (44%) (35%)	53 (56%) (90%)	94
Total	118	59	177

Of all of the new rhetorical units started, 65% (77/118) contained fullNP's, while of the continuing rhetorical units, 10% (6/59) contained fullNP's. Thus while pronouns

and fullNP's can appear in either type of slot, there is a skewing of fullNP towards new rhetorical unit and of pronoun towards continuing rhetorical unit.

Although rhetorical breaks are often signalled in expository prose by paragraph breaks, it would not be accurate to simply say that in expository prose all paragraphs begin with fullNP's. One of the propositions containing a pronoun in the passage above is paragraph initial, though not rhetorical-unit initial. Thus while paragraphs are rhetorical units of a sort, they are not the major units which influence anaphora; the units which do influence anaphora are R-structures, most notably the adjuncts off of Issue structures.

There seem to be, then, two conflicting structural principles which are at work in determining anaphora in the expository texts I have looked at: the first says that under certain specifiable conditions a pronoun is appropriate; and the second says that if certain other conditions also hold, a fullNP can be appropriate. The result is that neither principle is followed 100% of the time, but rather each text is some sort of

compromise between them.⁵⁵

Further examples of the association between fullNP and unit-initial slot are given below.

1. Theodore L. Hullar has been appointed executive vice chancellor at Riverside, succeeding Carlton R. Bovell.
2. Bovell announced his resignation to return to full-time duties as a biology professor and researcher on campus.
3. Hullar is director of the Agricultural Experiment Station and director for research at Cornell University.
4. At Cornell, Hullar established three important programs--the Cornell Biotechnology Institute and New York State Center for Biotechnology, the Institute for Comparative and Environmental Toxicology, and the Ecosystems Research Center.
5. As executive vice chancellor, Hullar is responsible for the administration of faculty and academic policy, involving all colleges, professional schools and departments.
6. In addition, he will oversee the Graduate Division and Research, the library,

⁵⁵ In some cases, strictly following one of the principles can make a genre-related statement, as in the obituary given below--an obituary of a young feminist, written by a feminist writer for a feminist audience:

Joan Kelly, a leading feminist scholar, teacher, and activist, died of cancer on August 15, 1982, in New York City.

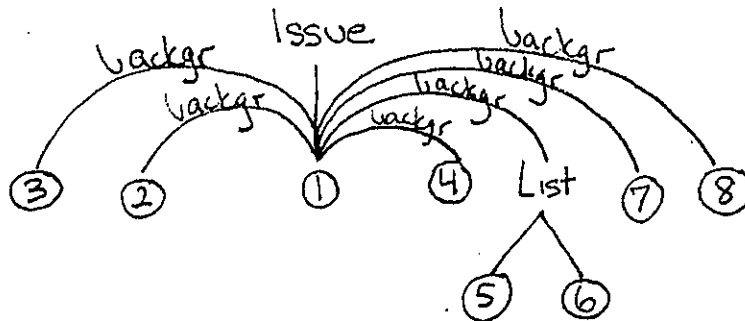
A founding member of the Renaissance Society of America, she wrote an important book: Leone Battista Alberti: Universal Man of the Renaissance. Later, she was to question whether the Renaissance really did champion a universal humanist ethic for women as well as for men in her classic essay, "Did Women have a Renaissance?"

Her early political activities marked the beginning of a lifelong commitment to combine activism with scholarship, practice with theory. She helped to found the United Federation of College Teachers and worked for a policy of open enrollment in the City College of New York as a practical means of overcoming discrimination against minority groups. During the 1960s she was also deeply involved in the antiwar movement.

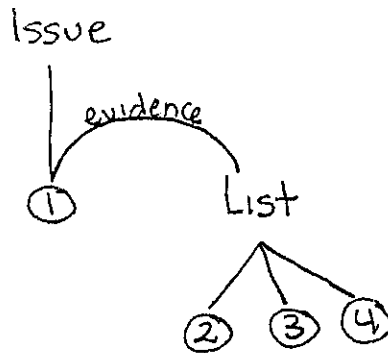
In the late 1960s her interests turned to feminism and socialism... (Ms., 12/82)

The genre convention of beginning new rhetorical units with fullNP's is ignored in this obituary, which almost certainly makes some statement about the relationship between the writer and the reader and the norms of the larger society.

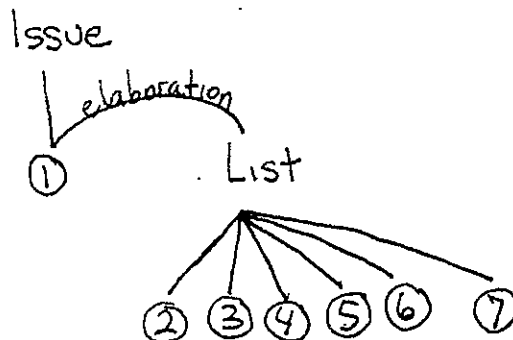
8. Chancellor Tomas Rivera said " Dr. Hollar....." (University Bulletin, 1/16-20/1984)



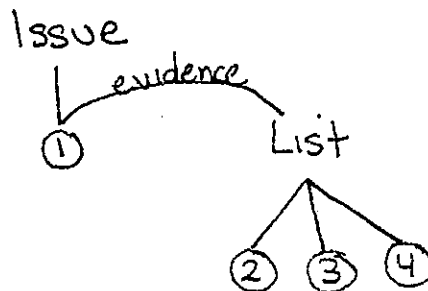
1. Lytton's speech was filled with the rhetoric of the past.
2. He knew his Rousseau;
3. he knew his Voltaire;
4. he even knew his President de Brosses! (*A House of Lions*, p.39)



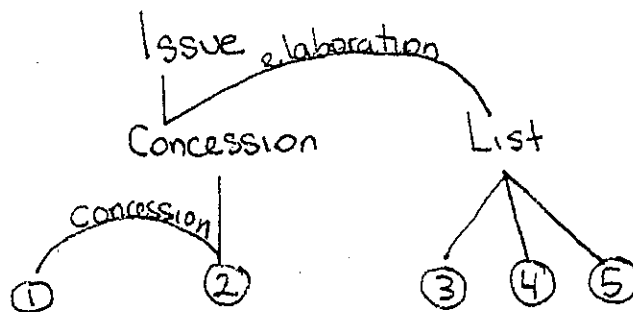
1. We see many Vanessas in the portraits that remain of her, especially those painted by Duncan Grant.
2. The young face was smooth, with firmly lined brows and liquid gray-green eyes.
3. She had sensuous lips.
4. She rarely used makeup.
5. Somewhere Virginia speaks of "her passionate mouth."
6. Her voice was beautifully modulated;
7. her words were carefully paced. (A House of Lions, p.78)



1. ...Hunter does what he can to keep elocution alive.
2. He spoke continuously for three hours from a platform in Memorial Park during Claremont's 1979 Fourth of July festivities.
3. The next year, at the same rostrum, he stretched it out four hours.
4. The next Fourth of July, on a similar platform half a continent away, he talked nearly six hours. (Los Angeles Times, 7/3/83)



1. Against such formidable appeal, his opponents no doubt were readying grenades,
2. but up to Super Tuesday they could throw only marshmallows:
3. For nearly 17 years he had shaved a year off his actual age...;
4. in 1961 he had officially shortened his name from Hartpence...;
5. at 43, he had obtained an appointment to the Naval Reserve (People, 3/26/84)



In each of these examples, the references within the List structures which are coreferential with the referent in the nucleus (off of which the List is an adjunct) are done with pronouns. This distribution supports the hypothesis that it is new rhetorical units that are started with fullNP's. In cases where no new unit is started, a pronoun is used.

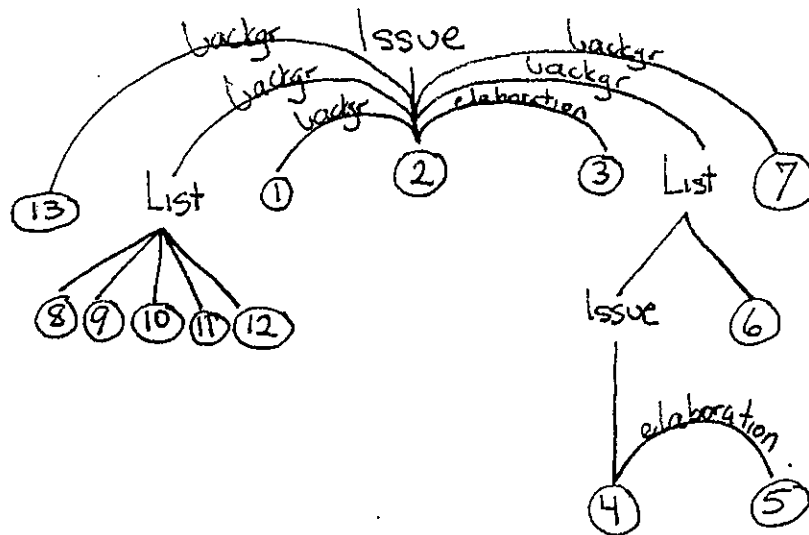
The following passage brings up another principle in choosing a fullNP over a pronoun: the greater the internal structure of the just-created structure, the more likely we are to find the current proposition done with a fullNP, even if the current proposition is a next member in a List or Narrative structure. That is, a return to a List structure is more likely to be done with a fullNP if the preceding member of the List has its own adjunct (that is, structure of its own) than if the preceding member has no internal structure. Compare the List and Narrative structures of the Albertson article with the List structure in the Glaser article: the non-initial members of those structures in the Albertson text are done with pronouns, while the non-initial member of the List in the Glaser text is done with a fullNP (proposition 6). The reason for this difference in anaphora, according to the hypothesis proposed here, is that the members of the List and Narrative structures in the Albertson article have no internal structure--they are all terminal nodes; the first member of the List in question in the Glaser text, however, has a background adjunct (giving the names of the laboratories), and the next member of the List ("Glaser will also assist...") is done with a fullNP.

Remember that in an earlier section we saw that a return to a List structure over an adjunct of a preceding member of the List could be done with a pronoun (e.g., in the Robertson passage), so I am not claiming here that such a move must be done with a fullNP; rather, given this other set of structuring principles which takes into account the

internal articulation (Koffka, 1935) of the preceding and current units, it can be done with a fullINP.

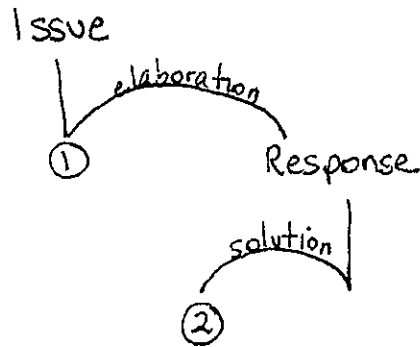
1. A new position at the University has been filled, involving responsibility for matters concerning the four Laboratories that UC manages for the U.S. Department of Energy.
2. Harold Glaser, a consultant to the U.S. Office of Management and Budget, will serve in the new position as a special assistant to President Saxon.
3. The appointment is another step taken by UC to strengthen its oversight of the DOE Laboratories.
4. Glaser will assist Saxon and Vice President William B. Fretter in fulfilling their oversight responsibility for the four Laboratories.
5. They are the Laboratory of Biomedical and Environmental Science at Los Angeles, the Lawrence Berkeley Laboratory, the Lawrence Livermore National Laboratory and the Los Alamos National Scientific Laboratory in New Mexico.
6. Glaser will also assist the Regent's Committee on Oversight of the DOE Laboratories and two committees that are advisory to Saxon on laboratory matters. (The two committees are the Scientific and Academic Advisory Committee established in 1971 and the recently authorized Committee on Health, Safety and Environment.)
7. Glaser's responsibilities will include preparation of background papers, handling requests for special studies, drafting reports, developing agendas for meetings of the various committees and preparing background materials for the meetings.
8. Until recently Glaser had been director of NASA's Solar Terrestrial Division, responsible for planning, implementing and managing most of the U.S. effort in solar terrestrial research.
9. Earlier he had been in charge of solar physics at NASA.
10. He has also worked at NSF and the National Bureau of Standards,
11. and he was detailed to the White House staff in 1971 and 1972.
12. Glaser also worked in the Office of Naval Research, at the Naval Research Laboratory, and at the Applied Physics Laboratory of Johns Hopkins University.

13. (The UC Regents voted at their June meeting to renew for five years their contracts with the U.S. Department of Energy to manage the four DOE Labs. The vote was 11-4.) (University Bulletin, 7/13/81)



More examples of the correlation between fullNP and new unit follow.

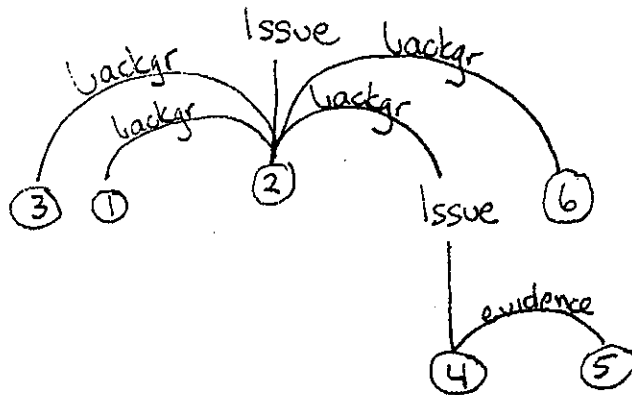
1. He left St. Paul's for Cambridge carrying an invisible outer shell, a carapace, that was his permanent shield against life.
2. What was this carapace which Leonard Woolf carried for seventy years (A House of Lions, pp.23-24)



In this example a new adjunct is started with a fullNP.

Another example of the correlation between fullNP and new rhetorical unit follows.

1. Groundskeepers like Joyce Harmse are the reason Santa Monica's 21 parks are beautiful and well maintained.
2. Joyce is one of 23 groundskeepers employed by the city and currently the only woman in this position.
3. A single parent since her divorce in 1972, Joyce lives with her daughter, now 18, in a West Los Angeles apartment.
4. In September, Joyce marks her fourth year in a job she apparently finds very satisfying.
5. "I like the outdoors," she says...
6. At 40, Joyce stands 5'5" and weighs 124 pounds. (Santa Monica Seascape, April, 1983)



In this passage, while all of the adjuncts off of the major nucleus are done with fullNP's, one of the adjuncts of an embedded Issue structure is done with a pronoun ("I like the outdoors," she says"). This fact points to a possible modification of the association between fullNP and new structure: the higher up in the tree structure the adjunct is, the more likely it is to be done with a fullNP. In addition, the degree of internal articulation of the adjunct conspires with the first factor to "induce" the use of a fullNP.

In the preceding discussion we have seen that fullNP's can, and very often do, occur in structural environments in which pronouns had been predicted to occur. I claimed that the motivation for the use of fullNP's in these situations is rhetorical organization, whereby the internal cohesiveness and the external discohesiveness of rhetorical units is displayed to the reader. Notions of participant continuity and paragraphing were shown to be ineffective in accounting for the rich patterning of anaphora in these texts.

7.4 Anaphora in Environment of Different-Gender Referents

In this section I examine the effect on anaphoric patterning of the appearance of different-gender referents.

The pattern for anaphora in the environment of different-gender referents is somewhat more restricted than the Basic Pattern described in section (7.2). It can be stated in essence as:

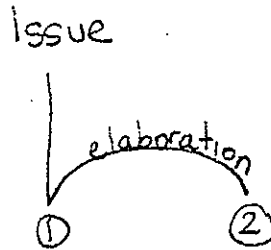
A pronoun is used to refer to a person in a different-gender environment if there is a previous mention of that person in a proposition which is active; otherwise a fullNP is used.

As this pattern is stated, then, pronominalization is limited to the active pattern, which includes R-structure partners and return pops.

7.4.1 Pronominalization in the active pattern

As we saw above, a proposition is active if its R-structure partner is being produced. In the following passages, we have examples of two different-gender referents in the same proposition, and one or both of them are pronominalized in the R-structure partner:

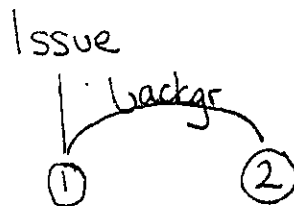
1. This time he married a sturdy Scotswoman with all the hardihood and endurance of the north--and of her race.
2. Year after year she bore him children (A House of Lions, p.35)



Here, both people mentioned in the nucleus of the R-structure are referred to with pronouns in the R-structure partner (the adjunct).

A similar example follows, in which two referents, of different genders, appear in the nucleus of the R-structure, and both are pronominalized in the adjunct.

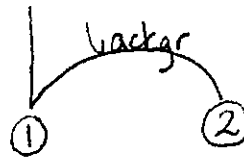
1. At three Vanessa had a baby brother aged one and a half.
2. She mothered him (A House of Lions, p.79)



One additional example of this pattern is given below.

1. Kirsten's husband of 28 years, brain surgeon John Douglas French, has it.
2. He is 72. (Los Angeles Times, 7/19/83)

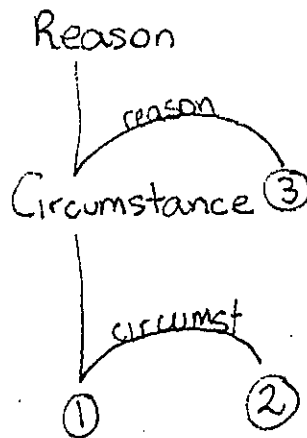
Issue



The background adjunct off of the nucleus contains a pronoun that refers to a person mentioned in the nucleus, in spite of the different-gender referent also present in that nucleus.

If the nucleus is realized by an embedded R-structure, and one of the referents is mentioned in the nucleus of that embedded structure and the other, different-gender, referent is mentioned in the adjunct of the embedded structure, then either person can be referred to using a pronoun in the higher adjunct. An example of this pattern follows.

1. "The most ridiculous boy," said Lady Strachey
2. when Lytton reached the age of speech,
3. for he spoke his fantasies aloud. (A House of Lions, p.35)



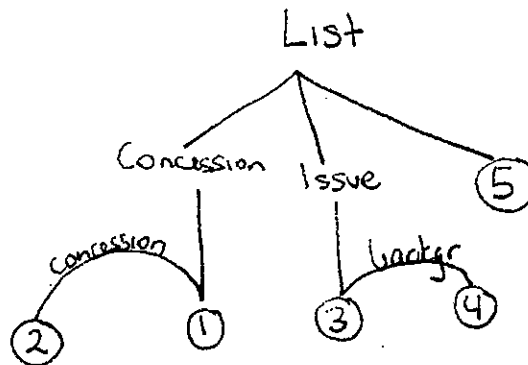
In this passage, the higher nucleus is realized by an embedded Circumstance structure; the female referent appears in the nucleus of this embedded structure and the male referent appears in the adjunct of the embedded structure. Notice that the reference to the male person in the higher adjunct is done with a pronoun. The active pattern covers approximately 46% of the pronouns in the environment of different-gender referents.

When a proposition is returned-to via a return pop, it becomes active again. And, in fact, we saw earlier in this chapter that return pops to a nucleus are done with pronouns if the adjunct "popped over" is structurally simple. Below I will demonstrate that, following this pattern, a return pop is done with a pronoun even if the popped over adjunct mentions a different-gender referent, iff that adjunct is structurally simple. Examples follow.

1. His re-entry into Hollywood came with the movie "Brainstorm,"
2. but its completion and release has been delayed by the death of co-star Natalie Wood.
3. He plays Hugh Hefner of Playboy magazine in Bob Fosse's "Star 80."
4. It's about Dorothy Stratton, the Playboy Playmate who was killed by her husband.

5. He also stars in the movie "Class." (Los Angeles Times, 7/18/83)

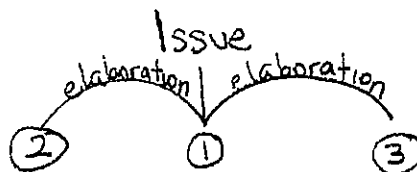
The structure of this passage can be represented as:



In each instance in which I have underlined the pronoun (propositions 3 and 5), we have a return pop to a list structure over a non-complex adjunct containing a reference to a different-gender person.

Another example follows.

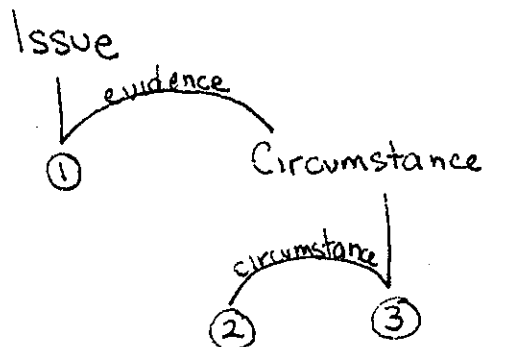
1. Alexis C. Jackson has been appointed assistant vice president for business management at the University.
2. The appointment, recommended by President Saxon, was approved by the Regents at their March meeting.
3. The appointment was to be effective April 1 or as soon thereafter as she has been able to relocate to California (University Bulletin, 4/20/81)



In this passage, we have a nucleus ("Alexis..has been appointed..."), then an elaboration adjunct with a male referent mentioned in it, and then a return pop over the adjunct to create a second elaboration adjunct. The return is done with a pronoun, even though a different-gender referent is present in the popped over adjunct. The return pop pattern accounts for roughly 50% of the pronouns in the environment of different-gender referents.

In all of my texts I found one passage in which pronominalization was possible in a different-gender environment when the relevant proposition was controlling rather than active. This passage is given below.

1. He prospered.
2. When Victoria came to the throne,
3. he was living in a comfortable house (A House of Lions, p.19)



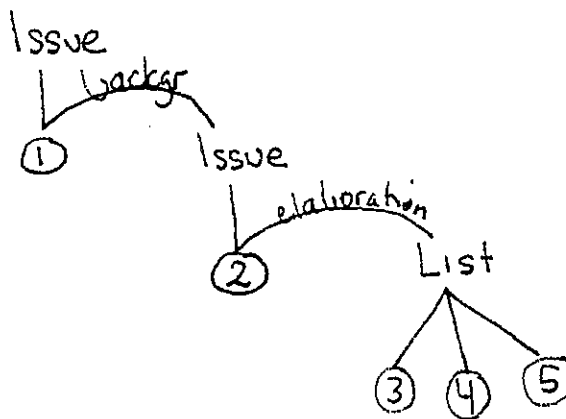
It is worth noting about this passage that the "interfering" different-gender referent comes in the adjunct, rather than the nucleus, of the embedded structure, and in addition the adjunct itself is structurally simple (a terminal node). Both of these factors no doubt work together to allow pronominalization in a situation other than the active pattern established above.

7.4.2 FullNP's elsewhere

FullNP's are used in cases where anything more "distant" than the active pattern is in progress, and in return pops if the popped over material is structurally complex.

Passages illustrating the use of fullNP in a pattern other than the active pattern are presented below.

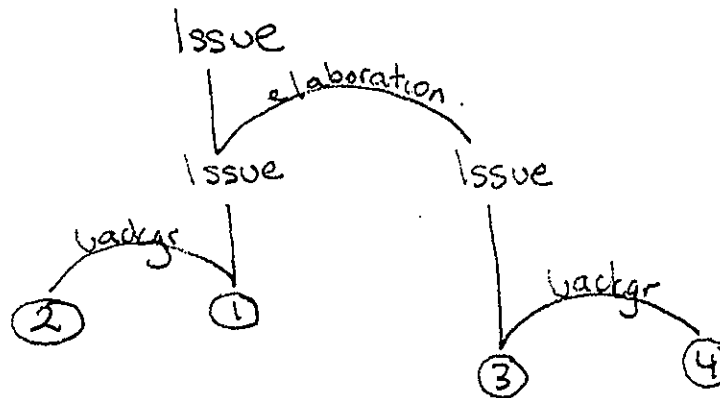
1. Leonard got from her both the pleasures and fear of public events, "the horrors and iniquities of the great world of society and politics as recorded in the Baptist Times, about the year 1885."
2. And all this in the untroubled atmosphere of the Lexham Gardens third-floor nursery, where the boy felt snug and safe.
3. The fire blazed behind the tall guard;
4. the kettle sang musically,
5. and the music mingled with the nurse's reading of serious things (A House of Lions, p.22)



The higher nucleus mentions both of the referents--Leonard and his nurse. We then have an adjunct/nucleus which mentions only Leonard; and the adjunct on this last item--a List structure--contains a reference to the nurse, done with a fullNP. We thus have a controlling pattern, and a fullNP is used for the critical reference.

Another example follows.

1. Still later she had John Singer Sargeant as her master;
2. like Furse, he had studied in France.
3. He was a sympathetic and encouraging teacher, a large imposing presence.
4. Vanessa liked his voice. (A House of Lions, p. 83)



Here again we have a controlling pattern, with a different-gender referent in the embedded nucleus, and a fullNP used for the reference in the embedded adjunct.

It was claimed in section (7.2.3) above that return pops over structurally complex material are associated with the use of fullNP, even if no other referents are involved. The presence of different-gender referents does not alter the pattern: it is followed if the popped over material contains mentions of a different-gender referent as well. However, since the pattern is basically the same as the one illustrated in section (7.2.3) above, I will not discuss it further here.

In this section we have seen, again, that it is not just distance or just the introduction of another referent that determines the anaphoric device chosen; rather, it is the structural organization of that distance, and of that other mention, that determines anaphoric patterning. Clearly, then, we need to have a view of text as hierarchically organized if we are to understand anaphora.

7.5 Anaphora in Environment of Same-Gender Referents

In this section I present the findings on anaphora in the environment of a same-gender referent. We will see in this discussion, as in the preceding section, that simple introduction of another referent does not necessarily produce "ambiguity"; rather, it is the structural organization of the text that determines what will count as "interfering" and what not.

The pattern of anaphora for same-gender environments is close to the pattern for different-gender environments, with a few more restrictions that will be discussed in detail below:

A pronoun is used in a same-gender environment if the relevant proposition is in an active state. Otherwise, a fullNP is used.

As this formulation stands, the same-gender environment seems identical to the different-gender environment; however, as will be shown below, there are a few differences.

7.5.1 Pronominalization in the active pattern

As before, included under the active pattern are basically (1) propositions whose R-structure partners are being developed, and (2) propositions that are being tied-to by a return pop. I examine the first of these below.

Pronominalization is possible in an R-structure partner if two same-gender referents are mentioned in the same proposition under the following conditions:

(a) if the referent mentioned in the second proposition was the grammatical subject of the first proposition (or the possessor in a nominalization).

or (b) if the referent mentioned in the second proposition was not the grammatical subject of the first proposition, but is mentioned in the next highest nucleus.

Examples illustrating the first pattern (subject → pronoun) are given below.

(Examples are from A House of Lions unless otherwise indicated.)

This is not to say that Virginia's rivalry with Vanessa had diminished. She oscillated between abasement and respect.

Old Leslie Stephen sat now in Thoby's rooms in the Trinity Great Court.
One by one the young tried to talk to him

Lytton could hardly undertake the entire history of Warren Hastings. He would focus on

Quentin Bell has pointed to an interesting slip of the pen Virginia made in a letter to her friend Violet Dickinson. She begins by saying

Clive asked Lytton to join the luncheon party. He was a little put out to learn that Lytton had already met Desmond

While FitzGerald doesn't have a quarrel with this year's grand marshal, union leader Teddy Gleason, he is annoyed by the selection of IRA fugitive Michael O'Rourke as honorary grand marshal. (People, 3/19/84)

Examples illustrating the second pattern follow.

Desmond once remarked that Lytton's friendship's at Cambridge were more like loves. One thinks of him as taking possession

Desmond gave him the Oxford miniature Shakespeare and four volumes of Milton, so that he would carry into remote parts the immortal utterances of the English tongue.

There are also situations in which both same-gender referents can be referred to with pronouns.⁵⁶ This anaphoric pattern arises only when role continuity of subject is maintained; that is, the pronoun which is the subject of the clause in question must be coreferential with the subject of the clause of the R-structure partner. From a use-determines-context viewpoint, we could say that the writer signals to the reader with the use of two pronouns that they should be interpreted as maintaining the grammatical roles of the active proposition.

Examples of this pattern are given below.

Lytton had written an earlier essay on Hastings. He had seen him as a "superman"

In the phantasmagoria of her inner world, Virginia loved Vanessa. She wanted total possession of her.

The active pattern covers about 82% of the pronouns in the environment of same-gender referents.

Another organization in which pronouns can be used in a same-gender environment is the list return pop. In this situation, two mentions of the same person, X,

⁵⁶Cf. Reichman (1981), in which it is claimed that only one referent is in high focus (and hence pronominalizable) at a time.

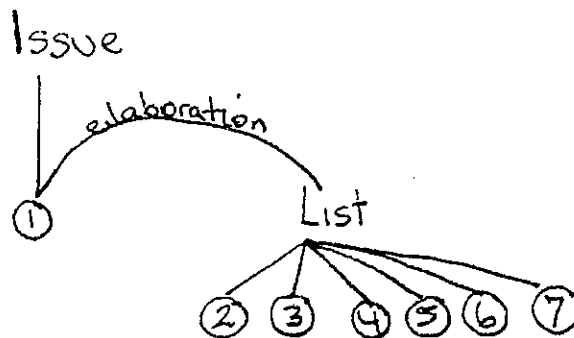
can be separated by references to another, same-gender, person, Y, and the second mention of person X can be done with a pronoun iff the second mention of X is a return pop to another member of a List structure (on a proposition containing a mention of X) and the popped over adjunct is (a) also a member of the List structure and (b) structurally simple. Schematically, this pattern would look like:

Notice that the restrictions on pronominalization in return pops are somewhat greater for same-gender environments than for different-gender environments: for the latter, pronominalization in return pops is not confined to lists. This greater restrictedness on pronominalization seems intuitively reasonable, given the greater competition among same-gender referents for a gender-marked pronoun. This pattern covers about 12% of the pronouns in the environment of same-gender referents.

Examples of the pattern of pronominalization in list return pops, with their diagrams, are given below.

1. We see many Vanessas in the portraits that remain of her, especially those painted by Duncan Grant.
2. The young face was smooth, with firmly lined brows and liquid gray-green eyes.
3. She had sensuous lips.
4. She rarely used makeup.
5. Somewhere Virginia speaks of "her passionate mouth."
6. Her voice was beautifully modulated;

7. her words were carefully paced. (A House of Lions p.78)



In this case the proposition containing the underlined pronoun is not an adjunct of the immediately preceding proposition ("somewhere Virginia speaks...") but is another in a series of adjuncts (in a List structure) on the first line ("we see many Vanessas..."). The return with a pronoun is possible in spite of the presence of a same-gender referent, according to the hypothesis proposed here, because the relevant mention of Vanessa comes in a next member of a list, popping over the previous member of the list to the proposition "We see many Vanessas..."; in addition the popped over list-member is structurally simple.

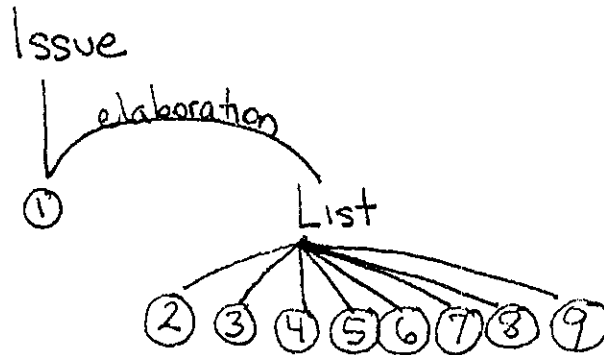
The next example comes from later in the same list.

1. We see many Vanessas in the portraits that remain of her, especially those painted by Duncan Grant.
2. The young face was smooth, with firmly lined brows and liquid gray-green eyes.
3. She had sensuous lips.
4. She rarely used makeup.
5. Somewhere Virginia speaks of "her passionate mouth."
6. Her voice was beautifully modulated;

7. her words were carefully paced.

8. Virginia, so often her historian, likens her to a bowl of golden water which brims but never overflows--or, as we have seen, to the sedate volcano.

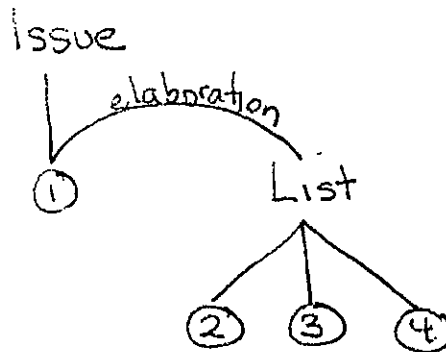
9. In another image she has a "queer antique simplicity of surface."



Here again we have a return in a List structure at proposition 9 done with a pronoun in spite of an apparently "interfering" same-gender referent (which appears in proposition 8).

Another example is given below.

1. He [i.e., Leonard] saw with child-like wonder and horror a brawling London whose violence and ginmill sordidness were visible at all times.
2. At night he heard a woman's shrieks;
3. or he saw a drunken, tattered man staggering about with a policeman violently hitting him;
4. he also glimpsed inferno-slums filled with strange human shapes.



In this passage, although two other same-gender referents are mentioned in proposition 3, Leonard is pronominalized in proposition 4, and this fact correlates with the fact that proposition 4 is another member of a list structure.

It is interesting to note that, from the reader's perspective, this pattern is possible only if the reader maintains some expectation that the nucleus will soon be returned to when s/he encounters one member of the List with a same-gender referent. It is probably the case that as this list-member grows in complexity, the expectation of immediate return diminishes; hence the writer risks a possible misinterpretation if a pronoun is used for a return after a structurally complex adjunct.

In this preceding section I have demonstrated that pronouns can be used even when other referents of the same gender are present if certain structural conditions hold. It is thus not the case that the simple presence of another, same-gender, referent in the neighboring clauses automatically induces the use of a fullNP; rather, there is a

delicate interaction between the presence of same-gender referents and the hierarchical structure of the text, and it is this interaction which determines when a pronoun can be used (and hence which determines what is to count as semantically "ambiguous" or not). It is critical, then, that a hierarchical approach to anaphora be adopted.

7.5.2 FullNP elsewhere

FullNP's are used whenever the circumstances described above are not met. Some of the cases in which the circumstances are not met are described below.

If two same-gender referents are mentioned in a proposition and one of them is mentioned in that proposition's R-structure partner, then a fullNP will be used for the reference in the second proposition if the referent did not fill the subject role in the first proposition and was also not mentioned in the next highest nucleus. Examples illustrating this pattern appear below.

But Lytton could not control Clive's appetite for life. Clive was a hungry-for-experience heterosexual.

It's not for nothing that Kennedy hagiographer Theodore Sorenson is a co-chairman of Hart's campaign. As Hart's caravan sped onward... (People, 3/26/84)

Keynes...could outplay Lytton. All Lytton could do was

She had lied to keep shock and suffering from her [i.e., Violet]. But Violet, 18 years older, needed no such defence.

Furthermore, if the following situation holds, in which a referent (and only that referent) is mentioned in an R-structure and then another, same-gender, referent is mentioned in the R-structure partner, then a fullNP is used for the reference in the second proposition, regardless of that referent's status in higher R-structures. In this case, since the referent in the first proposition is in the active pattern, a pronoun would be heard as referring to it, rather than to the referent in currently being mentioned in the second proposition (even if the latter is mentioned only two clauses back). Examples of this phenomenon follow.

Elvis had his gilded belt, Elton his spectacular spectacles and now Michael Jackson has that glittering glove. Rhinestones a-twinkling, the glove lends its wearer a magical air--as if he could pluck a rabbit from a hat with the same ridiculous ease that he snatched an unprecedented eight Grammy awards a couple of weeks back.

(most of 2 paragraphs omitted)

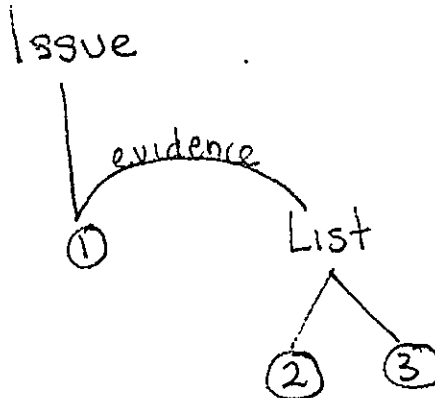
...Whitten says that Jackson owns six of the gloves, including two that are black and one that is red, white and blue.

Though Michael is mum about explaining why he wears the glove, other than to say it makes him feel "never offstage," Whitten maintains it is an integral part of the 25-year-old singer's mystique. (People, 3/19/84)

In this passage, Whitten is referred to with a fullNP because of the same-gender referent in the R-structure partner (Michael, in the preposed adjunct).

Another example follows.

1. Virginia's characterizations were a matter of moods.
2. Sometimes Vanessa was "marmoreally chaste"--loaded words suggesting coldness, concreteness, smoothness of surface, virginal severity.
3. Vanessa has "a genius for stating unpleasant truths in her matter of fact voice."

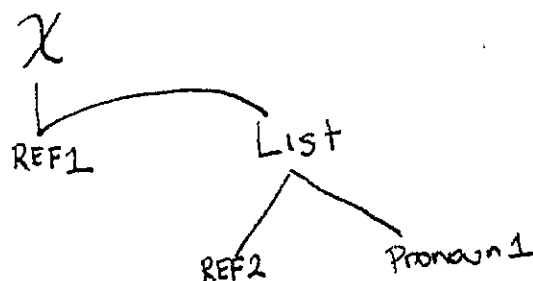


This passage is particularly interesting in that it shows what happens when two propositions (in a list structure) are adjuncts to a same-gender nucleus. In each case, Vanessa is referred to with a fullNP because Virginia, rather than Vanessa, appears in the nucleus, and each list-member in a sense cycles back to that nucleus. The proposition containing the mention of Virginia is thus active, and so is the source of referents for pronominalization. This passage is thus the exact inverse of the passage given below, in which all of the list-members are done with pronouns because their referent (Vanessa) appears in the relevant nucleus (and is, therefore, in the active pattern):

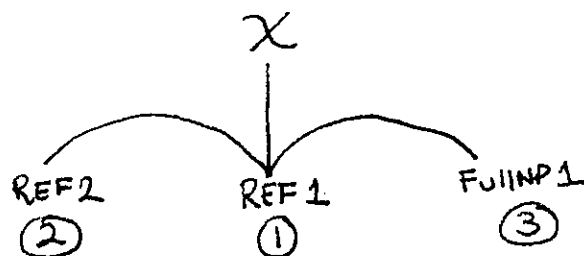
1. We see many Vanessas in the portraits that remain of her, especially those painted by Duncan Grant.
2. The young face was smooth, with firmly lined brows and liquid gray-green eyes.

3. She had sensuous lips.
4. She rarely used makeup.
5. Somewhere Virginia speaks of "her passionate mouth."
6. Her voice was beautifully modulated;
7. her words were carefully paced.

It is an interesting fact about the distribution of anaphora in same-gender environments that a list-return over a same-gender referent can be done with a pronoun, while a same-R-structure reference must be done with a fullNP. That is, in the following structure a pronoun can be used,



while in this structure a fullNP must be used:

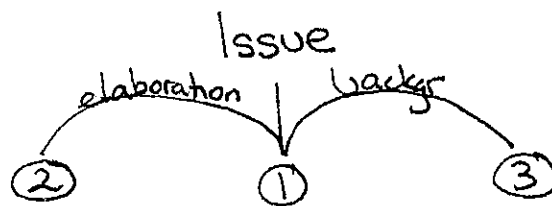


How can we account for this apparently anomalous distribution? My guess is that the List structure sets up such strong expectations that another mention of the referent is coming up that even an intervening same-gender referent does not displace the first referent from its pronominalizable position. In any other situation (at least for the type of texts I examined), the expectations of a next reference are not strong enough to guarantee an accurate resolution of a pronoun, so writers avoid pronouns in such situations.

While considering the cognitive side of this difference, we should not ignore the very real--and possibly non-functionally based--influence of genre on anaphoric patterning. The observed difference between same-gender anaphora in Lists and in other structures may have more to do with the somewhat arbitrary conventions of the expository, people-oriented texts that I have used in this study than with the cognitive processes of the reader (or the writer's assumptions about those processes). As we will see in chapter 8, the patterns of anaphora exhibited by expository texts are very much more conservative than would be indicated by cognitive processes (if the latter can be inferred from the spontaneous conversations examined in chapter 5); the expository situation may thus have its sources in something as mundane (for linguists) as generic conventions (whose own sources are unknown).

Return pops other than in list structures provide another same-gender context in which fullNP's are used. An example of this pattern is presented below.

1. Theodore L. Hullar has been appointed executive vice chancellor at Riverside, succeeding Carlton R. Bovell.
2. Bovell announced his resignation to return to full-time duties as a biology professor and researcher on campus.
3. Hullar is director of the Agricultural Experiment Station and director for research at Cornell University. (University Bulletin, 1/16/84)



The return at proposition 3 pops over the mention of a same-gender referent in proposition 2, but proposition 3 does not pop back to an on-going list structure; the return pop is done with a fullNP.

7.5.3 Interim Summary

In this section we have examined the ways in which other referents influence patterns of anaphora. The basic pattern for other-referent environments appears to be more restricted than the pattern for environments without other "interfering" referents in that only the active pattern seems to hold; that is, referents in propositions whose R-structure partner is being developed are available for pronominalization--any relationship more embedded than that induces the use of fullNP.

It is important to reiterate that the mere presence of another referent--whether same-gender or different-gender--is not the issue here; the crucial factors for anaphora have to do with the structural patterning of the clauses (and also in some cases the grammatical roles of the NP's in question). This critical feature of anaphora accounts for the lack of success some researchers have experienced in quantifying referent ambiguity and its effect on anaphora (see Givon, 1983). Before we begin quantifying ambiguity, we need to explore qualitatively, as I have tried to do here, the structural factors that influence anaphoric patterning.

7.6 Non-Structural Factors

In the preceding sections I have tried to describe the patterns of anaphora in my texts that appear to have a structural basis; that is, it is the rhetorical relation of the propositions that in these instances determines what anaphoric device will be used. In this section I will present some patterns that reflect non-structural (i.e., not having to do with rhetorical structures) bases.

7.6.1 Further description with a fullNP

As Schegloff (p.c.) has pointed out, any next reference to a person is a place where further information about that person can be added. In my expository texts, this fact is often realized through the use of a fullNP--complete with modifiers--in situations in which a pronoun would have been possible according to the structural patterns presented earlier. This technique is especially widely used in short articles, in which space is at a premium, and therefore any piece of information that can be packaged in a modifier or relative clause (instead of a full sentence) will appear in this "condensed" form, as part of a fullNP. Examples of this phenomenon follow.

There was one whose passion for literature was imparted to the small boy.
Mr. Floyd made Leonard "dimly aware that lessons--things of the mind--
could be exciting and even amusing." (A House of Lions, p.23)

Here the fullNP is used to introduce a previously unknown name for a character that was already introduced (one). I do not mean to claim that this is the only reason that a fullNP is used here--the structural principle discussed in section (7.3) on demarcating rhetorical units may also be involved; I mean to suggest only that at least part of the motivation for using a proper noun in this passage may be what I have called the "further information" function of fullNP's.

He was rescued Sunday after crawling to the top of the ravine, where he collapsed and was spotted by hikers.

"They told me their names," he said. "I forgot them, but I'll never forget their faces."

The lance corporal was on leave from his job as a small-arms repairman at Camp Pendleton. (Los Angeles Times, 7/26/83)

Before this passage, we did not know that Bell was a lance corporal, a fact that may be significant in judging how well he performed under the stressful conditions of

his accident. This information is brought in not through a complete clause, but through an anaphoric device--a fullNP.

George R. Tilton, professor of geological sciences who trained as a chemist, applies chemical theories and analytical methods to geological problems. These problems concern especially the age, origin and evolution of the earth, the moon and the solar system.

Tilton, a member of the National Academy of Sciences, is regarded as a leader in lead isotope geochemistry (University Bulletin, 12/1/80)

Bell, once a restaurant worker in his hometown of Battle Creek, Mich., said, "I thought about all the food."

Bell, who has taken mountain survival training with the Marines, said he will continue to enjoy the woods. (Los Angeles Times, 7/26/83)

In these passages again, fullNP's are used in conjunction with reduced pieces of added information (non-restrictive relative clauses). The slots could have been filled with a pronoun (by the rules of return pop for the environment of no "interfering" referents) or with fullNP's (by the rules of rhetorical unit demarcation); but we can say again that at least part of the reason for using a fullNP in these cases is the fact that "piggyback" information is being brought in here in the form of relative clauses, and a fullNP is required for the syntactic environment Referent + relative clause.

7.6.2 Classification

Another communicative situation in which a fullNP can be used in the place of an expected pronoun is when the membership of the referent in a category is the facet of the referent being stressed. For example, in positions where one could have expected

a pronoun, one finds the young girl, the Swede, etc. Illustrations of this pattern are given below.

Leonard Woolf sat for the scholarship examination at Trinity College--the college of Isaac Newton--in Cambridge in March 1899, when he was almost nineteen. He was adept at passing exams. In October of that year, when the century had reached an extremity of old age, the right-thinking and stoical-skeptical young Jew went up to the university (A House of Lions, p. 26)

Clive goes on to tell us in this passage (which we can read only as autobiography, so closely does it fit what we know): "He had learnt to feel; and, because, to feel a man must live, it was good to be alive. I know an erudite and intelligent man, a man whose arid life had been little better than one long cold in the head, for whom the madman, Van Gogh, did nothing less." This his closest friends apparently did not grasp. The vain little "name dropper" Clive Bell had had a revelation. (A House of Lions, p. 32)

He saw with childlike wonder and horror a brawling London whose violence and ginmill sordidness were visible at all times. At night he heard a woman's shrieks; or he saw a drunken, tattered man staggering about with a policeman violently hitting him; he also glimpsed inferno-slums filled with strange human shapes. They made the small boy sick with terror. (A House of Lions, pp. 22-23)

In all of these passages, fullNP's are used to categorize the referents, rather than just establish the referent's identity for the reader.

The difference between this pattern and the previous non-structural pattern lies in the newness of the information conveyed by the modification: in the first pattern

("further information") the reader is given, in a densely packaged form, new information about the referent; in the second pattern ("classification") already known information is used to bring out the membership-in-a-category facet of the referent's identity. For example, we knew before reading the passages given above that Leonard Woolf was a "young Jew" and that Clive Bell tended to be thought of as a name-dropper, and that the person in London (Leonard Woolf) was a young boy.

It is a curious fact about this particular pattern of anaphora that it tends to occur mainly in literary-style texts (while the "further information" pattern occurred in all text-types, although concentrated in short articles). Perhaps the use of this device, since it does little in the way of hardcore information conveying, carries a flavor of flowery variation that is more typical of literary-style texts than, say, short articles in a university bulletin.

7.6.3 Comparison and Contrast

It is very often the case that a reference will be done with a fullNP if the referent is being contrasted or compared, either implicitly or explicitly, with other people.

Examples from A House of Lions are given below.

He [i.e., Leonard] also describes how he learned to be the kind of "I" who watches himself as if he were double--"not I." This kind of self-awareness has been sketched by many others, not least Emerson and William James in their "me" and "not-me." In Leonard it seemed as if he were both actor and observer: "I cannot avoid continually watching myself playing a part on the stage." (p.24)

His [i.e., Clive] laughter was an explosive spasm or guffaw, and in his youth he possessed distinct crudities that made him seem like some young

rural squire out of Fielding rather than a sensitive poetry-conscious undergraduate at an ancient college. Leonard Woolf's early environment had been that of a middle-class intellectual and of a city-bred boy. Arthur Clive Heward Bell's was middle-class hunting and fishing. (p.27)

School for Lytton was erratic as well as erotic: his mother worried about his health; she was determined to ease his life. Unlike Leonard, unlike Clive, who were hearty, healthy boys, who loved games and learned their Latin and Greek well, and were heterosexuals, Lytton was not subjected to formal public schools. (p.37)

At the end of his [i.e., Maynard Keynes] time at Eton, he lived in the school as if it were his own fine country house and cooperated with his friends in running it. Unlike Leonard, Clive and Lytton, sons of suburb, countryside, metropolis, John Maynard Keynes was "all" Cambridge. (p.48)

The claim being made here is that the use of the (underlined) fullNP in each passage is motivated, at least in part, by the comparison or contrastive nature of its proposition. I do not mean to imply that this is the only motivation for using a fullNP in all of these cases (for example, the last passage is also an illustration of "further information," since it offers the first use of the name of the person under discussion); but the comparative/contrastive aspect needs to be taken into account if we are to explain the full range of anaphoric patterning in expository texts.

In the preceding sections I have presented some types of non-structure- oriented

communicative functions which seem to favor the use of fullNP.⁵⁷ The underlying proposal of this presentation has been that while hierarchical structure relations are crucial in the patterning of anaphora in written English texts, they are not responsible for every use of all of the anaphoric devices that are available to us in English; some of these uses have other communicative functions as their source. These non-structural uses of various anaphoric devices have been ignored in the recent discourse analysis, especially with regard to written material, so it is important that they be recognized in a full treatment of anaphora.

7.7 Comparison with Other Theories

In this section, I would like to demonstrate that the three major theories of discourse anaphora examined in chapter 2--Givon's Continuity Hypothesis, Reichman's Context Space theory, and Hinds' Peak Sentence approach-- fail in their own individual ways to account for the range of anaphoric facts explored in this chapter. I will proceed by presenting three expository passages with critiques on how each of the other theories of discourse anaphora fails where the approach delineated in this study succeeds.

The first passage is the Albertson article presented earlier in the chapter. I repeat it here for ease of exposition.

1. James S. Albertson has been appointed acting academic vice president by the Regents following President Saxon's recommendation.
2. The appointment is effective from March 1 until a permanent academic vice president is named.

⁵⁷ It is interesting to note in this regard that all of the cases described here have involved the use of fullNP where we could have expected pronouns; I found no non-structural factors which "induced" the use of pronoun where we could have expected fullNP.

3. Academic Vice President Donald C. Swain earlier was named president of the University of Louisville.
4. Albertson will be responsible for academic planning and program review, student affairs, financial aid, admissions, student loan collections, student affirmative action, basic skills, the Education Abroad Program, library plans and policies and UC Press.
5. He also is responsible for UC Extension, summer sessions, instructional media, Continuing Education of the Bar, and liaison with the Academic Senate, the Student Body Presidents' Council and the California Postsecondary Education Commission.
6. Albertson has been special assistant to Swain since 1978.
7. For four years prior to that he was assistant academic vice president.
8. He joined UC in 1973 as director of analytical studies.
9. Albertson is a graduate in classics at St. Louis University.
10. He earned his M.A. in philosophy there in 1953
11. and received the Ph.D. in physics in 1958 at Harvard.
12. He joined the faculty at Loyola University of Los Angeles in 1962
13. and became chairman of the department before he left in 1968 to join the faculty of the University of Santa Clara as professor of physics.
14. He was also academic vice president at Santa Clara. (University Bulletin, 3/23/81)

Recall that with the approach developed here we saw that the basic pattern for pronominalization was followed (i.e., a pronoun is used if the relevant antecedent proposition is in an active state), and that in addition a unit-demarcation pattern appeared, whereby the beginning of rhetorical units (at propositions 4, 6, and 9) is signalled by the use of full noun phrases. We thus have a layering of patterns.

Within Givon's Continuity Hypothesis, we have essentially one basic pattern for

anaphora--referential distance.⁵⁸ The main hypothesis of this work states that the greater the distance between two mentions of a referent, the greater the likelihood that the second mention will be done with a fullNP. Note in the Albertson passage above, however, that the fullNP's in propositions 6 and 9 occur when the referential distance is as small as it can be (i.e., the referent is mentioned in the immediately preceding clause); in addition, pronouns are used under the same distance conditions (in propositions 5, 7, 8, 10, 12, 13, and 14). Clearly, then, the Continuity Hypothesis cannot predict the use of pronouns and fullNP's in this text.

In Reichman's work, pronominalization is possible as long as the relevant antecedent proposition is active or controlling (i.e., in "current consciousness"). If we suppose that her model could easily be extended to include the elaboration and background relations, then her hypothesis accurately predicts the use of pronouns in this passage (since they are all in the active environment); what her hypothesis cannot predict is the use of fullNP's where pronouns would have been perfectly acceptable and interpretable. The use of fullNP to mark the beginning of a rhetorical unit is thus not captured in Reichman's work.⁵⁹

Hinds' peak sentence hypothesis states, as we saw in chapter 2, that the peak sentence slot of a paragraph tends to be associated with the use of a fullNP. While it is not altogether clear what criteria should be used in judging the "peakness" of a sentence, I think it is reasonable to say that sentence 9, which contains a fullNP

⁵⁸ Although thematic continuity is briefly introduced in Givón's work, it is never integrated into the quantitative analyses.

⁵⁹ It should be kept in mind, however, that the context space theory was developed on conversational material, so transferring it to written material obviously leaves it open to unwarranted attack.

reference to Albertson, is no more "peak" than sentence 10, which contains a pronoun reference to Albertson: both sentences are equal members of a short narration. It seems that "peakness" is not what is at issue here; it is the rhetorical organization of the text that correlates with patterns of anaphora.⁶⁰

The second sample passage contains a fullNP reference where a pronoun would have been completely interpretable:

He saw with childlike wonder and horror a brawling London whose violence and ginmill sordidness were visible at all times. At night he heard a woman's shrieks; or he saw a drunken, tattered man staggering about with a policeman violently hitting him; he also glimpsed inferno-slums filled with strange human shapes. They made the small boy sick with terror. (*A House of Lions*, pp. 22-23)

The motivation that I proposed for this use of fullNP is the non-structural factor called Classification, wherein a referent's membership in a class/category is brought out. In the passage above, it is Leonard's innocence and small-boyness that makes the scene in London so horrifying; presumably an older person would have expected such things in a city. Leonard's membership in the class of items known as "small boys" is thus important if we are to understand the terror of his London experiences. The motivation for the fullNP the small boy is thus not based in the rhetorical organization of the passage but in some other, non-structural, aspect of the text.

Here again Givon's referential distance fails to make an accurate prediction. The clause containing the fullNP the small boy is immediately preceded by a clause containing another reference to Leonard. The referential distance in this instance is thus 1.0, the lowest figure possible, and yet the reference is done with a fullNP. If the

⁶⁰ A more detailed critique of Hinds' hypothesis is given in chapter 2.

claim is that short distances tend to be associated with pronouns, then there is something that is missing from the account, since in this passage we have an extremely small distance (essentially no distance at all) associated with a fullNP.

Reichman's hypothesis fails here too, because she does not allow for the possibility that a fullNP might be used even though a pronoun would have been cognitively understandable. Her model predicts a pronoun in this case, since the relevant antecedent proposition is active and the referent is in high focus. The fullNP in this passage thus seems to go unaccounted for in the particular context space theory proposed in Reichman's dissertation.

Again taking into consideration that "peakness" is difficult to determine, I do not find the relevant sentence (i.e., the one containing the fullNP) any more peak than the others. In general, one might expect peak sentences to scope over the rest of the sentences in the paragraph (at least that might be one type of peakness); in this passage, however, the relevant sentence scopes over the immediately preceding clause and nothing more (I have taken they in they made the small boy sick with terror to mean the inferno slums mentioned in the preceding clause). Moreover, this sentence does not advance the passage more than the other sentences (as far as I can judge), nor does it provide the culminating piece of information which the rest have led up to. I therefore find no criterion by which this sentence could be considered peak; and since the only explanation offered for the use of fullNP's is peakness, I find no explanation in Hinds' hypothesis for this particular use of fullNP.

The third and final passage illustrates the difficulties encountered by the three theories of anaphora in the environment of multiple referents.

1. His re-entry into Hollywood came with the movie "Brainstorm,"
2. but its completion and release has been delayed by the death of co-star Natalie Wood.
3. He plays Hugh Hefner of Playboy magazine in Bob Fosse's "Star 80."
4. It's about Dorothy Stratton, the Playboy Playmate who was killed by her husband.
5. He also stars in the movie "Class." (Los Angeles Times, 7/18/83)

I claimed earlier in this chapter that the pronoun in proposition 5 was possible--in spite of the four other referents, some of the same gender, in the immediately preceding text (Hugh Hefner, Bob Fosse, Dorothy Stratton, and her husband)--because of the extremely tight organization of the list structure which is being developed. It seems that it is only in list structures that such instances of pronominalization occur.

One of Givon's claims is that the greater the number of other referents introduced between two mentions of a referent, the greater is the tendency to use a fullNP for the second mention of that referent. While this hypothesis may at a general, statistical, level be true, in this particular case it seems to make a misleading prediction. Between the mentions of Robertson at propositions 3 and 5 there are four other people introduced--enough by Givon's standards to induce the use of a fullNP; yet a pronoun is used. In fact, the most recently mentioned referent is Dorothy Stratton's husband--a same-gender referent--but the pronoun in proposition 5 remains completely unambiguous in its reference to Robertson. Recency and number of "interfering" referents by themselves are thus not the critical issues attended to by writers, and the Continuity Hypothesis fails in this case because it relies too heavily (in fact nearly exclusively) on these factors.

Reichman's context space apparatus lacks the machinery necessary for modeling this particular passage, since it lacks a list structure, and it lacks return pops in list environments (the only return pops in Reichman's framework occur after self-interruptions started with "by the way"). It is thus not clear what predictions her theory would make about the anaphor in proposition 5. It is possible that a pronoun would be predicted, since in the context space work return pops in general are done with pronouns (regardless of how many other referents they pop over), but this can't be known for sure. Reichman's work thus in a sense doesn't fail in this case; it simply is not powerful enough to provide a structural analysis of the passage.

Hinds' hypothesis makes no claims about environments with potentially interfering referents. It may be that the pronoun in proposition 5 would have been predicted in Hinds' framework, if we can see proposition 5 as nonpeak, but this would be coincidental and not based on an examination of anaphora in the environment of multiple referents. Therefore, while the peak sentence approach may accurately predict a pronoun in the relevant slot, the accuracy of the prediction is accidental.

It has been my aim in this section to demonstrate that while the other major theories of anaphora capture many significant insights, each of them fails to account for some substantial range of patterns exhibited by expository texts. The approach adopted here is ultimately more comprehensive than the other theories I have discussed.

7.8 Summary

In this chapter I have identified and described various patterns of anaphora in written expository English. It was claimed that the most basic pattern is the active pattern, since it holds for different-gender and same-gender environments, as well as for environments with no "interfering" referents. The other, somewhat less common, pattern is the controlling pattern, and this holds only for environments with no interfering referents.

In order to understand the few instances of semi-longdistance pronominalization in the texts, I identified a structural organization called return pop. With a return pop the writer returns not to the immediately preceding proposition but to another, usually superordinate, proposition. I proposed that under certain circumstances return pops can be done with pronouns; these circumstances have to do with the structure of the "popped over" material, the content of that material, and whether there are other referents present.

It was also demonstrated that there is another set of organizing principles which can cause a fullNP to be used where, according to the basic patterns of anaphora described, a pronoun would have been appropriate. These principles were shown to involve the demarcation of rhetorical units, such that a fullNP is used at the beginning of a new rhetorical unit (otherwise a pronoun is used).

Finally I tried to indicate that anaphora is not governed entirely by rhetorical organization, i.e., that there are non-structural factors which influence the choice of anaphoric device. These factors include categorization of the referent, further information about the referent, and comparison and contrast of the referent with other people.

8. Anaphora in Expository Written and Conversational English

8.1 Introduction

In the preceding chapters I have explored the distribution of pronouns and fullNP's in written (expository) and conversational (non-narrative) English. In this chapter I present a comparison of the anaphoric patterns found in the conversational and written texts. Before beginning the presentation, however, a note about past research on the differences between spoken and written language is in order.⁶¹

8.2 Theories of the Differences between Spoken and Written Language

A fair amount of attention has been directed recently to the differences in syntactic structure exhibited by the two modalities (see, for example, Keenan and Bennett (1977); Ochs (1979); Chafe (1982); Biber (1983); Akinnaso (1982); O'Donnell (1974); Tannen (1982); Rubin (1980)). Claims have been made that written texts tend to be characterized by greater complexity of syntactic structure (e.g., greater use of nominalizations and complex verb structures), more frequent use of subordination, and a predominance of subject-predicate structure rather than topic-comment (or reference-proposition); that is, in general there seems to be a greater degree of what Chafe (1982) calls syntactic integration in written texts than in spoken texts.

It should be noted at this point that the characteristics of spoken and written

⁶¹ I have avoided the term spoken in this thesis because it includes all texts produced by mouth--even orally produced monologues (such as classroom lectures, speeches, etc.). Since I have concentrated explicitly on nonmonologic and spontaneous spoken language, I have preferred to use the narrower term, conversational.

language that have been studied are surface phenomena that can be counted, and from them contrastive frequencies given. In this case, where absolute frequency is the distinguishing factor, the exact nature of the texts is critical; the length of the text, its level of formality, its genre, the social class of its creator, etc., can all critically influence the number of times a particular syntactic construction gets used. In the present study, on the other hand, I have examined recurrent underlying patterns of rhetorical/interactional structure within each mode and isolated correlations between these recurrent structural patterns and recurrent anaphoric patterns. These structural patterns appear regardless of length of text, level of formality, social class of author/speaker, etc. (although they may be more frequent in one particular subtype of the genre), and the correlations with linguistic coding recur. Within this paradigm, it is thus possible to make justifiable claims about the differences between certain written and certain "spoken" texts without confounding from intruding variables. For me, then, the method adopted in this work proves to be much more satisfactory than the surface-phenomenon approach taken by previous studies.⁶²

We can now turn to a comparison of the anaphoric patterns in the written and conversational texts.

8.3 The Basic Patterns

The basic patterns of each mode were described as follows.

For Non-story Conversation:

The first mention of a referent in a sequence is done with a fullNP. After

⁶²An excellent review of the literature on spoken and written language is provided in Akinaso (1982). I have omitted discussion of much of that literature here since it is not relevant to the phenomenon under study.

that, by using a pronoun the speaker displays an understanding that the sequence has not been closed down.

For Expository Writing:

A pronoun can be used to refer to a person if there is a previous mention of that person in a proposition that is active or controlling; otherwise a fullNP is used. 1 f

The main difference between these two patterns lies in the distinction between the notions closed and active or controlling. In particular, we saw that there were instances of extremely long-distance pronominalization in the conversational material because level of embedding and the nature of the embedding seemed to have little influence on anaphora; in the expository material, on the other hand, there were no clear patterns of extreme long-distance pronominalization, and level of embedding turned out to be crucial for anaphora. Basically, after one level of embedding, the written material required that a fullNP be used.

The long-distance aspect of the anaphora patterns in these two groups of texts is particularly interesting, since both types allow return pops (a large source of the long-distance pronominalization in the conversational material), but they have radically different constraints on the association of return pops with pronouns: for the conversational data (same-gender environments aside), pronominalization with a return pop is essentially unconstrained, that is, it can apply in any structural context, while for the written data, pronominalization with a return pop was governed by the following restrictions: 1

1. The popped over material must contain mentions of the relevant referent;
2. or, the popped over material must be structurally non-complex.

The constraints on embedding and pronominalization are equally disparate. In the conversational material, fairly long-distance pronominalization is possible even in embedded utterances ; in the written material, however, pronominalization requires that at most one level of embedding be present, regardless of the nature of the surrounding text.

Quantitative data supporting these differences are presented in Tables 1.0 and 2.0 below. The figures indicate the average distance to the most recent mention of a given referent for the anaphoric device in question⁶³ and the proportion of each anaphoric device in the two text types. Although as we saw in chapters 5 and 7 the most recent mention of a referent is not always the relevant antecedent mention, for conformity with the counting procedures developed in Givon (1983) I have adopted the most recent mention as the critical reference. The results suggest that (a) fullNP's are much more prevalent in expository written texts than they are in conversational texts, and that (b) the referential distance for pronouns is much greater in the conversational texts than it is in the written texts. Long-distance pronominalization--either of the embedding type or of the return pop type--is thus basically non-existent in the written texts.

⁶³This measurement technique is based on the method developed in Givon (1983).

Table 1.0 Referential Distance in Conversational and Written T
(for pronouns only)

<u>Referential Distance (in clauses)</u>	
Conversational	2.52
Written	1.21

Table 2.0 Proportion of Each Anaphoric Device

	<u>FullNP</u>	<u>Pronoun</u>	<u>Total</u>
Conversational	87 (22%)	306 (78%)	393
Written	548 (47%)	608 (53%)	1156

8.3.1 Continuity and Anaphora in Written and Conversational Texts

In the discussions of data in chapters 5 and 7, I have tried to indicate points at which the traditional theory of anaphora (represented by the Continuity Hypothesis of Givon et al) falls short of accounting for the patterns of anaphora exhibited by the texts. The criticisms leveled against the traditional theory are extremely strong in the case of the conversational data: long-distance pronominalization (some researchers have recorded gaps of up to 30 minutes) is common, and fullNP's can be used in situations where distance would have predicted a pronoun. In this case, it is entirely clear that a structural approach to texts is critical for our understanding of anaphora.

The criticisms brought against the traditional theory in the case of the written data are not so strong, however: we saw that real long-distance pronominalization probably does not occur (the longest gap in my data being 5 clauses), and in a few instances the conditions on pronominalization require circumstances that imply a more string-oriented view of texts than I am advocating. For example, pronominal return pops exhibit limitations on complexity of the material popped over (which can be read as a limitation on distance), but this limitation on complexity can be overcome if there are mentions of the relevant referent in the popped over material (which can also be read as a function of distance). Should we then abandon the structural approach for the written texts and accept the traditional theory? If not, what should we say about anaphora in written texts to account for its apparently more linear nature?

I firmly believe that the answer to the first question is negative: we did see that fullNP's occur where distance would have predicted pronouns, and the gaps that do occur fall into structural patterns which can be described using Rhetorical Structure Analysis; furthermore, the notion of "interfering" referent can only be accurately described in terms of structure. So we can be sure that a structural approach illuminates some large portion of the data that would otherwise remain opaque. We are thus left with the question of the somewhat more linear nature of anaphora in written texts: how are we to account for the fact that distance (or something like it) does seem to play a role in the written texts while it seems to be minimally important in the conversational texts?

I currently have no definite answer to this question. Since the modes differ on more than one feature (having different values for at least formality, plannedness, modality, genre, and number of contributing participants), it is impossible to say exactly

which feature, or which function, contributes most to the greater dominance of something like distance in the written texts. As an initial guess, however, I would like to suggest that the stability of a written text over the period of reading might make a significant difference in the treatment of anaphora. If we compare return pops across the modes the difference will be clear. In conversation, we saw that a return pop "closes off" the popped over material, and since there is no remaining physical trace of that now-closed material, the interlocutors are free to forget its content.⁶⁴ In written texts, on the other hand, there is a very obvious set of physical traces remaining of the closed off material, traces which the reader's eye may return to; hence the reader is less likely to forget the material. Perhaps because of the traces, then, the intervening material assumes a greater importance in the attention of the reader than it does when there are no physical traces, and as a result what appears to be distance assumes a correspondingly greater importance for anaphora.

A note of caution regarding such explanations is in order, however. As we will see in chapter 9, not all genres of written texts show such conservative (and possibly distance-influenced) patterns of anaphora; the patterns exhibited by written narratives, for examples, resemble more closely those of the conversational texts. It must thus be conceded that it is not just the physical facts of writing that influence anaphora; the conventions established for each written genre are also critical in the process.

⁶⁴ Obviously this statement should not be taken to indicate that participants immediately forget everything that was said in a closed environment--obviously, if something extremely hurtful was said, the structure of the conversation will not automatically make the recipient of the wound forget the injury. What I mean is that this material is the least likely of any around to be brought up for future talk and thus it can be disattended to.

8.4 Demarcating Structural Units

In chapter 7, we saw that fullNP's in expository written texts are often used at the beginning of rhetorical units where pronouns could have been appropriate. Such a claim was also made for the conversational material, but there the pattern was shown to be relatively minor. In Table 3.0 below I have presented indirect evidence that this pattern is extremely widespread in expository written texts and not at all common in the conversational texts.

Table 3.0 FullNP and Non-Anaphoric Functions

Written			
	Referent in preceding clause	Referent not in preceding clause	Total
FullNP	207 (38%) (29%)	341 (62%) (78%)	548
Pronoun	513 (84%) (71%)	95 (16%) (22%)	608
Total	720	436	1156
Conversational			
FullNP	10 (11%) (6%)	77 (89%) (33%)	87
Pronoun	151 (49%) (94%)	155 (51%) (67%)	306
Total	161	232	393

The results show clearly the differences between the two types. Even when the referent is mentioned in the immediately preceding clause, 29% of the time (207/720) a fullNP is used in the written material, whereas in the same situation in the conversational texts fullNP's are used only 6% of the time (10/161). These findings indicate that fullNP's in the written texts are doing much more than just the standard referent-tracking work attributed to them; that is, if they occur even when their

antecedent is plainly retrievable from the preceding clause, then they are not simply performing an anaphoric duty. Rather, they are helping to block the text up into its structural units.⁶⁵ This function could not be as common in the conversational texts as in the written, given the low percentage of references in this situation done with fullNP's.

Furthermore, Table 3.0 suggests that a larger percentage of the fullNP's in the written texts occur under these conditions--i.e., referent mentioned in preceding clause-- than in the conversational texts: 38% (207/548) of all of the fullNP's in the written texts occurred under these conditions, compared to 11% (10/87) for the conversational material. Here again we see that while the structuring function of fullNP's is prevalent in the written texts, it is much less so in the conversational texts.

It is interesting that on the one hand written texts seem to be more sensitive than conversational texts to some type of linear distance and on the other hand seem also to be more sensitive to the demarcation of hierarchical units. These sensitivities do not contradict one another; rather they are both indicative of an awareness of the extremely important role of the writer's explicitness in guiding the reader to the intended interpretation of the text (since the reader can never ask for clarification and cannot use prosodic information as a clue): the first sensitivity guides the reader to an interpretation of an anaphor that s/he might not have been able to make because of interfering physical "traces"; the second sensitivity guides the reader to an interpretation of the structure of the text that s/he might not otherwise have been able to make due to lack of structural "signposts" from the writer.

⁶⁵ I do not mean to claim here that this is the only possible reason for using a fullNP when the referent is mentioned in the preceding clause. However, based on the non-quantitative work presented in chapters 5 and 7, it seems safe to me to suggest that the demarcation of structural units is the major reason for this pattern.

8.5 Different-Gender Referents and Anaphora

In chapter 5 I proposed that pronominalization in the environment of a different-gender referent in the conversational data is quite free. That is, a return pop over material containing mentions of a different-gender referent was seen to be done with a pronoun; and if two referents of different genders appeared in the same adjacency pair, then a mention of either one of them in a "tying" pair could be done with a pronoun. Furthermore, a pronoun could be used to refer to a person in a second-pair-part even if that person was not mentioned in the first-pair-part of the pair but was mentioned in the tied-to pair:

H. So: en she already wrote him about me en everyth//ing
en she'd li:ke

N. Awr::ight.

H. =(t') fix us u:p.

.
.
.

N. Well wt's () he li://ke.

H. hhhhhhhh a-ah: she says () he y'know
th'las'time she saw him

In this passage we get a female-gender pronoun in the second-pair-part even though its referent does not appear in the first-pair-part of the sequence. The proposed reason for this distribution is the fact that the relevant referent appeared in the tied-to pair.

In chapter 7, on the other hand, I suggested that pronominalization in the written material in the environment of different gender referents was fairly restricted, being limited to the following conditions:

1. If both referents are mentioned in the same proposition, then either one of them can be pronominalized in the R-structure partner.

2. In a return pop situation, if the popped over material is structurally non-complex.

The differences in distribution are discussed below.

In written expository English texts, then, we do not find a pronoun used to refer to a person in the adjunct of a structure if there is a reference to a different-gender person in the nucleus of that R-structure. This pattern differs from the situation in the conversational material in the following sense. Let me suggest that an adjacency pair and a tying pair can be seen as roughly equivalent to the nucleus of an R-structure and an embedded R-structure realization of its adjunct. That is, the following structures can be seen to be basically equivalent.

The equivalence of these structures arises from the equation of tied-to pair with nucleus and tying pair with adjunct, and the equation of an adjacency pair with an R-structure (because each is the basic unit of structure in its mode). Hence the tying adjacency pair is roughly equatable with an embedded R-structure, and the first-pair-

part of the adjacency pair is parallel to the nucleus of the embedded R-structure.⁶⁶

Given this comparison, we can see that the conversational material displays a pattern of pronominalization not seen in the written material. That is, the conversational material allows a pronoun in the second-pair-part of the tying pair (in the structure shown above), while the written material appears to require a fullNP in the structurally equivalent adjunct of the embedded R-structure.

Return pops done with pronouns are possible in both the written and the conversational texts. The constraints on returns in the written texts are much greater, however, than they are in the conversational data. Basically, in the conversational texts I could find no constraints on return pops in the environment of different-gender referents, while in the written texts the constraints were quite strong:

A return pop can be done with a pronoun even if the popped over adjunct mentions a different-gender referent iff that adjunct is structurally simple.

Here again we see that the written material exhibits a much more conservative pattern of anaphora than does the conversational data.

Below I present the results of some text counts which support the structural analyses given above.

⁶⁶I would probably not want to say that the second-pair-part of an adjacency pair has an adjunct status with regard to the first-pair-part; the two parts might have parity in the pair. We could thus say that an adjacency pair is equatable to a di-nuclear R-structure.

Table 5.0 Anaphora in the Environment of Different-Gender Referents

	Written	Conversational
FullNP	51 (61%)	7 (28%)
Pronoun	32 (39%)	18 (72%)
Total	83	25

This table indicates that in a different-gender environment the modes are skewed in exactly opposite directions with regard to anaphora: fullNP is used 61% (51/83) of the time in the written material, while pronoun is used 72% (7/25) of the time in the conversational texts. These figures thus indirectly support the claim that the constraints on pronominalization are greater in the written texts than in the conversational texts.⁶⁷

In almost every situation, then, the written texts exhibit a more highly conservative pattern of anaphora in the environment of different-gender referents than do the conversational texts.

⁶⁷ For the purposes of this count, a reference was considered to be in a different-gender environment if the preceding clause contained (a) a subject NP that referred to a person of another gender, or (b) a mention of a referent of another gender, in any case role, if no other referent was also mentioned in the clause/proposition. That is, the underlined device in the first two of the hypothetical sentences below is considered to be in a different-gender environment, while the device in the last sentence is not considered to be in such an environment:

Susan was home with David, but he was unhappy.

While Susan was in school, Martin was home with the kids.

David was taking care of Susan, but he was unhappy.

The method of counting thus possibly excludes some cases which are potentially relevant to the issue of "interfering" referents. Initial mentions of referents were excluded from this count, since their behavior is obviously not influenced by the appearance of other referents: they are always done with fullNP's.

8.6 Same-Gender Referents and Anaphora

The conservatism of the written material (with regard to anaphora) is especially apparent in the environment of same-gender referents. Here, the only situation in which pronominalization is tolerated in the written texts is if the two referents are in the same proposition; in the R-structure partner the referent that had been in subject role in the first proposition can be pronominalized (there are two other minor conditions in which a non-subject can be pronominalized, see section (5.5.1)). Return pops with pronouns are also allowed in this environment, but only under extremely restricted conditions.

While the same-gender environment is the most restricted environment for the conversational texts, it is not as constrained as in the written texts. Return pops can be done with pronouns in same-gender environment (unless no other linguistic device is used to guide the reader to the appropriate level of structure), and there appears to be no singling out of subject NP's for special pronominalization status.

Quantitative evidence which supports the more widespread use of fullNP in same-gender environment for the written material is given in Table 6.0 below.

Table 6.0 Anaphora in the environment of Same-Gender Referents

	Written	Conversational
FullNP	142 (87%)	9 (43%)
Pronoun	21 (13%)	12 (57%)
Total	163	21

Here again we see that fullNP's are much more commonly resorted to in this environment within the written texts than they are in the conversational texts.⁶⁸

A full table comparing the environments of (a) no interfering referents, (b) different-gender referents, and (c) same-gender referents in the written and conversational texts is given below. Notice that while the conversational texts are obviously sensitive to these environments (reaching a level of 43% use of fullNP), the written texts are clearly more extreme in their response (reaching a level of 87% use of fullNP). It should also be noted that the percentage of fullNP's used increases in a direction consonant with the structural patterns described in chapters 5 and 7. That is, we saw that the environment of no interfering referents--where "interfering" was determined structurally--allowed the most freedom of pronominalization, the environment of different-gender referents showed a slightly more restricted distribution of pronouns, and the environment of same-gender referents showed a fairly high degree of restriction on pronominalization; in fact, the figures in Table 7 indicate that the percentage of fullNP's increases in just this direction, as one would have expected intuitively.

⁶⁸ A reference was considered to be in the environment of "same-gender" if a referent of the same gender was mentioned in the preceding clause (a) as the grammatical subject of that clause, or (b) as the only referent in the clause. Initial mentions of referents were excluded from the count.

Table 7.0

Anaphora in Three Environments

	<u>No interfering</u> referents	<u>Different-gender</u>	<u>Same-gender</u>
<u>Written</u>			
FullNP	312 (36%)	51 (61%)	142 (87%)
Pronoun	553 (64%)	32 (39%)	21 (13%)
Total	865	83	163
<u>Conversation</u>			
FullNP	16 (6%)	7 (28%)	9 (43%)
Pronoun	272 (94%)	18 (72%)	12 (57%)
Total	288	25	21

8.7 Non-Structural Factors in Anaphora

In chapters 5 and 7, I proposed that there are factors other than structural ones that affect the anaphoric patterning in texts. That is, I was suggesting that it is not just the hierarchical organization of clauses and propositions that determines which anaphoric device will be used at any given point; rather, there are non-structural factors which also, in perhaps a secondary way, influence anaphoric choices. The non-structural factors which were claimed to be relevant for the anaphoric distribution in each of the modes are listed below.

Conversational:

Replacement of an utterance

Disagreeing

Written:

Further description

Classification

Comparison and Contrast

Overt recognitionals

Assessments

Category membership

The factors which involve multi-party interaction are obviously excluded from the written material (this includes disagreements and replacements of utterances). The others are discussed below.

Two of the factors which were claimed to be important in the conversational texts may also play some role in the written material, although they were not mentioned with regard to the latter. These are: overt recognitionals and assessments.

Recall that overt recognitionals are phrases which, instead of presupposing the recognition of a participant, explicitly claim that recognition as their function. Such phrases as know X, remember X were said to be overt recognitionals. I proposed in chapter 5 that overt recognitionals provided an environment in which fullNP's could be used when pronouns would have been predicted from the hierarchical structure.

By excluding this category of non-structural factors from the discussion on anaphora in the written texts I did not mean to imply that it had no possible place in determining anaphora; on the contrary, it seems quite probable that if I could find instances of overt recognitionals they would be seen to behave in very much the same way in the written texts as they do in the conversational texts. Unfortunately, I was unable to find examples of this type of non-structural influence in my texts.

Essentially the same situation holds for assessments. While I do not doubt that assessments in written texts can be done with fullINP's, I found only one instance in all the texts that appeared to provide some empirical support for this intuition:

His greatest satisfaction...was his use of his power, when he became a senior boy, to put an end to offensive sexual practices in the school. "When I left for St. Paul's in 1894," he wrote with a note of distinct pride years later, "the atmosphere had changed from that of a sordid brothel to that more appropriate to fifty fairly happy small boys under the age of fourteen." Leonard was a reformer from the first. (A House of Lions, p.23)

In this passage it seems clear that an assessment is being done with a fullINP. The pattern is not widely enough documented to treat it as an established phenomenon, however, so I have not included it in the discussion of anaphora in written texts. Nonetheless, with a broader and larger data base it is likely that assessment will be a strong category under non-structural factors.

One non-structural factor in the conversational data which appears to have no place in the written texts is category membership. In this case, a first mention of a referent is done with a pronoun rather than a fullINP, and no fuller specification of the person's identity is necessarily forthcoming (because the exact identity is irrelevant to the interaction). I found no instances of this pattern in the written material and I expect that there are no instances to be found. This belief is based on several different types of reasoning: first, writers and readers do not initially have enough shared knowledge to allow any given participant's identity to be thoroughly known to both parties (except, perhaps, in the case of He to mean God); second, in all of my experience with expository prose I have no recollection of initial pronominal uses which are not followed by a fuller explication of the participant's identity (suspenseful uses of initial pronouns do not count here, since the identity is eventually disclosed; here suspense, and

precisely not anaphoric resolution, is the author's goal). We have here, then, a fairly substantive discrepancy in the use of pronoun in conversational and written texts.

The first factor which is apparent in written texts but not in my conversational texts is comparison and contrast. In the written material, I found that if two (or more) people are compared or contrasted with regard to some characteristic or feature, then both will be realized with fullNP's. Although I have no examples of this factor in the conversational texts I examined, there is some reason to suspect that in fact it does operate in conversation as it does in writing: in her study of the use of it and that in spoken apartment layout narratives, Linde (1979) found that that was used when the speaker wished to contrast one room (or apartment) with another, even if it would have been expected for structural reasons. We thus have, in spoken texts, something in the direction of a fullNP used in a situation of contrast. Since the modes thus probably not differ in this respect, I will not offer any further discussion of this particular factor.

There are two additional factors which are characteristic of the written texts but do not seem to be relevant to the conversational material: these are (a) Further description, and (b) Classification.⁶⁹ These factors are not excluded absolutely from conversational interaction, but since the functions in written texts which work together to produce them are not common in conversational texts, they are not often observable. The functions which are involved in Further Description appear to be a combination of lack of space and a fair amount of information to be presented in that space. A fullNP in the further description environment allows both of these conflicting constraints to be

⁶⁹ Recall that further description includes fullNP's like the lance corporal which provide information that was previously unknown about a referent; classification includes fullNP's like the Swede or the child, which provide no new information about the referent but only serve to place the referent in a category.

accommodated, since a small amount of space is used to convey a maximum load of information. Since in natural, spontaneous conversation there is only in rare instances a shortage of "space" (time) and a need to convey a heavy dose of information, the efficient use of a fullNP in the further description mode is almost never used (I found no instances of it in my data). Furthermore, it is almost certainly the case that such a use of fullNP is felt to be associated with generic conventions of particular text-types, and hence might be generically (i.e., having to do with genre) inappropriate in the context of natural conversation.

The needs filled by fullNP in the Classification environment are not clear to me, but as I suggested in chapter 7, they probably have something to do with stylistic variety and colorfulness of phrasing (hence this environment was found much more frequently in longer, more literary, texts than in short to-the-point texts). Although conversationalists are sensitive to variation and poetic phrasing (see Tannen (1983)), they appear to not engage in selecting colorful fullNP's to describe persons whose identities have already been established.⁷⁰

We can see from this brief discussion of the differences in non-structural factors in written and conversational texts that it is the discrepancy in circumstances and communicative needs (as well as generic conventions, perhaps) that determines which factors will arise in one mode and not in another. Conversation, of course, leans towards factors which involve the overt interaction of two or more interlocutors and an overt consolidation of their mutual knowledge and affect, while expository writing leans towards factors which involve the restrictions imposed on writing by lack of space and

⁷⁰ Phrases which convey negative or positive assessment are used with great elan--the dirty bastard, etc.--and are accounted for under Assessment.

lack of mutual knowledge between the relevant parties, as well as by conventions of the mode. The differences in anaphoric patterning are thus somewhat predictable from the differences in communicative needs.

8.8 Summary

The goal of this chapter has been to provide an explicit comparison of the data already presented in chapters 5 and 7 and to offer some very tentative explanations for the differences observed in the patterns of anaphora across modes. Essentially, I suggested that the expository written texts were in all environments more conservative in their use of pronouns than the conversational texts, and that fullNP's were much more frequently used to indicate structural boundaries in the written texts than in the conversational texts.

9. Other Directions and Final Conclusions

9.1 Introduction

The previous chapters of this thesis have focused on anaphora in expository and non-story conversational texts and have used the findings from these data to indicate that certain other theories of anaphora do not adequately describe the patterns of anaphora which occur in these texts. This criticism is not entirely fair, however, since at least one of the major theories of anaphora we examined, Givon's Continuity Hypothesis, was based not on expository writing but on narratives. In this final chapter, then, I would like to take a brief and preliminary look at anaphora in written monologue narratives to demonstrate that even in this case a hierarchical, structural, account of anaphora is required. General conclusions regarding the empirical study of linguistic phenomena are also offered.

I chose four fast-paced popular narratives as the sources of references for this study. These are:

1. Alien. Foster, Alan Dean. 1979.
2. The Girl of the Sea of Cortez. Benchley, Peter. 1982.
3. Coma. Cook, Robin. 1977.
4. Return of the Jedi. Kahn, James. 1983.

References from these novels were entered in the computer database described in chapter 3 and the portions of the texts studied (usually a swath of approximately 10 pages) were analyzed using a hierarchical text model. The results of these quantitative and qualitative probes are discussed below in section 9.2.

9.2 Anaphora in Written Narratives

It first came to my attention that the traditional "distance" theory of anaphora might not be accurate for stories when I started closely examining long written monologue narratives. In these texts, I found examples like the following, in which something like 11 clauses (depending on what one counts as a clause) separate the two mentions of a character, and yet the second mention is done with a pronoun⁷¹:

She took a deep breath and tested the firmness of her grasp on the wood. When Jobim had first taught her to swim, he had told her always to get in and out of the water quickly, for it was in the marginal moment--half in, half out of the water--that a person was most vulnerable to shark attack: It was then that the person looked truly like a wounded fish; most of the body was out of the water so it appeared smaller, and what remained in the water (lower legs and feet) kicked erratically and made a commotion like a struggling animal.

She spun, grabbed the gunwale... (The Girl of the Sea of Cortez, p.78)

In addition, I found that two mentions of a character could be separated by a mention of a character of the same gender and yet the second mention of the first character could still be done with a pronoun, contrary to the predictions made by Givón et al (1983) about ambiguity. A passage illustrating this phenomenon is shown below.

He <Obi Wan Kenobi> paused sadly and looked directly into Luke's eyes, as if he were asking for the boy's forgiveness. "My pride had terrible consequences for the galaxy." Luke was entranced. That Obi-Wan's hubris could have caused his father's fall was horrible. Horrible because of what his father had needlessly become, horrible because Obi-Wan wasn't perfect, wasn't even a perfect Jedi, horrible because the dark side could strike so close to home, could turn such right so wrong. Darth Vader must yet have a spark of Anakin Skywalker deep inside. "There is still good in him," he declared. (Return of the Jedi, pp. 63-64)

In this passage, two mentions of Luke are separated by references to Obi-Wan

⁷¹ Throughout this chapter, the relevant anaphors in real examples are underlined.

and Darth Vader (Anakin Skywalker is Darth Vader), and yet the last mention of Luke is done with a pronoun. Clearly, then, the anaphor here is responding not to the linear sequence of references, but to something else.

Moreover, contrary to the predictions made by the Continuity Hypothesis, I found references done with fullNP's when the referential distance (i.e., distance to most recent mention) was extremely small, as in the following passage:

The four flights up to her floor seemed longer than usual to Susan. She paused on several occasions, because of a combination of physical fatigue and mental effort.

Susan tried to remember if Bellows had said succinylcholine was among the drugs found in the locker... (Coma, p. 236)

In this passage, there is arguably no clause-gap between the underlined reference to Susan and the mention just preceding it, yet the last mention is done with a fullNP. This piece of text thus runs counter to the "distance" theory of anaphora.

In working through these examples, then, it became apparent to me that distance was not in and of itself a factor in the determination of anaphora in narratives. Other factors having to do with the functional, hierarchical structure of narratives seemed to be much more influential. There isn't room for a full account here, but some of these critical factors are discussed below.

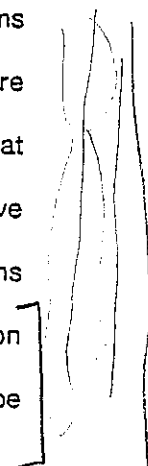
9.2.0.1 The Basic Patterns

As much as possible, I have couched the statements of the anaphoric patterns in terms that are familiar from our vernacular descriptions of stories and events. Although a particular text model was used to analyze the narratives (a modified version of Mandler and Johnson's Story Grammar); because of limitations on space I have chosen


to describe most of the patterns in a model-independent way, so that a full explanation of the model used would not be necessary. Where the Story Grammar notation is helpful, I have introduced just those aspects of it that are relevant to the immediate discussion. It should be kept in mind throughout this chapter that the statements about anaphora offered here are meant to be as brief and non-technical as possible. A full exploration of anaphora in written narratives still remains to be performed.

The basic pattern of anaphora in the written narratives I examined seems to be something like the following:

Temporarily putting aside the environment of same-gender referents, it seems that a referent is pronominalizable until another character's goals and actions are introduced unless those goals and actions are interactive with the first character's, that is, unless in the immediately projected text there is some confrontation or active interaction between the two characters. In other words, if another character begins planning and performing an action, and there is no immediately projected interaction between the two characters, then a subsequent mention of the first character will be done with a fullNP.⁷²



This basic pattern has several implications. First, it means that a long gap between mentions of a referent does not necessarily trigger the use of a fullNP for the second mention; if the gap does not introduce another character's plans and actions, but is, rather, concerned with something off the event-line, for example, like describing the surrounding scenery or a general truth, then it will not "induce" the use of a fullNP.



⁷²The other character in this case does not have to be human. It could be some other sort of animate creature.

Examples of this pattern are given below.⁷³

She took a deep breath and tested the firmness of her grasp on the wood. When Jobim had first taught her to swim, he had told her always to get in and out of the water quickly, for it was in the marginal moment--half in, half out of the water--that a person was most vulnerable to shark attack: It was then that the person looked truly like a wounded fish; most of the body was out of the water so it appeared smaller, and what remained in the water (lower legs and feet) kicked erratically and made a commotion like a struggling animal.

She spun, grabbed the gunwale... (The Girl of the Sea of Cortez, p.78)

In this passage, the gap between mentions of the referent in question is not concerned with describing another character's current plans and actions; rather, it is taken up with an off-event-line aside about how one should behave under certain conditions. When the aside is completed, the event-line is resumed with a pronoun.

Another example of this phenomenon follows:

She reached B deck unopposed, her flamethrower held tightly in both hands. The food locker lay just ahead. There was an outside chance the alien had left someone behind, being unable to maneuver itself and two bodies through the narrow ducts. A chance that someone might still be alive.

She peered around the jamb... (Alien, p. 260)

Here again we have an off-event-line description after an action by the character in question. When the event-line is resumed, the reference is done with a pronoun.

⁷³The event-line is what Hopper and Thompson (1980) have called the foregrounded portion of a narrative; that is, it is the temporally sequenced events/actions which occur. It thus does not include descriptions of places, internal monologues, statements of general truths, etc. See also references mentioned there for further discussion of this distinction.

Another example:

Luke had known the passing of old mentors before. It was helplessly sad; and inexorably, a part of his own growing. Is this what coming of age was, then? Watching beloved friends grow old and die? Gaining a new measure of strength or maturity from their powerful passages?

A great weight of hopelessness settled upon him... (Return of the Jedi, p. 61)

Once more, the event-line is interrupted, in this case in order to present some of the character's thoughts. When the event-line is resumed, the reference is done with a pronoun.

This pattern holds even if the off-event-line gap introduces a character of the same gender as the character in question. This variation of the phenomenon is illustrated by the following passage, in which a pronoun is used to refer to the event-line character in spite of references to other, same-gender, referents in the off-event-line gap:

He <Obi Wan Kenobi> paused sadly and looked directly into Luke's eyes, as if he were asking for the boy's forgiveness. "My pride had terrible consequences for the galaxy." Luke was entranced. That Obi-Wan's hubris could have caused his father's fall was horrible. Horrible because of what his father had needlessly become, horrible because Obi-Wan wasn't perfect, wasn't even a perfect Jedi, horrible because the dark side could strike so close to home, could turn such right so wrong. Darth Vader must yet have a spark of Anakin Skywalker deep inside. "There is still good in him," he declared. (Return of the Jedi, pp. 63-64)

(2)

The second implication of the basic pattern described above is that even if the material separating the references is not off-event-line, as long as it does not introduce the current actions of another character a pronoun can be used to refer to the first character. Examples of this use of pronoun are given below.

She felt her way down the ladder until she reached solid footing. Then she activated her lightbar. She was in a small maintenance chamber. The light picked out plastic crates, rarely used tools. It also fell on bones with shreds of flesh still attached. Her skin crawled as the light moved over fragments of clothing, dried blood, a ruined boot. (Alien, p. 261)

Her gaze rose to the rear-facing screen. A small point of light silently turned into a majestic, expanding fireball sending out tentacles of torn metal and shredded plastic. It faded, was followed by a much larger fireball as the refinery went up. Two billion tons of gas and vaporized machinery filled the cosmos, obscured her vision until it, too, began to fade. (Alien, p. 266)

She reached down with her hand and tried to squeeze the lower calf muscle, but it was too late. The muscle fibers had already balled into a knot the size of an orange. She rolled onto her back and used both hands to squeeze her leg. Kneading with her fingertips, she softened the knot and felt it begin to relax. Suddenly the knot dissolved and she thought the cramp was finished... (The Girl of the Sea of Cortez, pp. 172-173)

③
The third implication of the pattern formulated above is that the introduction of a second character (excluding same-gender referents for the time being) does not necessarily cause the use of a fullNP to refer to the first character. If the two characters are involved in a fast-paced confrontation or interaction, such as a fight, a chase, or a conversation, the mention of one does not cause the next mention of the other to be done with a fullNP. Here again, a referential gap does not "induce" the use of a fullNP. Examples of this pattern follow.

He took a step toward her, reached out helpfully.

She bolted, ducking just beneath his clutching fingers. Then she was out in the corridor, sprinting for the bridge. She was too busy to scream for help, and she needed the wind.

There was no one on the bridge. Somehow she got around him again, throwing emergency switches as she ran. (Alien, p. 244)

In this passage a chase between two characters occurs, so we know that if one of the characters is mentioned, the other is not far behind. Thus in this case pronouns can be used in spite of intervening mentions of another character.

Another instance of this pattern is given below.

"Oh, Han!" she cried, and burst into tears once more. She buried herself in his embrace.

His anger turned slowly to confusion and dismay, as he found himself wrapping his arms around her, caressing her shoulders, comforting her. "I'm sorry," he whispered into her hair. "I'm sorry." He didn't understand, not an iota--didn't understand her, or himself, or his topsy-turvy feelings, or

women, or the universe. All he knew was that he'd just been furious, and now he was affectionate, protective, tender. Made no sense.

"Please...just hold me," she whispered. She didn't want to talk. She just wanted to be held.

He just held her. (Return of the Jedi, p. 122)

Here a conversation between Han and Leia is carried out with both characters referred to with pronouns. Remember that the observation about anaphora in this case is that the introduction of another character and his/her plans and actions does not constitute a block to pronominalization iff that character and the first character are engaged in a close interaction (so that the plans and goals of both characters are always relevant).

The fourth outcome of the basic pattern is that when a second character is introduced that is not interacting directly with the first, pronominalization seems to be blocked. In the following passage, for example, the second character is interacting directly with a group of sharks rather than with the first character (the first character is watching the human-shark interaction). A mention of the second character's actions thus blocks pronominalization of the first character (Jobim is Paloma's father):

Now the other two sharks were rising. They kept their distance from the larger one, seeming to defer to it, but they were growing bolder. And though they were definitely smaller than the other shark, relativity was the only comfort: Her [i.e., Paloma's] father was six feet tall, and each of these sharks was at least as long as he was tall.

Jobim held the half-needlefish out to the big shark and wiggled it with his fingertips. The circling pattern grew tighter. Now the shark was missing

Paloma by only three or four feet as it swept by. (The Girl of the Sea of Cortez, p. 76)

In the following excerpt from Alien, we have a mention of Ripley ("reached her from outside") followed by an introduction of the goals and actions of the alien. Notice that in this case the alien is not interacting with Ripley, but with Jones the cat. We would thus expect, from the patterns presented above, that a next mention of Ripley would be done with a fullNP; indeed, the second paragraph begins with a reference to Ripley, done with a fullNP.

The locker was not airtight. A distinctive moaning reached her from outside. Distracted, the alien left the port to inspect the source of the strange noise. It bent, lifted the sealed catbox, causing Jones to howl more loudly.

Ripley knocked on the glass, trying to draw the creature's attention away from the helpless animal. (Alien, p. 267)

In the next passage, following a mention of Leia an interaction between two other characters (an Ewok and an enemy soldier) is initiated. After that confrontation, a mention of Leia is performed with a fullNP. The observation here is that, in spite of the small gap between the two mentions of Leia, a fullNP is warranted for the second mention because the intervening material introduces the actions of another character, and these actions are not interactive with Leia but with another, third, character.

Slowly she [i.e., Leia] swiveled, to find an Imperial scout standing over her, his weapon leveled at her head. He reached out his hand for the pistol she held.

"I'll take that," he ordered.

Without warning, a furry hand came out from under the log and jabbed the scout in the leg with a knife. The man howled in pain, began jumping about on one foot.

Leia dove for his fallen laser pistol. (Return of the Jedi, p. 95)

9.2.0.2 Demarcation of Narrative Units

The basic pattern established in section 9.2.0.1 does not cover all of the uses of anaphors in the narrative texts, however. In particular, under certain conditions fullNP's are used where pronouns would have been possible. In the following passage, for example, fullNP's are used in a fast-paced confrontation (fight/chase) where we could have expected pronouns:

Susan herself was amazed at the effect and stepped into the amphitheater, watching D'Ambrosio's fall. She stood there for an instant, thinking that D'Ambrosio must be unconscious. But the man drew his knees up and pulled himself into a kneeling position. He looked up at Susan and managed a smile despite the intense pain of his broken rib.

"I like 'em...when they fight back," he grunted between clenched teeth.

Susan picked up the fire extinguisher and threw it as hard as she could at the kneeling figure. D'Ambrosio tried to move... (Coma, p. 241)

And in the next passage, fullNP's are used to refer to one character, although no plans or actions of other characters have been introduced (the scene takes place in a hospital):

Susan found a concrete wall which she guessed housed the elevator shafts. Then she discovered that the corridor of the OR area had a dropped ceiling. Beyond the OR corridor, over what was probably part of central supply, Susan could see that the maze of pipes and ducts running through the ceiling space converged in what seemed a tangled vortex. Susan

guessed that was the location of the central chase which housed all the piping and ducts coursing vertically in the building. (Coma, p. 234)

Another instance of the use of fullNP instead of pronoun in a fast-paced confrontation scene is given below.

Spinning in the chair, her [i.e., Ripley's] heart missing a beat, she saw, not the creature, but a form and face now become equally alien to her.

Ash smiled slightly. There was no humor in that upturning of lips. "Command seems a bit too much for you to handle. But then, proper leadership is always difficult under these circumstances. I guess you can't be blamed."

Ripley slowly backed out of her chair, carefully keeping it between them. Ash's words might be conciliatory, even sympathetic. His actions were not. (Alien, p. 243)

I would like to argue that the key to this use of fullNP in the narrative texts, as in the expository data, lies in the structural organization being displayed by the writer. Let us suppose, along with researchers in the Story Grammar paradigm, that stories basically concern the reactions, plans, and actions of different characters. In small stories we are often given what we might call background setting information, then an initiating event (a happening which causes a character to respond in some way), a reaction to that event on the part of a character, a plan to do something about the

situation brought about by the initiating event, and then a carrying out of that plan, with some final outcome of the action. It is, in a sense, a basic problem-solution structure, with the solution divided up into parts (reaction, plan, action). The basic pieces of a story, according to this view, are thus:

1. background information (e.g., setting)
2. initiating event
3. reaction
4. plan
5. action
6. outcome

and these cluster into higher-level units, the most common of which is the Reaction structure: reaction, plan and action form a Reaction. There are obviously other units which can occur in extended narratives, including some which might be appropriately described using rhetorical structure analysis notation. But for our purposes here, let us suppose that the major higher-level unit is the Reaction structure.

Below I have given a passage which illustrates the Reaction structure. The first paragraph describes the initiating event (Jones' yowling at something). The second paragraph presents Ripley's reaction to that initiating event and thus begins the Reaction. The third paragraph gives two plans (the first of which is discarded) and starts the action piece.

She [Ripley] did not see the massive hand reaching out for her from the concealment of deep shadow. But Jones did. He yowled.

Ripley spun, found herself facing the creature. It had been in the shuttle all the time.

Her first thought was for the flamethrower. It lay on the deck next to the crouching alien. She hunted wildly for a place to retreat to. There was a small locker nearby. Its door had popped open from the shock of the expanding gas. She started to edge toward it. (Alien, pp. 266-267)

Let me now propose that many fullNP's in narratives which occur where one would have expected pronouns are functioning in a manner parallel to their counterparts in the expository texts: in the expository texts we found that fullNP's were used to demarcate new rhetorical units; in the narrative texts, I would argue, fullNP's are used to demarcate new narrative units. That is, fullNP's can be shown to correlate with the beginnings of Reaction structures, where the Reaction structure is seen as the major recurring unit in narratives. In the passage from Alien immediately above, for example, a fullNP is used to begin the Reaction structure ("Ripley spun"). Additional examples of this correlation between fullNP and the beginning of a Reaction structure are given below.

But the man drew his knees up and pulled himself into a kneeling position. He looked up at Susan and managed a smile despite the intense pain of his broken rib.

"I like 'em...when they fight back," he grunted between clenched teeth.

Susan picked up the fire extinguisher and threw it as hard as she could at the kneeling figure. (Coma, p. 241)

In this passage, the first slot of a Reaction structure contains a fullNP, even though the referent was mentioned approximately 3 clauses before (depending on what one counts as a clause). It is therefore clear that simple distance is not at issue here; in addition, the basic pattern established for two characters interacting seems to be superseded. The critical pattern to be noticed here is the correlation between the beginning of a narrative unit (the Reaction structure) and the use of a fullNP.

That did it for the Ewok. He jumped up, grabbed a four-foot-long spear, and held it defensively in her [i.e, Leia's] direction. Warily, he circled, poking the pointed javelin at her, clearly more fearful than aggressive.

"Hey, cut that out," Leia brushed the weapon away with annoyance.
(Return of the Jedi, p. 94)

Here, as in the preceding example, the first slot in a Reaction structure contains a fullNP, where, by measures of distance or the basic pattern demonstrated earlier, we could have expected a pronoun. I would like to argue that it is the demarcation of a new narrative unit which "produces" the fullNP. ||

Another example of this association between a new narrative unit and fullNP follows:

She shook her head and looked at the pirogue and at the horizon and at the softly rolling sea swells. She was in at least ten, maybe twenty, fathoms of water. Then what was she standing on? For, there was no question that she was standing on something. She drained water from her mask and put

her face down and saw that the manta had come beneath her and had risen, like a balloon, until it rested just at her feet.

Did it want something? Was it injured again? Paloma took a breath and knelt on the manta's back... (The Girl of the Sea of Cortez, p. 226)

Another instance:

She [Ripley] did not see the massive hand reaching out for her from the concealment of deep shadow. But Jones did. He yowled.

Ripley spun, found herself facing the creature. It had been in the shuttle all the time. (Alien, p. 267)

With this collection of examples, and the many others that could be added to it, it seems clear that on top of the patterns for pronominalization I established above there tends to be an association between the beginning of a narrative unit (typically the first slot of a Reaction structure) and the use of a fullNP. I do not mean to suggest with this statement that all Reaction units are started with fullNP's; rather, this is a slot in which fullNP's can occur even though we might have expected pronouns. In comparison, within the boundaries of Reaction units there tend not to be fullNP's (assuming by the other patterns described that pronouns are expected). Examples illustrating this predominance of pronouns within narrative unit boundaries are presented below.

She stuck her head out into the engine room. It was still deserted. Smoke curled up around her, making her cough. She climbed out, kicked the disc

back into place, leaving enough of a gap for air to reach the fire. Then she strode resolutely toward the engine-room control cubicle. (Alien, p. 263)

Her mind evaluated every item and discarded it. And then, as she looked at the wood fibers, she saw beside them other fibers, closely woven though not as thick as the wood, and she had the answer: her dress. She could stuff her dress into the hole, and it would keep the water out. The fabric was already saturated with salt water, so no more could penetrate it. And packed tightly in a ball, the cloth fibers would bind and become nearly waterproof.

She peeled the sodden shift up over her head, then ducked under the pirogue and, from the inside, packed the cloth into the hole. It made a tight plug--nothing that could survive a pounding in a heavy sea, but secure enough for an easy paddle on calm water.

She ducked out again, hauled herself up onto the bottom and reached over and grabbed the far edge. (The Girl of the Sea of Cortez, p. 170)

Susan stared at the valve. She looked at the other gas lines coming up the chase. There were no similar valves on any of the other lines. With her finger she examined the valve. (Coma, p. 235)

In a manner exactly parallel to the pattern in the expository texts, then, we find that the initial slots of the relevant discourse units are associated with fullNP's, while the non-initial slots of these units are associated with pronouns.

9.2.0.3 Same-gender referents

The core pattern for anaphora in the environment of same-gender referents in narratives can be roughly stated as follows:

If a character has been mentioned as participating in an event/action, then that person can subsequently be referred to with a pronoun, until another character of the same gender is mentioned as participating in another event/action. If two referents of the same gender are involved in the same action, then the grammatical subject of the clause describing that action can be referred to in the next event-line mention with a pronoun. The other non-subject NP will have its referent indexed on the next event-line mention with a fullNP.

The first pattern looks something like the following.

X actionverb, Y actionverb, PRO

If X and Y are same-gender referents, the pronoun refers to Y, not X. A fullNP must be used to perform a second reference to X. Passages illustrating this pattern are given below.

Before Vader could gather his thoughts much further, though, Luke attacked again--much more aggressively. He advanced in a flurry of lunges... (Return of the Jedi, p. 155)

He [i.e., Luke] took a step back, lowered his sword, relaxed, and tried to drive the hatred from his being.

In that instant, Vader attacked. He lunged half up the stairs... (Return of the Jedi, p. 156)

Passages illustrating the use of a fullNP to refer to a character other than the last one involved in an action follow.

when Vader moved to parry, Luke fainted and cut low. Vader counterparried... (Return of the Jedi, p. 154)

She placed the transparent mask over Ripley's mouth and nose, opened the valve. Ripley inhaled. (Alien, p. 238)

We can thus see that if a character is involved alone in the current action, then in the next action it can be referred to with a pronoun; if, on the other hand, the next action involves another character of the same gender--without mention of the first character--then a subsequent mention of the first character will be done with a fullNP.

If two characters of the same gender are mentioned in the current action, however, the referent realized by the subject NP of the clause can be referenced using a pronoun in the next action; the other referent must be referenced using a fullNP.

In the following same-gender examples, we have two characters of the same gender involved in the same action. In these instances, the person referred to by the subject NP is referenced with a pronoun in the next event-line mention, while the non-subject NP is referenced with a fullNP.

Subject NP becomes pronoun:

Vader paced the area like a cat, seeking the boy; but he wouldn't enter the shadows of the overhang. (Return of the Jedi, p. 157)

Trembling, he stood above Vader, the point of his glowing blade at the Dark Lord's throat. He wanted to destroy this thing of Darkness, this thing that was once his father... (Return of the Jedi, p. 159)

Palpatine raised his spidery arms toward Luke: blinding white bolts of energy coruscated from his fingers... (Return of the Jedi, p. 160)

Lambert set one of the oxygen tanks down next to her friend. She placed the transparent mask over Ripley's mouth and nose... (Alien, p. 238)

In all of these examples, the referent realized by the subject NP in the first action is pronominalized in the next.

Non-Subject NP becomes fullNP


When Luke pushed Vader back to break the clinch, the Dark Lord⁷⁴ hit his

⁷⁴Vader is often called the Dark Lord.

head on an overhanging beam in the cramped space. (Return of the Jedi, pp. 158-159)

He bound the boy's blade with his own, but Luke⁷⁵ disengaged... (Return of the Jedi, p. 156)

Jabba motioned 3PO to his side, then mumbled orders to the golden droid. 3PO⁷⁶ stepped up... (Return of the Jedi, p. 42)

In these passages, the referent realized by the non-subject NP in the first action clause is not pronominalized in the next action, being realized by a fullNP. 

9.2.0.4 Conclusion

In the preceding sections we have seen that a small number of patterns based on the structuring functions in narrative--such as event-line, Reaction structures, plans and actions--can describe a very large proportion of the anaphors in the narrative texts examined. In the next section we'll see how these patterns differ from the patterns established in chapters 5 and 7 for the conversational and expository texts, and I will

⁷⁵"Luke" and "the boy" are coreferential.

⁷⁶3PO is "the golden droid".

draw some general conclusions about the need for basing claims about a particular linguistic phenomenon on a wide range of data.

9.3 Comparing Expository, Narrative and Conversational Data

In all of the major previous studies on anaphora, discussed in chapter 2, very general claims have been made based on findings within one fairly restricted text-genre. In Givon's work, the genre was written monologue narratives, in Reichman's work spontaneous conversations (mostly of a debate-like nature), in Grosz's work task-oriented dialogues, and in Hinds' work newspaper and magazine articles. Yet, in spite of the narrowness of the data, each makes quite global claims about the mechanisms involved in anaphora. In this section, then, I would like to demonstrate that the three genres I have looked at in this thesis, even when probed with crude quantitative measures, differ strikingly from one another. Thus although the foundation of anaphora might remain constant from genre to genre--being grounded in the structural/functional level of the text rather than the linear surface level--the actual detailed patterns, and the types of structures and functions that are relevant, differ from text-type to text-type. Some of these differences are discussed briefly below.

In all of the text-types examined, I noted an association between the beginning of structural units and the use of fullNP, instead of pronoun. In chapter 8 I demonstrated that this association is much more prevalent in the expository texts than in the conversational material. I hope to show now that the variable involved is not modality (i.e., written vs. spoken), since the association turns out not to be common in written narratives; rather, the variable is something closer to genre.

In Table 1.0 below, I have given the figures for all three genres for the anaphoric distribution, under the condition that the referent of the anaphor in question is mentioned also in the preceding clause (versus not mentioned in the preceding clause). These figures are an indirect measure of the frequency with which fullNP's appear when pronouns would have been acceptable (assuming that if the referent is mentioned in the preceding clause a pronoun is in general acceptable), and hence an indirect measure of the frequency with which the use of fullNP is motivated by the demarcation function.

Table 1.0 FullNP and Non-Anaphoric Functions

Written Expository			
	Referent in preceding clause	Referent not in preceding clause	Total
FullNP	207 (38%) (29%)	341 (62%) (78%)	548
Pronoun	513 (84%) (71%)	95 (16%) (22%)	608
Total	720	436	1156
Conversational			
FullNP	10 (11%) (6%)	77 (89%) (33%)	87
Pronoun	151 (49%) (94%)	155 (51%) (67%)	306
Total	161	232	393
Written Narrative			
FullNP	46 (15%) (10%)	253 (85%) (49%)	299
Pronoun	433 (62%) (90%)	268 (38%) (51%)	701

Total	479	521	1000
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As we might have expected, the narrative anaphora situation seems to lie between the extremes of the other two text-types: while there appears to be some association of fullNP with new structural units (15% (46/299) of the fullNP's in the narrative data had their referents mentioned in the preceding clause), it is clearly not as dominant as in the expository material (in this case, 38% (207/548) of the fullNP's had their referents mentioned in the preceding clause), nor as negligible as in the conversational material (11% (10/87) of the fullNP's were so distributed).

Furthermore, it seems that the absence of the referent from the preceding clause is more likely to be associated with the presence of a fullNP in the expository material than in the narrative texts (78% of the "referent not in preceding clause" are done with fullNP's in the expository data, compared to 49% for the narrative texts), with the conversational data third (33%). This fact may indicate that something like distance is not necessarily more critical for written texts than for "spoken" texts, since at least one written text-type seems to be close to the conversational end; rather, distance seems to be a possible factor in one genre but not in the others (see chapter 8 for a discussion of gaps and anaphora in the expository and conversational texts). The possibility that length of gap between mentions of a referent is more important in the expository texts than in the other two text-types is supported by the following table. Table 2.0 gives figures for referential distance (for pronouns only) for all three text-types. Recall that referential distance is the distance, in clauses, between the current mention of a referent and the most recent mention of that same referent.

Table 2.0 Referential Distance and Anaphora
 (Pronouns only)

<u>Referential Distance (in clauses)</u>	
Expository	1.21
Narrative	1.77
Conversational	2.52

From this table it is apparent that the distance "tolerated" for pronouns is higher in the narrative texts than in the expository texts, and higher still in the conversational texts. Again we see that fairly large differences exist across genres, even within one modality.

9.4 Conclusions on Anaphora and Data

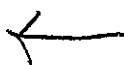
In this thesis I have shown, in keeping with the findings of Grosz (1977), Reichman (1981), Linde (1979), and Sidner (1979), that anaphora is governed not by the linear surface nature of the texts--i.e., not by distance or simple introduction of other characters--but by the hierarchical structure and functional formation of the text. This essential fact about anaphora was seen to hold for narrative as well as expository written texts, and for spontaneous conversations.

Moreover, I demonstrated that it was not enough to describe the anaphoric patterns of one text-type; the patterning of each text-type was seen to be sufficiently distinct as to require its own complete description. Certain factors were seen to be at work in one text-type but not in another, and some types appeared to be more conservative in their patterning than others. Crude quantitative data were offered to indicate roughly the extent of some of the (obvious) differences among the genres.

The structural units that were relevant to anaphora in each text-type were shown to be different as well, which militated against making broad statements about anaphoric distribution. For example, while the single-author R-structure was demonstrably critical for the anaphoric patterning in expository texts, it was the multi-contributor adjacency pair and its cohorts that were seen to be crucial in the conversational texts, and a still different sort of unit, the Reaction structure, made its presence felt in the narrative material.

In short, blanket statements about when pronouns can be used, or when fullNP's must be used, tend to be inaccurate when one examines closely data from a variety of text-types. Claims about linguistic phenomena must thus be based on a wide variety of

text-types (or state explicitly that they hold for one genre only), and must reflect an understanding of the structural differences exhibited by these text-types. Above all, they must explore the relationships between the structural organizations of the texts and the phenomenon under observation.

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