Theoretical and Pedagogical Applications of Discourse Analysis to Professional Writing.

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Theoretical and pedagogical applications of discourse analysis to professional writing

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THEORETICAL AND PEDAGOGICAL APPLICATIONS OF DISCOURSE ANALYSIS TO PROFESSIONAL WRITING

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in

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I want to thank my many teachers and students for showing me the gaps that exist in our current understanding of writing instruction and for requiring me to make my ideas clear to them. Thanks to Kathryn Riley for providing the model on which the research included here is based. Most especially, I want to recognize the support and encouragement of Frank Parker, whose influence appears on every page, and of Kevin Campbell, whose unselfishness made this dissertation possible.
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ABSTRACT

This dissertation attempts to show the utility of discourse analysis for professional writing. The articles collected here fall into three categories: Chapter One provides an overview of the need for a discourse analysis approach in writing research; Chapters Two and Three demonstrate applications of Speech Act Theory to problems in tone; and Chapters Four, Five and Six suggest the role that cohesion and coherence play in professional writing.

Chapter One notes that, with the emphasis on process, discourse based research has largely fallen out of favor with writing specialists. Despite this lack of enthusiasm, this chapter demonstrates the importance of discourse knowledge in the writing process of expert writers and suggests areas of discourse research which could enhance writing pedagogy.

Chapters Two and Three begin with the observation that advice about tone is often too vague and unprincipled to truly benefit novice writers. Chapter Two illustrates that advice about the use of
syntactic positioning of pronouns for manipulating tone (called the *you*-perspective) can be better understood by looking at two types of speech acts: directives and commissives. Chapter Three demonstrates that advice about the use of explanations in refusal letters (called negative messages) can be better understood by examining the felicity conditions on the speech act of refusing, also taken from Speech Act Theory.

Chapters Four, Five and Six explore theories of cohesion and coherence and their importance in enhancing the quality of professional writing. Chapter Four notes that current theories of cohesion are inadequate for describing well-written professional texts and proposes a Repetition theory of cohesion based on perceptual principles. Two types of repetition are distinguished: semantic and formal. Chapter Five illustrates the variety of formal cohesive devices used in professional writing, but which are excluded from current theories of cohesion. Finally, Chapter Six explores the distinction between cohesion and coherence. A Fulfillment theory of coherence is proposed. Two coherence conditions on cohesion (i.e., repetition) are also proposed: the Redundancy Condition on semantic cohesion and the Similarity Condition on formal cohesion.
CHAPTER ONE

DISCOURSE BASED RESEARCH:
THE NEED FOR A MODEL OF DECLARATIVE DISCOURSE KNOWLEDGE
THE NEED FOR DISCOURSE RESEARCH

In his discussion of the state of writing research in 1987, Corbett writes, "in some cases, the emphasis on process became so extreme that attention to the product virtually dropped out of sight. What we need to do now is redress the balance" (1987:451). Unfortunately, such a balance has not been achieved. In this paper, I will attempt to encourage more discourse based research by demonstrating the crucial role of discourse knowledge in the writing process.

As one example, consider a writer who is composing a letter to the management of her apartment in order to request that they fix a long-standing problem with leakage around her patio doors. The writer has come to the end of her letter and has written "When will you be sending someone to fix the doors?" At this point, the writer stops and considers the tone of her request. She recognizes that her request may actually hinder getting her doors fixed by making the reader angry. So she decides she must reword her request as "Will you send someone to fix the doors as soon as possible?" How can we explain the writer's ability to improve the tone of her writing? One explanation consists of noting that the writer changed the wording of her request as a way to manipulate her reader's reaction. Her
ability to revise depended on her ability to access her knowledge of discourse tone. Specifically, the writer had to know (albeit implicitly) that questions beginning with when, what, how, etc. presuppose the truth of the proposition expressed by them, while other question types do not. In order to avoid angering her reader, the writer changed the question type to one which didn't presuppose that the reader would fulfill her request; thus Will you... was judged to be an improvement over When will you... (See Riley and Parker 1989 for a comprehensive discussion of tone problems caused by presupposition.) The point here is that, without the relevant discourse knowledge of tone, the writer would have been stuck with her first wording or would have had to stab blindly in the dark for a different way in which to word her request. In this paper, I want to provide similar examples of the importance of discourse knowledge in the writing process in order to encourage more discourse based research.

To this end, the first section of this paper addresses the importance of discourse research. First, I want to clarify the distinction between declarative and procedural knowledge and then to demonstrate the importance of declarative discourse knowledge in the writing process. Second, I want to illustrate the actual and potential utility of discourse research for improving writing pedagogy by providing a model of writers' declarative discourse knowledge. The second section of this paper addresses two attitudes
which may pose potential obstacles to discourse based research. First, I want to show that the object of study in both process and discourse research is the human mind. And, second, I want to encourage writing specialists to take responsibility for applying discourse theory to writing problems instead of depending on those outside composition.

**Distinguishing Models of Declarative and Procedural Knowledge**

It has become commonplace to postulate that humans possess two different although related types of knowledge. In simplest terms, declarative knowledge is knowledge of what, while procedural knowledge is knowledge of how (Glaser 1984). Discourse theories provide a model of one type of declarative knowledge used by writers, while process theories provide a model of the procedural knowledge used by writers. Although using different terminology,² Radford provides an illuminating analogy for understanding this distinction.

Municipal regulations specify certain conditions that houses must meet: viz. they must be built out of certain materials, not others; they must contain so many windows of such-and-such a size, and so many doors; they must have a roof which
conforms to certain standards...and so and so forth. Such regulations are in effect well-formedness conditions on houses. What they do not do is tell you how to go about building a house; for that, you need a completely different set of instructions, such as might be found e.g. in Teach Yourself Housebuilding (1981:91).

In this analogy, the list of conditions you must know in order to follow the municipal housing code constitutes a kind of declarative knowledge of houses, while the list of steps you must know in order to actually build a house constitutes a kind of procedural knowledge.

Let's turn now to an example of this distinction in writing. As Stein notes, spellers have both declarative and procedural knowledge of spelling (1984:191). A complete model of declarative knowledge of English spelling would consist of a list of the conditions which must be met for any and all English words to be spelled accurately. For example, we would need a rule that states that the phoneme /f/ can be represented graphemically as f (in fat), ph (in photo), or gh (in coughing). In addition, we would need a principle that states that /f/ is represented as gh only at the end of a morpheme. As this example shows, the list of principles required to account for the spelling of just the phoneme /f/ would be quite long. Nevertheless, the complete list of such rules and principles would constitute a
model of the declarative knowledge that a speller possesses. Note that the model exists outside real time. In other words, the model is not concerned with the obvious fact that no one individual speller is likely to know every one of the rules and principles in the model. Instead, the model is concerned with accounting for any and all accurate English spellings. The model accomplishes this by assuming a hypothetical, ideal speller who would, in fact, know every rule and principle of English spelling.

In contrast, a complete model of procedural knowledge of English spelling would consist of a list of any and all the steps or processes which spellers use to spell English words. For example, spellers make use of some of the following processes. First, if photo is a familiar enough word, spellers may access its spelling as a whole word; second, spellers may use letter names to determine the vowels in photo; third, spellers might match phonemes with graphemes to spell foto or photo; and fourth, spellers might use their knowledge of the spelling of photo to spell photograph by analogy even though the second vowels in each are not pronounced in the same way. Clearly, our procedural model must be concerned with knowledge in real time as it is used by real spellers. Unlike the declarative model of spelling, this procedural model must account for individual differences in spelling. For instance, some spellers may never use the letter name process noted above, while others use it only at the early stages of learning to spell. Even one individual may use
different spelling processes in a unique order on the same spelling problem at different times.

It is important to note here that some (although not all) the spelling processes can only be understood by reference to the model of declarative spelling knowledge mentioned above. For example, we could not understand why a speller produces foto for photo without a model of the ideal speller's knowledge that /f/ can be represented by either f or ph. Thus the declarative knowledge of spellers is part of their procedural knowledge. In other words, spellers use their declarative knowledge in real time spelling processes. This point is especially important for the purposes of this paper. Without a model of what the spelling system is, we cannot hope to build a comprehensive model of how people spell.

The Importance of Declarative Knowledge

Writing about overall problem-solving ability, Glaser states that "high-aptitude individuals appear to be skillful reasoners because of the level of their content knowledge as well as because of their knowledge of the procedural constraints of a particular problem form" (1984:99). Flower, Hayes, Carey, Shriver, and Stratman note the importance of the writer's knowledge in revising:
Chapter One - 8

The writer must possess strategies for dealing with the problems detected. Responding to problems in texts draws on both declarative knowledge about texts and their features and procedural or how-to knowledge such as strategies for making revisions...(1986:19).

Thus writers, as problem-solvers, must have both declarative and procedural knowledge.

Flower et al. argue that the ability to recognize "patterns" (i.e., to categorize problems without necessarily naming them) when revising is the distinguishing characteristic of expert as opposed to novice writers (1986:42). Riley (1988) provides a useful example of pattern recognition. Imagine that two ESL students write, "I will taking physics next semester." Student One's declarative knowledge of English includes the fact that modals are always followed by uninflected verb forms. Student Two has no relevant declarative knowledge. As the result of his declarative knowledge, Student One can recognize will taking as a pattern (i.e., as a modal followed by a verb form) and can change taking to the uninflected form take based on his knowledge of the pattern. In addition, Student One can handle any new verb form problems of this type because of his ability to recognize this pattern. In contrast, Student Two is stuck precisely because he lacks knowledge of the pattern. In this case, we could
call Student One the expert and Student Two the novice. The only way Student Two will become an expert is by gaining the relevant declarative knowledge which will allow him to recognize the pattern.

To further illustrate the importance of declarative knowledge in writing consider Flower et al.'s (1986) illuminating distinction between diagnosis and detection strategies when revising. Both strategies must be preceded by the writer’s perception of a problem in a text. But detection leads only to rewriting, while diagnosis leads the way toward true revising. For example, suppose a student writer is rereading his text below and feels dissatisfied with it.

**Things mechanics do not like to see in manuals:**

*Don’t use copies of photos or blueprints. A poor picture or print cannot be made better on any copier.*

*When decimal numbers are extensively used to identify page, chapter, or paragraph, it can be confusing.*

*Sketches and drawings should be presented horizontally, instead of vertically on the page so that the person reading it need not rotate the book.*

(Adapted from Journet & Kling 1984:124).
If the student simply detects some problem with this portion of the text, but doesn't recognize any particular pattern which accounts for the problem, she has the choice of abandoning these sentences and rewriting, hoping to do better next time. On the other hand, if the student diagnoses the problem with this portion of the text as one of unparallel sentence structure, she can abandon these sentences and rewrite or simply revise as needed to produce parallel form. Thus Flower et al. note that "having the capacity to Diagnose when she needs to seems to be the defining feature of the expert..." (1986:42).

Note that it is the student's declarative knowledge of parallel sentence structure that qualifies her as an expert. So expert writers have declarative knowledge that allows them to see patterns in texts. Unfortunately, as Milic notes, writing teachers also often fail to recognize patterns and thus use terms such as awkward, which are of limited use to novice writers (1986:193). We do not yet have a comprehensive model of writers' declarative knowledge. As researchers, we have an obligation to find out what declarative knowledge writers possess so that, as teachers, we can help novice writers to become experts by recognizing patterns in texts. As early as 1983, Bereiter and Scardamalia argued that "probably nothing is holding back progress toward understanding the composing process so much as this lack" (1983:23).
Discourse Research

Obviously, expert writers have declarative knowledge of more than spelling and parallel structure. Some of this knowledge is non-linguistic. For instance, the writer of a letter requesting a refund must have knowledge of the way business is conducted, what are reasonable requests in such circumstances, etc. But because the writer's meaning will be communicated in writing, he will obviously need to rely on declarative knowledge of writing. As I noted above, however, there is much missing in our model of declarative discourse knowledge. In fact, many areas of discourse knowledge have only recently been investigated.

For example, only within the last few years has research begun to develop a theory which attempts to account for expert writers' knowledge of tone (e.g., Riley 1988; Riley & Parker 1989; Hagge & Kostelnick 1989; Campbell, Riley & Parker 1990; and Campbell forthcoming). Interestingly, all of this research simply showed how available research in linguistics/discourse analysis is relevant to tone in professional writing. As one example, I propose that the need for explanations in so-called negative messages or refusal letters is supported by research in Speech Act Theory. I demonstrate that writers' explanations can be classified into five types: (a) denying the existence of a referent in the reader's request; (b) denying that the writer is the agent of the reader's request; (c)
denying that the timing of the requested act is appropriate; (d) denying that the writer has the ability to do the requested act; and (e) denying that the reader wants the request fulfilled. Expert writers' ability to accomplish a polite tone in such letters is partly determined by their knowledge of these five explanatory types.

By offering some theories of tone, these recent studies begin to fulfill our need for a comprehensive model of the discourse knowledge used by expert writers. But there are many areas of expert writer's declarative knowledge of discourse which remain a mystery. For example, Hillocks notes the need for research into discourse types (1986:233). Despite our need for such research, relatively little work has been published in this area in recent years. As noted in the introduction, the emphasis on process research has been so great in the recent past that discourse research has apparently fallen out of favor among writing specialists. To illustrate, consider the table below which summarizes the relative number of process to discourse studies chronicled in Research in the Teaching of English's annual bibliography (Durst & Marshall 1985-9):
Table 1. Relative Percentages of Process and Discourse Studies

<table>
<thead>
<tr>
<th>YEAR</th>
<th>PROCESS</th>
<th>DISCOURSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>1986</td>
<td>78%</td>
<td>22%</td>
</tr>
<tr>
<td>1987</td>
<td>70%</td>
<td>30%</td>
</tr>
<tr>
<td>1988</td>
<td>74%</td>
<td>26%</td>
</tr>
<tr>
<td>1989</td>
<td>74%</td>
<td>26%</td>
</tr>
</tbody>
</table>

The point here is that relatively few researchers appear interested in studying writing using a discourse based approach. In the next section, however, I want to encourage such research by considering how a comprehensive model of writer's discourse knowledge can enhance the effectiveness of writing pedagogy.

Discourse Research and Writing Pedagogy

Writing pedagogy has been influenced by discourse theory for many years. This influence, however, has produced pedagogical practices with varying degrees of effectiveness. For example, as Hillocks notes in his comprehensive review of writing research, studies have
shown that grammar instruction has no positive effect on the quality of student writing, while the use of models is only slightly more effective than grammar instruction (1986:154). In contrast, sentence-combining is more effective than free writing and either of the foci of instruction listed above. Interestingly, the use of scales or lists of criteria was found to be twice as effective in improving writing than free writing practice (1986:249). This section will consider the relevance of discourse theory to the focus of instruction in writing classrooms as well as to the mode of that instruction in order to promote the importance of developing a comprehensive model of that knowledge.

**Focus of Instruction.** In particular, I want to consider the use of scales since Hillocks found this focus to be relatively effective. Often scales are used with peer review in the revision process. Bereiter and Scardamalia discuss a revision study which found that students with a list of diagnostic cues gave more effective suggestions for revision (1987:293). Furthermore, Hillocks notes that most studies of the use of scales suggest "that the criteria learned act not only as guides for revision but as guides for generating new material" (1986:160). Thus the use of scales appears to be a very promising focus of instruction. In order to demonstrate the reason for this effectiveness, consider the scale below which forms a part of a list of criteria for revising
definitions (Lannon 1988:201-2).

REVISION CHECKLIST FOR DEFINITIONS

Content
* Is the type of definition (parenthetical, sentence, expanded) suited to your purpose and reader's needs?
* Have you documented all data sources?

Arrangement
* Is the expanded definition unified and coherent (like an essay)?
* Do you provide adequate transitions between ideas?

Style
* Is your definition in plain English?
* Is it written in correct English?

Although scales may have a more limited scope (e.g. Anderson 1987:767), many scales like Lannon's include criteria relating to the content, organization, style and mechanics of the whole written document.

Consider the first question under Content. A student using this checklist while reviewing another student's definition is guided by
this first question to consider what type of definition has been written, why the reader needs such a definition, how the reader will use the information in the definition, and whether the type of definition written matches the reader's needs. The utility of this scale depends on the student's ability to answer the above questions. Answering these questions, in turn, requires both linguistic and non-linguistic declarative knowledge. For example, categorizing the type of definition requires declarative linguistic knowledge of definition types. On the other hand, recognizing the reader's need for the information in the definition requires non-linguistic declarative knowledge.

Now consider the first question under Arrangement. For this question, the scale's utility depends on the student's declarative knowledge of unity and coherence. The student must rely on his declarative knowledge of coherence to judge this definition and ultimately to produce coherent prose if the definition needs revision in this area. It seems reasonable to assume that the use of scales increases the quality of writing simply by getting novice writers to access declarative knowledge of which they might otherwise remain unaware. In other words, the ultimate utility of the scale depends on the writer's ability to access relevant discourse knowledge.

At this point, it is important to note that the student's knowledge need not be conscious. The test for determining declarative knowledge of coherence is students' ability to judge or
produce coherent prose not to give an explicit definition of coherence. Obviously, most students can judge whether a discourse is coherent without being able to define coherence. Many of these can produce coherent prose, too. Unfortunately, however, there are students who do not intuitively understand how to write coherently. The use of scales with such students is doomed to fail since these students lack the required declarative knowledge. If for no other reason, we as researchers must be concerned with our ability to give an explicit definition of coherence so that these students can gain that knowledge.

**Mode of Instruction.** Hillocks' review of research reports that the "environmental" mode of teaching is more than four times as effective as the traditional "presentational" mode and three times as effective as the "naturalistic" mode (1986:247). The environmental mode is something of a compromise between traditional lectures about forms and grammar (the presentational mode) and the reactionary workshops using freewriting (the naturalistic mode). For instance, while the environmental classroom incorporates pre-writing activities, it also includes the use of models and activities which focus on producing forms. Therefore, some of the emphasis in an environmental classroom will necessarily be on increasing or accessing students' discourse knowledge in order to aid them in producing better writing.
Earlier, I quoted Milic's observation that teachers often fail to recognize "patterns" in texts and thus use terms such as awkward which are relatively useless to students. These patterns (e.g., coherence, parallel sentence structure, explanatory types in refusals, etc.) constitute part of writers' declarative knowledge of writing. In the last section, I attempted to demonstrate that the effectiveness of scales depends on the writer's ability to access that declarative knowledge. Thus a promising pedagogical tool is of little use with students who lack the relevant declarative knowledge. Teachers in environmental classrooms will need to address this lack of knowledge.

For example, consider a classroom situation in which a student has written a memo containing the following request which a peer reviewer perceives as weak, "If you don't mind, could you send the necessary information as soon as possible?" What kind of feedback can the reviewer give this student to aid her in revising without recognizing a "pattern"? It seems he has two choices. First, he can simply state his perception that this request is weak. In this case, his perception will be useful for revising only if the writer has declarative knowledge of what constitutes a stronger request. Without that knowledge, the reviewer's perception is of little use to her. Second, the reviewer can rewrite the request for the student. In this case, his rewriting will be useful to the writer only if she can infer how his revision accomplishes the goal of strengthening her
request. Without inferring the relevant declarative knowledge, the writer will not gain any knowledge that she can use in the future to control tone in her writing.

Fortunately, Riley (1988) and Hagge and Kostelnick (1989) offer a theory of politeness strategies which makes some of what writers know about tone explicit. The teacher armed with these theories would be in a much better position to stimulate learning in the hypothetical situation above. For instance, the teacher might explain to these two students or to the entire class that three strategies have been incorporated into this writer’s request (please, suspending the truth of the request by using if and the past tense form could, and questioning the reader’s ability by using could) and that politeness strategies must be chosen according to weight of the request (the imposition on the reader and the social distance and power relationship between reader and writer). These theories provide an explicit definition of politeness as well as a list of the discourse markers which accomplish a polite tone and the contextual factors which determine the need for politeness. Providing an explanation of tone based on these theories would require relatively little classroom time (perhaps 10-15 minutes) and could be used to develop exercises in which students actually use the politeness strategies to manipulate tone in writing. (See examples in Riley, Parker, Manning and Campbell 1990.)

Since discourse theories attempt to discover patterns in texts at
all levels— from graphemes to words to sentences to whole discourses—a comprehensive model of discourse knowledge would go a long way in improving our ability to see patterns in texts and thus to help novice writers recognize these patterns. Unfortunately for writing pedagogues, explicit definitions or theories of all the relevant discourse knowledge of expert writers are not available to writing teachers. The following questions provide a sample of what such theoretical research might address.3

1. How do writers know the purpose of a discourse? Do all discourses have a single over-riding purpose or a web of interrelated purposes?

2. How is purpose related to discourse type? How many discourse types are recognizable and what features distinguish them?

3. How are discourses organized? What features distinguish introductions from conclusions? Is organization similar or different for different discourse types?

4. How do readers/writers recognize coherence? What is the relationship between coherence and cohesion?

5. Do readers/writers use only semantics to
determine cohesion? What is the relationship of cohesion and formal devices such as alliteration and parallel sentence structure?

6. Do readers distinguish technical terms from jargon? How?

In addition, experimental studies might, for example, investigate the effectiveness of pedagogical tools suggested by such theoretical research (e.g., the effect of exercises such as those in Riley et al. (1990) on writing improvement or the relative politeness of the five explanation types in Campbell (forthcoming)).

In sum, the first section of this paper has attempted to clarify the distinction between declarative and procedural knowledge. I have argued that access to declarative discourse knowledge is vital to the writing process. Unfortunately, a comprehensive model of such knowledge is not available. In fact, it does not appear to be a priority for a majority of writing researchers despite the fact that such research might significantly improve writing pedagogy. Specifically, the effectiveness of scales relies partly upon the writers' declarative discourse knowledge. But without a comprehensive model of such knowledge, writing teachers lack the explicit definitions and explanations for students who cannot infer the principles of effective writing addressed in scales. In addition, the effective teacher in an environmental classroom must
have the ability to make writers' declarative discourse knowledge explicit in order to offer explanations of writing problems and to develop effective classroom activities. Again, however, a comprehensive model does not exist.

POTENTIAL OBSTACLES TO DISCOURSE RESEARCH

I have tried to demonstrate the importance of building a model of writers' declarative discourse knowledge in the last section. The remainder of this paper attempts to clear away two potential obstacles to such research. First, I want to establish that the object of study in both process and discourse research is quite similar. Second, I want to encourage writing specialists to take responsibility for applying discourse theory to writing.

The Object of Study in Process and Discourse Research

Often the results of process research are assumed to provide direct evidence for cognition, while the results of discourse based research are considered to reflect only the product of cognition. In fact, the results of process research are often interpreted as if the researchers had direct access to the mind of their subjects. However, both types of research investigate the structure of the human mind through the analysis of the mind's products. As Bereiter and
Scardamalia clearly states, "thinking-aloud protocols and clinical-experimental protocols display the products of these cognitive activities rather than the cognitive activity itself" (1983:13-4). The process researcher has only the tape-recorded or transcribed speech of the research subject to analyze, just as the discourse researcher has only the oral or written text to analyze.

At present, we cannot access cognition directly (i.e., we cannot get inside the physical brain and see, feel or hear the mind thinking). The position we are in with respect to the mind is analogous to the position described by Einstein and Infeld with respect to physical concepts.

Physical concepts are free creations of the human mind, and are not, however it may seem, uniquely determined by the external world. In our endeavor to understand reality we are somewhat like a man trying to understand the mechanism of a closed watch. He sees the face and the moving hands, even hears its ticking, but he has no way of opening the case. If he is ingenious he may form some picture of a mechanism which could be responsible for all the things he observes, but he may never be quite sure his picture is the only one which could explain his observations. He will never be able to compare his picture with the real mechanism and he
cannot even imagine the possibility of the meaning of such a comparison (1938:31).4

So, like these famous physicists, writing researchers have no direct access to the reality which they want to understand. Instead, we must form a model of that reality based on what we can observe—in this case the oral and written discourses (including protocols) produced by the mind which we seek to understand. Thus neither a protocol nor an essay is a direct means of studying cognition, but they are the best means currently at our disposal. We analyze these products of the mind, assuming that "whatever lawfulness is found in the text must reflect lawful behavior on the part of the writer" (Bereiter and Scardamalia 1983:11).

The crucial point of this section is that both process and discourse research study cognition indirectly through the analysis of the products of that cognition. Our discourse models are, therefore, just as concerned with the structure of the mind as process models. However, these models are obviously different. I stated earlier that these two types of models are distinguished by the type of mental structures they attempt to model: process research attempts to model writers' procedural knowledge, while discourse research attempts to model writers' declarative discourse knowledge. Both types of knowledge are integral to writing.
Responsibility for Applications of Discourse Theory

Much lack of enthusiasm about applied linguistics or discourse theory is probably the result of what Raskin and Weiser call "method-oriented" applications in which the research is driven by the extension of a method or theory in linguistics to composition instead of by a problem within composition which the method or theory can address (1987:249).

Riley (1987) provides a distinction which is useful in understanding this problem. Although there is a traditional division between theory on the one hand and application or practice on the other, Riley argues that there is a three-part division among theory, application, and practice. Theory is similar to application in that both are descriptive, while practice is prescriptive. On the other hand, theory is dissimilar to application in that theory is concerned with universals, while application and practice are concerned with specific populations. For instance, consider the table below.

<table>
<thead>
<tr>
<th>THEORY</th>
<th>APPLICATION</th>
<th>PRACTICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)free radicals</td>
<td>animal tissue damage</td>
<td>surgery technique</td>
</tr>
<tr>
<td>(b)felicity conditions</td>
<td>explanations</td>
<td>heuristic for</td>
</tr>
<tr>
<td></td>
<td>in refusal letters</td>
<td>inventing explanations</td>
</tr>
</tbody>
</table>

Table 2. Distinction between Theory, Application and Practice.
Example (a) in the table illustrates that the theory of free-radicals in chemistry has ultimately been used to develop a new surgery technique within modern medicine. The theory of free-radicals describes universal chemical properties. In contrast, the surgery technique prescribes a behavior for a specific population (i.e., surgeons). The link between the theory and the practice is an application in which a researcher described the relevance of free-radical theory for the specific population of surgeons. A chemist developed the theory, a surgeon schooled in chemistry (or a chemist interested in surgery) explained the relevance of the theory to surgeons, and a surgeon used the explanation to develop a new surgery method.

Likewise, example (b) illustrates that the theory of felicity conditions (part of Speech Act Theory) can ultimately be used to develop a heuristic for business writers composing a refusal letter. Felicity conditions describe universal characteristics of speech acts. In contrast, the heuristic prescribes the behavior of the specific population of business writers. Again, the link between the theory and the practice is an application in which a researcher described the relevance of felicity conditions to the specific population of business writers. A linguist/philosopher developed the theory, a business writing specialist schooled in linguistics (or a linguist interested in business writing) explained the relevance of the theory to business writers/teachers, and a business
writer/teacher used the explanation to develop a heuristic for writing a refusal letter.

Riley's theory makes two things clear. First, application and practice are separate, though related, activities. As Bereiter and Scardamalia have noted, a requirement that research deal with the full act of writing in natural conditions confuses methods with purposes (1987:51). In other words, the methods adopted when applying discourse theory in order to better understand writers' knowledge are not necessarily good (or bad) methods to adopt in teaching writing. As pedagogues we must take responsibility for developing and assessing classroom practices suggested by applications of discourse theory.

Second, theory and application are separate, though related activities. Since discourse theory is by definition interested in more than teaching writing, much of it will be inapplicable to our field. However, as I have tried to show by example above, some discourse theories are extremely useful in illuminating writing problems. As researchers, we must take responsibility for finding relevant applications of discourse theory. We can assure that discourse based writing research is truly useful only if we educate ourselves in discourse theory, thinking always about the problems of teaching writing and how the theory can solve those problems.
CONCLUSIONS

In this paper, I have tried to impress upon the reader the importance of building a comprehensive model of writers' declarative discourse knowledge. Although declarative and procedural knowledge are distinct, they bear an important relationship to one another. A comprehensive model of writers' procedural knowledge will include a model of writers' declarative knowledge, which in turn will include discourse knowledge. I have attempted to demonstrate the impact of declarative discourse knowledge on the process of writing. In a number of examples, the ability to access such knowledge distinguished novice from expert writers. I have also tried to show how a comprehensive model of discourse knowledge can improve writing pedagogy, providing theoretical foundations for both the focus of instruction (e.g., the effective use of scales) and the most promising mode of instruction, the environmental.

Though discourse theory has a great potential within composition, relatively few researchers are involved in such research. Therefore, I have attempted to clear away two potential obstacles to more discourse based research by demonstrating that both discourse and process theories provide a model of the human mind. In addition, I have encouraged writing specialists to take control of discourse based research for themselves, insuring that applications of discourse theory will be relevant to writing problems and, therefore, useful in improving writing pedagogy.
NOTES

1Throughout this paper, "discourse based research" refers to research in such fields as linguistics, socio-linguistics, discourse analysis, etc.

2Radford is actually explaining Chomsky's distinction between competence and performance models.

3While some of these questions have already been addressed (e.g., Kinneavy's theory of discourse types based on purpose (1971)), nothing like a comprehensive understanding of such questions has been reached—the kind of understanding which might actually effect the practices of writing pedagogues.

4I'm grateful to Frank Parker for making me familiar with this quote and the scientific enterprise it describes.

5Parker (1986) provides a concise and very accessible introduction to linguistic theory, Coulthard (1977) a concise introduction to discourse analysis, and Raskin and Weiser (1987) potential applications of such theory to composition.
REFERENCES


INTRODUCTION

Analysts of professional communication generally agree on the value of the *you*-perspective (also known as the *you*-attitude), the use of stylistic strategies to convey "an attitude which views the situation from the reader's point of view" (Lesikar 1979:50). Advice about how and when to implement the *you*-perspective, however, is not so generally agreed upon, and in fact is sometimes vague or contradictory. For example, Huseman, Lahiff, and Penrose advise the writer to "Go through you draft and spot each I reference. Then work on the elimination of these words...Now go through the draft and insert some you references" (1988:70). At the same time, though, they warn against letting these *you* references become "bothersome and noticeable" (1988:70). The problem with such advice lies not in its legitimacy but instead in its utility, since it reflects a kind of "Catch-22": it is redundant for the student writer who intuitively understands the *you*-perspective, but not explicit enough for the writer who lacks insight into this strategy.

This paper uses speech act theory to refine one aspect of advice about the *you*-perspective by examining its use in two particular structures, directives and commissives. A directive is a speech act in which the speaker/writer (addressee) attempts to get the
hearer/reader (addressee) to behave in some required way (e.g., a request). A commissive is a speech act in which the addressor commits himself or herself to behave in some required way (e.g., a promise). The following section briefly reviews the textbook advice about the you-perspective in order to demonstrate the need for more explicit treatments of this strategy. Next, the relevant concepts from speech act theory are explicated. Finally, these concepts are applied to sample texts in order to show how they predict when the you-perspective is appropriate and how to implement it.

CURRENT TREATMENTS OF THE YOU-PERSPECTIVE

The goal of the you-perspective appears to be generally agreed upon by professional writing specialists. For example, Sigband and Bell state that "a you attitude consists of viewing a situation from the other person's point of view" (1986:587). Similarly, Lesikar says that "you-viewpoint writing is writing which emphasizes the reader's interests and concerns" (1979:50). (See also Wilkinson, Wilkinson, and Vik 1986:126; Dumont and Lannon 1987:118; and Bonner 1986:14). While stating the goal of the you-perspective is helpful and necessary, novice writers also require an explanation of how to reach that goal. To this end, many professional communication textbooks include advice about how to create the you-perspective. However, this advice is not always explicit or principled enough to
benefit novice writers.

For example, Wilkinson et al. tell beginning writers that "making your reader or listener the subject or object of most sentences will help you keep you-viewpoint interpretation" (1989:127). The following hypothetical text, however, illustrates problems that may arise when a writer follows this advice.

(1) You will not receive credit for the shoes you purchased because you did not honor the terms of your warranty.

Note that the reader has been made the subject of each clause through the use of the second person pronoun. Even though this example adheres to Wilkinson et al.'s advice, however, it does not achieve the goal of the you-perspective, which is to emphasize the benefits of the writer's action to the reader. Bowman and Branshaw offer similar advice: "One measure of the you-attitude is to count the you's and compare that number to the number of I's and we's. When you can, make the reader or the reader's company of product the subject of object of your sentences" (1980:48). Again, however, this kind of simple metric cannot guarantee the desired effect, as illustrated in example (1).

Some authors appear to recognize the limitations of their advice about how to create the you-perspective. For example, Huseman et al. warn against the exclusive use of second person pronouns: "if making
the reader the center of attention might bring offense, then shift to
the we or I approach" (1988:75). Murphy and Hildebrandt likewise
advise writers to begin their text with you or your only if this
strategy is "psychologically desirable" (1988:42). They advise
against using the second person when the reader has made a mistake or
expressed an opinion that differs from the writer's (1988:44).
Himstreet and Baty place similar constraints on the you-perspective,
advising writers to use the second person for presenting positive
ideas and to avoid it for presenting negative ideas (1984:59. (See
also Bowman and Branshaw 1980:48 and Lesikar 1979:50.) Bonner goes
so far as to claim that "the you attitude...can be established more
naturally by sing I and we than by omitting these pronouns"
(1986:14).

In short, while advice about how to create the you-perspective
generally concerns the use of personal pronouns and syntactic
positioning with a sentence, the advice suffers from tow basic
limitations. First, none of the authors provides a sufficiently
explicit account of how the you-perspective is created and when it is
appropriate. Second, the advice at times seems vague or
contradictory. Some authors suggest that second person pronouns be
used almost exclusively; others insist that first person pronouns
play a significant role in you-perspective. Even when the second
person pronoun is emphasized, some analysts suggest that either
subject or object position is an equally effective place for it to
appear.
LINGUISTIC CONCEPTS

Speech Acts

The concept of speech acts is primarily the result of work by Austin (1962) and Searle (1968, 1975). Austin's insight was that, in addition to saying things, language can also be used to do things. The sentences below provide examples.

(2) I promise you to have the report on your desk in the morning.

(3) I order you to have the report on my desk in the morning.

According to Austin's theory, the effect of uttering a sentence like (2) is to commit an act of promising. Likewise, the effect of uttering (3) is to issue an order. Austin notes that certain other verbs can also perform acts when uttered under the right circumstances (e.g., thank, vow, advise, forbid, congratulate, give, name, apologize, etc.).

Searle extends Austin's basic insight by grouping speech acts into three functional categories: Directive, in which the addressee attempts to get the addressee to behave in a certain way; commissives, in which the addressee commits himself or herself to behave in a certain way; and constatives, in which the truth of a proposition is asserted. (For our purposes here, only the first two
categories of speech acts are relevant.) The sentences below are representative of the class of directive speech acts.

(4) Get Harris on the phone!
(5) You should use my broker.
(6) Would you type this memo?

Uttering any one of these sentences, under appropriate circumstances, performs a speech act intended to elicit some specific behavior from the addressee. In (4), the act performed by uttering the sentence is an order; in (5), a suggestion; and in (6), a request. In each case, the addressor wants the addressee to act in some prescribed way (i.e., by making a phone call in (4), by contracting a particular broker in (5), or by typing a memo in (6)) as a result of the addressor's utterance. Most importantly, however, note that the subject (either explicit or understood) in each of these directives in the second person you.

Let's turn next to the group of speech acts called commissives. The following sentences are representative of this class.

(7) I promise the report will be on your desk in the morning.
(8) I accept your terms.
(9) I'll help with the dishes.
These sentences, when uttered under appropriate circumstances, all perform speech acts which commit the addressor to some specific behavior. In (7), the act performed by uttering the sentence is an act of promising; in (8), an act of agreement or acceptance; and in (9), an act of volunteering. Once again, the important point to note is the person of the subject: in each of these commissives it is the first person I.

In short, the subject of a directive is normally second person (i.e., you) and the subject of a commissive is normally first person (i.e., I/we).

**Semantic Roles**

Fillmore (1968) proposes a treatment of noun phrases (NPs) which describes their semantic role in relation to the verb and other NPs in a sentence. Sentence (10) illustrates some of these roles.

(10) The secretary typed the letter for her boss with

1 2 3

a typewriter.

According to Fillmore's theory, NP1 functions as the agent, or volitional performer of the action described by the verb. NP2 functions as the patient, or thing affected by the action of the
verb. NP3 functions as the **beneficiary**, or thing which benefits from the action. Finally, NP4 functions as the **instrument**, or thing which is used to carry out the action.

In English, the normal position for the agent is subject and normal position for the beneficiary is object of the preposition to or for. At the same time, however, Fillmore's theory also captures the fact that a given semantic role (e.g., agent patient, beneficiary, instrument) can be instantiated by one of a number of syntactic construction (e.g., subject, object, object of a preposition). In sentences (11-13), for example, the semantic role of instrument is instantiated in three different syntactic positions.

(11) Subject = A typewriter was used by the secretary to type the letter for her boss.

(12) Object = The secretary used a typewriter to type the letter for her boss.

(13) Object of Preposition = The secretary typed a letter for her boss on a typewriter.

Conversely, (14-17) illustrate each of the four semantic roles being instantiated in subject position.
(14) Agent = The secretary typed the letter for her boss with a typewriter.

(15) Patient = The letter was typed on a typewriter by the secretary for her boss.

(16) Beneficiary Her boss had the secretary type the letter on a typewriter.

(17) Instrument A Typewriter was used by the secretary to type the letter for her boss.

In short, then, a single semantic role can be instantiated by several syntactic constructions, and a single syntactic construction can convey several semantic roles.

Interaction of Speech Act Categories and Semantic Roles

We noted earlier that sentences such as (18), which express directive speech acts, generally contain a second person subject. In contrast, those like (19) that express commissive speech acts usually have a first person subject.

(18) Would you type this memo?

(19) I will ship your materials tomorrow.
In directives like (18), the addressee functions in the semantic role of agent (i.e., the volitional doer of the action—typing) as well as the grammatical subject of this sentence. In this way, the addressee in such situations attributes the action described by the verb to the addressor. So part of the reason we interpret (18) as a directive, despite the fact that the sentence doesn't use the imperative form, is due to the use of the second person subject/agent. On the other hand, in (19) the addressor functions as agent (the party responsible for the action of the verb—shipping) as well as the grammatical subject. Despite the fact that the verb promise is not used to make this a directly conveyed speech act, the use of a first person subject/agent helps to insure that we interpret the speech act as a commissive.

These examples illustrate that directive and commissive speech acts appear to be mirror images of each other. Directives have a second person agent, while commissives have a first person agent. In fact, these speech act categories also mirror each other in their distribution of beneficiaries, so that the beneficiary in a directive is the addressor, while the beneficiary in a commissive is the addressee. Clearly, the addressor is the party who benefits from the typing requested through the directive in sentence (18), while the addressee is the party who benefits from the promise to ship merchandise in the commissive conveyed by (19). Although the beneficiaries are not overtly expressed in these sentences,
alternative versions of them which do express these roles can be easily constructed.

(20) Would you type this memo for me?
(21) I will ship your materials to you tomorrow.

In each of these sentences, the pronoun in the prepositional phrase functions as the beneficiary of the action described by the verb. Directives and commissives, then, are truly mirror images of each other in the distribution of the semantic roles of the addressor and addressee.

Table 1 illustrates the distribution of semantic roles in directive and commissive speech acts.

<table>
<thead>
<tr>
<th>Semantic Role</th>
<th>Agent</th>
<th>Beneficiary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech Act Category</td>
<td>2nd person</td>
<td>1st person</td>
</tr>
<tr>
<td>Directive</td>
<td>2nd person</td>
<td>1st person</td>
</tr>
<tr>
<td>Commissive</td>
<td>1st person</td>
<td>2nd person</td>
</tr>
</tbody>
</table>

Table 1. Distribution of roles in speech act categories.
The linguistic concepts outlined in the previous section can be used to refine strategies for achieving the you-perspective. Specifically, these principles allow a more precise statement of when and where first and second person pronouns are most effectively used in commissives and directives. The fundamental principle underlying the distribution of pronouns in these structures is as follows: emphasize the addressee (i.e., reader/hearer) in a positive message and de-emphasize the addressee in a negative message. This section discusses ways to achieve these goals in commissives and directives.

First, consider the case of commissives. As stated earlier, these are speech acts in which the addressor (i.e., an agent) commits himself or herself to perform some action for the addressee (i.e., a beneficiary). In terms of syntactic structure, commissives de-emphasize the addressee, since the "unmarked" or typical pattern is for the addressor to occupy subject position and the addressee to occupy non-subject position. Therefore, the unmarked structure for commissives would be a first person subject (representing the addressor/agent) and a second person non-subject (representing the addressee/beneficiary). This pattern occurs in (22) (adapted from Bowman and Branshaw 1980).

(22) We will ship your order to you next week.
This pattern, however, emphasizes the addressor rather than the addressee, since the pronoun representing the addressor occupies subject position. (Subject position may be thought of as the focal point of a sentence in that, as Keenan notes, subjects across languages normally express both the topic and the agent of the sentence, and they tend to be the leftmost occurring NP (1976:318-321)). If we assume that the message conveyed by this sentence (i.e., the writer's commitment to ship the goods next week) will be perceived positively by the addressee, we have to get the pronoun representing the addressee into subject position. This is accomplished in (23).

(23) You will receive your order from our factory by next week.

Sentence (23) now implements the you-perspective. It represents a positive message and thus should emphasize the addressee. It accomplishes this by putting the pronoun representing the addressee (i.e., you) in subject position. Such a move, however, permutes the unmarked pattern for commissives, in which the addressee is in non-subject position.

In contrast, a commissive conveying a negative message should be expressed in its unmarked syntactic form, where the addressee is de-emphasized. Sentence (24), for example, commits the addressor to an action that is likely to be interpreted unfavorably by the addressee.
(24) We will be shipping your order to you by U.P.S. rather than by Federal Express.

Sentence (24) implements the you-perspective by using the unmarked syntactic form for commissives. Since (24) represents a negative message, it should de-emphasize the addressee in order to achieve the you-perspective. I accomplished this by putting the pronoun representing the addressee (i.e., you) in a non-subject position.

To summarize the situation with commissives: the unmarked structure for commissives has a first person NP as subject/agent and a second person NP as non-subject/beneficiary. This pattern should be retained when constructing commissives that will be perceived negatively, since the non-subject position is a less prominent one for the reader than is the subject position. In contrast, the unmarked pattern for commissives should be varied when the commissive will be perceived positively, so that the reader/beneficiary is placed in the more prominent subject position.

Now consider the case of directives. As stated earlier, these are speech acts in which the addressee (i.e., an agent) is directed to perform some action for the addressor (i.e., a beneficiary). In terms of syntactic structure, directives emphasize the reader since the unmarked pattern is for the addressee to occupy subject position and the addressor to occupy non-subject position. Therefore, the unmarked structure for directives would be a second person subject
(representing the addressee/agent) and a first person non-subject
(representing the addressor/beneficiary). This pattern is
illustrated in (25), where you is the implied subject of the
imperative structure.

(25) [You] Return the enclosed questionnaire to us and receive a
free book.

This pattern emphasizes the addressee since the pronoun representing
the addressee occupies subject position. If we assume that the
message conveyed by this sentence is positive, then this sentence
conforms to the you-perspective.

In contrast, a directive expressing a negative message should be
framed in its "marked" syntactic form, where the addressee is
de-emphasized. Consider, for example, the contrast between (26) and
(27) from Murphy and Hildebrandt 1988:44.

(26) You failed to enclose your check in the envelope.

(27) The envelope we received did not have a check in it.

Both (26) and (27) function as directives. However, only (27)
conforms to the you-perspective. It represents a negative message
and thus should de-emphasize the addressee. It accomplished this by
removing the pronoun representing the addressee (i.e., you) from
subject position and substituting a pronoun representing the addressor (i.e., we).

It should be noted that there are occasions when the writer may wish to retain the reader as subject/agent in a directive even though the message is a negative one. In a collection letter, for example, making the addressee the subject/agent of a negative message may help to strengthen the seriousness of the tone. This strategy is illustrated by the contrast between (28) and (29).

(28) We must receive your payment by March 15.
(29) You must send your payment to us by March 15.

Our analysis of directives predicts that (29) constitutes a stronger message to the reader than (28). Even though (28) functions as a directive, it uses the first person beneficiary (i.e., we) as subject; the second person agent is alluded to only indirectly by the possessive pronoun your. In contrast, (29) functions as a directive and uses the second person agent as subject; in contrast to (28), the first person beneficiary is placed in a less prominent position as object of a preposition.

To summarize the situation with directives: the unmarked structure for directives has a second person NP as subject/agent, with a first person NP as object/beneficiary. This pattern should be retained when constructing directives that will be perceived
positively since the subject position is a more salient one for the reader than is the object position. In contrast, the unmarked structure for directives should be varied when the directive conveys a negative message that the writer wished to de-emphasize.

Table 2 summarizes the appropriate pronoun choice for the subject and non-subject positions in commissives and directives.

<table>
<thead>
<tr>
<th>SEMANTIC ROLE</th>
<th>PRONOUN</th>
<th>POSITIVE MESSAGE</th>
<th>NEGATIVE MESSAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agent</td>
<td>1st person</td>
<td>non-subject</td>
<td>subject</td>
</tr>
<tr>
<td>Beneficiary</td>
<td>2nd person</td>
<td>subject</td>
<td>non-subject</td>
</tr>
<tr>
<td>Agent</td>
<td>2nd person</td>
<td>subject</td>
<td>non-subject</td>
</tr>
<tr>
<td>Beneficiary</td>
<td>1st person</td>
<td>non-subject</td>
<td>subject</td>
</tr>
</tbody>
</table>

Table 2. Recommended distribution of first and second person pronouns in different message types.

CONCLUSION

Concepts from linguistic theory can be used to refine advice about the you-perspective. In particular, speech act theory can be
used to answer questions about the roles of first and second person pronouns in this strategy and about the best position (subject or non-subject) for these pronouns in different types of structures. Our analysis calls for placing the addressee/beneficiary in subject position in positive commissives and for placing the addressee/agent in subject position in positive directives. In negative commissives, the addressee/agent should occupy subject position, while in negative directives the addressor/beneficiary should occupy subject position. Thus both first and second person pronouns, as well as both subject and non-subject position, may be exploited to create the you-perspective, depending on the type of speech act and its status as a negative or positive message.
REFERENCES


CHAPTER THREE

EXPLANATIONS IN NEGATIVE MESSAGES:
MORE INSIGHTS FROM SPEECH ACT THEORY

(Journal of Business Communication, forthcoming)
INTRODUCTION

Textbooks generally advise writers to include an explanation in so-called "negative messages" (traditionally as part of the "indirect plan"). Textbook authors advise that letters containing such bad news should be logical and courteous, and they include example letters which are designed to illustrate these qualities. Unfortunately, as Hagge has recently observed about textbook discussions of politeness, "What these textbooks ignore is the real issue: how courtesy is linguistically encoded in texts" (1989: 50).

A number of researchers have noted that linguistic pragmatics can be used beneficially in the field of composition. For instance, Hagge argues that writers most likely depend on their pragmatic linguistic competence instead of their knowledge of traditional rhetorical principles for writing courteously (1989), and Riley (1986) argues that linguistic pragmatics is widely applicable to research in professional communication. In addition, both Steinmann (1982) and Dasenbrock (1987) have proposed that Speech Act Theory (one component of linguistic pragmatics), as developed by the language philosopher J.L. Austin (1962), provides the foundation for our much sought after "New Rhetoric" in composition. Recent research has explored the utility of Speech Act Theory for
understanding some aspects of tone in professional communications. For example, the theory defines the linguistic cues which produce indirectness in letter writing (Riley 1988) and clarifies the most effective use of the you-perspective (Campbell, Riley and Parker forthcoming).

In this paper, I continue the line of research that applies concepts from Speech Act Theory to professional writing. Specifically, I want to demonstrate that this theory supports the use of an explanation to maintain goodwill when composing negative messages and also provides a useful classification of such explanations based on five universal strategies for politely refusing requests. This classification, in turn, illuminates some problems which novice writers exhibit in inventing (i.e., creating) explanations and has some specific pedagogical implications. First, current advice about negative messages will be evaluated; second, the relevance of a few concepts from Speech Act Theory will be outlined; and third, those concepts will be used to illuminate the nature of explanations in negative messages.

ADVICE ABOUT USING EXPLANATIONS

Research investigating the use of explanations in negative messages is scarce. The majority of research on these messages has focused on the "indirect plan." A number of years ago, Harbaugh
published a letter to the Editor in the *ACCA Bulletin*, in which he argued against indirectness in letters refusing job applicants (1977). In addition, Jablin and Krone published the results of their analysis of the characteristics of rejection letters to job applicants in *Written Communication*. They found that 82% of such letters contained an explanation. Salerno recently published an article in the *Journal of Business Communication* in which he argues that buffers are not always effective (1988), and Riley has published an article in *The Technical Writing Teacher*, in which she defines the linguistic means for producing indirectness in letters (1988). Of these, only Jablin and Krone deal specifically with explanations, although they were interested in rejection letters as a whole and their effect on job applicants.

Despite the scarcity of research into the use of explanations in writing negative messages, professional writing textbooks are amazingly uniform in their prescription for and description of them. In fact, all of the thirteen textbooks consulted for this paper contain prescriptions for the use of explanations when giving bad news.1

Typically, professional writing textbooks list the qualities the explanation in a negative message should possess. For instance, Wilkinson, Wilkinson and Vik offer a representative statement about the need for a "...thorough, logical explanation that is friendly and positive" (1986: 190). Other necessary qualities of the explanation
listed in these textbooks include: convincing, unselfish, non-apologetic, non-combative, cordial, and specific. Unfortunately, a list of the qualities an effective explanation should possess is of limited practical use to the novice writer actually attempting to invent an explanation or to the teacher trying to explain why a particular letter is or is not convincing. For instance, a teacher might instruct students to reply to a letter from a hypothetical customer who requests that the students' manufacturing company send her/him a case of their high-grade motor oil; the student must refuse the order because her/his company sells only to wholesale distributors. One student's letter contains only the following explanation: We regret that we will not be able to fill your order. The teacher may suggest that the student consider her audience and then revise to make her statement more polite and therefore convincing. However, presumably both teacher and student know the student's letter should be convincing; the question is what words to write in order to make it so, and if the teacher provides a rewrite of the student's explanation for this refusal letter then the student has learned little about how to write explanations for future negative messages. What the student needs is an explicit and principled prescription for writing a polite explanation. In this paper, I hope to show that Speech Act Theory can offer just this type of advice.

In addition to listing these qualities though, professional
writing textbooks provide sample letters which are designed to illustrate the qualities of effective explanations. As an example, Sigband and Bell discuss a situation in which a customer has requested an exchange on a bathing suit purchased from the writer's company and then provide an example of an effective explanation which could be used by the writer to respond to the customer. Part of their example appears below.

...in keeping with the statutes of this state, garments of this type may not be restocked after they have been sold... (1986: 645).

How useful is the authors' sample to the writing student? If the student must compose a negative message for exactly the same situation, then the example will be informative (i.e., it can be copied). But, unfortunately, without a discussion of how this particular example is effective (i.e., logical, polite, etc.), a novice who does not know how to write logically and politely gains little unless s/he is able to infer what specific linguistic cues make this example effective.

In fact, each of the textbooks examined for this paper fails to discuss how their examples produce effective explanations. As another example, Dumont and Lannon discuss a situation in which a
friend requests permission to graze his dairy herd under the power lines on fallow land owned by the writer's company. The authors compose a sample letter which informs the friend that the writer's company has been using a defoliant on the land. A portion of the authors' letter is included below.

...The defoliant could affect the quality of your product, or worse, the herd itself, since the cows would be grazing on the land at least five months a year. I'm sure you'd rather not take that chance, nor would we (1987:163-4).

Of course, it is highly unlikely that a student writer will need to compose a future negative message for exactly this situation. Most importantly, without an explanation of the general principles which make this example effective, student writers who do not already understand how to write effective explanations in negative messages gain little from the authors' example that they can use themselves in inventing an effective explanation for refusing a different request.

In sum, very little research has investigated the use of explanations in writing negative messages, although professional writing textbooks consistently advise their use. While these textbooks offer writers a list of the qualities that effective explanations possess, as well as examples, without a discussion of
how these examples produce the desired qualities, they are of limited use to the writers actually attempting to compose a letter or to their instructors trying to teach them.

Textbooks typically refer to the type of explanations used in conveying bad news according to the kind of request which must be denied by the writer (e.g., explanations in credit refusals, adjustment refusals, or even refusals of favors). I want to demonstrate that explanations for refusing requests can be classified in a way that is useful to teachers of professional writing and their students. The classification offered is built on principles from Speech Act Theory. Therefore, some concepts from that theory and their relevance to the composition of negative messages will be outlined in the next section.

SPEECH ACT THEORY AND NEGATIVE MESSAGES

J. L. Austin broke with a long tradition of language philosophers by arguing that language is used to do things in the world, as well as to say things about the world (1962). The sentences below provide examples.

(1) I promise to give you the gun.

(2) I order you to hand over the gun.
Uttering sentence (1) actually performs an act of promising; likewise uttering (2) performs an act of ordering. Austin noted that there are a number of verbs like promise and order that can be used in this way (e.g., beg, thank, bet, and congratulate). He called these "performatives." John Searle expanded the work of Austin by arguing that every utterance commits a speech act, regardless of whether it contains one of Austin's performative verbs (1969). For example, consider the sentences below.

(3) I will give you the gun.
(4) Give me the gun.
(5) Please give me the gun.
(6) He gave me the gun.

Note that uttering sentence (3) performs an act of promising even though the verb promise is not used (cf. (1) above). In the same way, uttering (4) performs an act of ordering, (5) an act of requesting, and (6) an act of stating, although no performative verb is used.

Since most negative messages are responses to requests, this paper concentrates on the speech act request. First, the role of requests in the organization of discourse is briefly discussed. Second, the concept of felicity conditions is defined. And, finally, five strategies for denying requests based on the felicity conditions
are presented.

Discourse Organization and the Need for Negative Messages

Some speech acts, like requests, require a response and so help to organize the structure of discourse. In fact, any response which follows a request will be interpreted as a response to that request (Davidson 1984: 102). For instance, see the examples below which represent the responses of a secretary to a request from the boss who says Please get me some coffee.

7. (a) OK.
   (b) I'll make some right away.
   (c) Do you want cream and sugar?

8. (a) No.
   (b) Nice day, isn't it?
   (c) It's on the table.

9. (Silence)

Note that all of the (7) responses, despite their varied forms, are interpreted as compliance with the boss's request — we expect the secretary to get the boss some coffee. In contrast, the (8) responses all refuse the request. In (8a) the refusal is explicit,
whereas in (8b) and (8c) the refusal is implicit. Interestingly, even the silence of (9) is interpreted as a response (of either compliance or refusal) to the boss's request. The point here is that requests require a response and that all responses will be interpreted as either compliance or refusal. This analysis of requests supports the need for writing negative messages since even no letter would be interpreted as either compliance or refusal of a request, and if the bad news is given in a letter the writer has some chance to maintain the goodwill of the person being refused.

Conditions on Making Requests

Austin recognized the importance of social context in performing speech acts and included within his theory a set of conditions, called felicity conditions, which must be met in order for an utterance to count as a valid act of a particular type. For understanding explanations in negative messages, five of these felicity conditions are relevant: three propositional content conditions and two sincerity conditions.

According to Speech Act Theory, there are three propositional content conditions which must be met by the utterance used in issuing a request in order for that utterance to count as a valid request. The first condition states that the items referred to in the utterance must exist. For instance, this condition would be
violated if a 13-year-old daughter asks her mother Can I get married at a plantation, and the mother responds with You're not getting married. In this case, something referred to in the daughter's utterance (her marriage) does not exist, and therefore her utterance does not count as a valid request.

The second propositional content condition requires that the addressee must be the actual agent of the action requested. For example, this condition would be violated if, while getting on a crowded bus, you ask a passenger Could you move your bag so I can sit down, and the passenger responds It's not my bag. In this case, the passenger (the addressee) is not actually the agent of the action you have requested, and therefore your utterance does not count as a valid request.

Finally, the third propositional content condition states that the act requested must be a future one. This condition would be violated if you go to McDonald's drive-thru at noon and say I'd like an Egg McMuffin and orange juice, and the voice responds I'm sorry, but we don't serve breakfast after noon. In this case, the act you requested (serving breakfast) is actually a past instead of a future act, and therefore your utterance does not constitute a valid request.

The first sincerity condition which must be met if an utterance is to count as a request requires the requestor to believe that the addressee is able to perform the requested act. As an example of a
violation of this condition, imagine that a teacher said to his student Mona, please put your solution to #5 on the board, when he knows that Mona has not done her homework. In this case, the teacher lacks the belief that Mona is able to do the requested act (put the solution on the board), and therefore his utterance is an infelicitous request.

Finally, the second sincerity condition on requesting states that the requestor must desire that the addressee actually perform the requested act. This condition would be violated if a teenage boy, planning to go to a movie with his friends, asks his little brother Why don't you come with us in response to his mother's insistence that he take his brother along. In this case, the teenager does not actually want his request fulfilled, and therefore his utterance is considered an infelicitous request.

Speech Act Theory differentiates cases in which sincerity conditions are violated from those involving the propositional content conditions. When a sincerity condition is violated, the utterance does count as a valid request; nonetheless, the request is considered infelicitous since the requestor lacks the appropriate belief or desire concerning the requested act.

In brief, Speech Act Theory describes five conditions which must be met in order for an utterance to perform a felicitous request. If any of the three propositional content conditions are violated, the utterance is infelicitous and does not count as a valid speech act,
while if either of the two sincerity conditions is violated, the utterance is simply infelicitous. In the next section, I will demonstrate that these five felicity conditions provide speakers with five strategies for politely refusing requests.

**Politeness Strategies and the Need for Explanations**

Sociolinguists have noted that the expression of many speech acts is socially threatening to both the requestor and the addressee and that this fact motivates strategies for lessening the threat (Brown & Levinson 1987). These are commonly called "politeness" strategies. Both Riley (1988) and Hagge & Kostelnick (1989) have observed that politeness is achieved in professional writing through the use of such strategies as hedging, passive constructions, and nominalizations. Because the speech act request is socially threatening, speakers invoke various politeness strategies to lessen the threat (Labov & Fanshel 1977). For example, imagine a situation in which two business associates, Mary and John, are at lunch. Mary might simply say to John, "Pass the butter." However, she might frame her request more politely by questioning John's willingness to pass the butter: "Will you pass the butter?" (See Riley (1988) or Hagge & Kostelnick (1989) for a comprehensive and insightful discussion of such politeness strategies.)

Similar to making requests, refusing requests is also socially
threatening and therefore motivates speakers to invoke strategies for lessening the threat. Labov & Fanshel noted that "the only way in which a request may be refused with reasonable politeness is to give an accounting" (1977:). Therefore, the inclusion of an explanation in letters conveying refusals is justified.

One politeness strategy for refusing a request involves suggesting that a felicity condition on requesting has been violated. (Gordon & Lakoff 1971). In fact, this strategy appears to be the most common (Levinson 1983) and also universal (Brown & Levinson 1987) strategy for politely denying requests. So when addressees of a request want not to comply, but also to lessen the threat of refusing, they generally adopt one of the following strategies for implicitly refusing.

STRATEGY 1: Deny that an item referred to in the request exists.

STRATEGY 2: Deny that the addressee is the agent of the requested action.

STRATEGY 3: Deny that the requested act is a future act.

STRATEGY 4: Cite reasons for the addressees inability to perform the requested act.

STRATEGY 5: Cite reasons that the requested action is actually not desired by the requestor.

Strategies 1-3 are based on the propositional content conditions,
while Strategies 4-5 are based on the sincerity conditions for the speech act request.

The use of any of these five strategies in response to a request constitutes a claim that the request is not a felicitous speech act. If a request is claimed to be infelicitous, then that request is dismissed. In using these strategies, the addressee of a request fulfills two, seemingly incompatible desires: first, not to comply with the request and second, to maintain cooperative social relations with the requestor. Addressees fulfill their desire not to comply by dismissing the request with these strategies based on the felicity conditions. They fulfill their desire to maintain social relations by refusing politely (i.e., implicitly) instead of bluntly (i.e., explicitly). Maintaining good relations with requestors appears to be what textbooks call "maintaining goodwill" when giving bad news. Therefore, politeness strategies like those listed above can be used to maintain goodwill when it is necessary to write a refusal letter (i.e., most negative messages).

It is important to note that these politeness strategies are employed by addressees regardless of the actual validity of the requestor's utterance as a speech act of requesting. For instance, imagine that, after reading over a student's paper and deciding it is unacceptable, you ask him to revise it. He may claim I did revise it. Your student has used Strategy 3 (denied that the requested act is a future act) thereby explaining why your request has been
dismissed—even though the revision you have actually requested is a future act. In other words, despite the actual validity of your utterance as a request, Strategy 3 dismisses your original request by claiming it is not a valid speech act and requires you to use another request in order to get the revision you want from your student.2 Note the difference between the use of the strategy (based on the third propositional content condition) in this situation and the actual violation (of the third propositional content condition) in the example of your order at McDonalds. The point here is that the politeness strategies work because they claim that a felicity condition is violated, regardless of whether the condition is actually violated.

This section has presented five points of interest regarding explanations in negative messages based on Speech Act Theory. First, utterances actually perform acts, called speech acts. The act performed by most negative messages is a refusal to comply with the reader's request. Second, the speech act request requires a response and that response will always be interpreted as either compliance or refusal concerning the requested action. This supports the need for writing negative messages and predicts that the purpose of such messages will be interpreted as either compliance or refusal by the reader. Third, utterances must meet certain conditions, called felicity conditions, in order to count as well-formed requests. Fourth, sociolinguists have investigated the socially threatening
nature of some speech acts, including requests and their refusals. In addition, these linguists have described politeness strategies which are used to lessen the social threat involved in refusing requests; one of these involves the inclusion of an explanation. Thus, the use of explanations is justified in professional writing when the reader's request is refused. And, fifth, there are five of these politeness strategies (based on the felicity conditions) which are used by the addressee of a request to refuse to comply; each strategy dismisses a request by claiming that it was not a well-formed speech act. The use of these strategies for refusing a request constitutes an explanation for the refusal and accomplishes two disparate purposes for the writer of a negative message: (a) not to comply with the reader's request by dismissing it and (b) to maintain the reader's goodwill by being as polite as possible.

A CLASSIFICATION OF TEXTBOOK EXPLANATIONS

In this section, I want to demonstrate that explanations for refusing a request in negative messages can be classified according to the five politeness strategies presented above, and then explore the possible impact of that classification on teaching negative messages.
The Classification

**Strategy 1.** (Deny that an item referred to in the request exists). Since there were no textbook examples of explanations which fall into this class, I will provide a constructed example. Imagine a situation in which a customer orders a specific kind of light bulb which is no longer available. The writer of an explanation simply needs to inform the customer that no one makes these light bulbs anymore. For instance, *I'm sorry, but the KV310 is no longer being manufactured.* In other words, the writer's explanation denies that the item referred to exists. (Obviously, the writer would want to offer some kind of alternative product to the reader, but this would not be a part of the explanation.) This explanation is considered polite because the refusal is accounted for by claiming that the reader's request was invalid as a speech act instead of explicitly refusing to comply (i.e., saying No). I will return to the apparent reason for the lack of textbook examples using Strategy 1 after discussing examples of the other strategies.

**Strategy 2.** (Deny that you are the agent of the requested act). Sigband and Bell provide an example explanation from a negative message which responds to a customer's request for an adjustment on damaged merchandise. The writer is advised to inform the customer that the carrier inspects material before accepting it. The authors' explanation is provided below.
...We have their [the carrier's] receipt indicating that this order was turned over to them in excellent condition. [paragraph break] For this reason you will probably want to get in touch with Rapid Freight as quickly as possible and enter a claim for the four damaged lamps (1986: 641).

Note that the effect of informing the customer that the carrier inspects merchandise before accepting it and of suggesting that the customer contact the carrier to make a claim is precisely that of claiming that the carrier is the proper agent of the request for an adjustment, and therefore that the company is not. Use of this strategy permits the writer to implicitly refuse the reader's request by dismissing the reader's speech act. Therefore, the letter is perceived as polite (as far as is possible) because it responds to the reader's request and accounts for the writer's refusal without explicitly refusing.

Strategy 3. (Deny that the requested act is a future act). Lesikar provides an example explanation in which a charity has requested that a company make a donation. The writer is advised to inform the charity of the company's procedure for contributing to charities. A portion of the explanation appears below.
As our budgeted contributions for this year already have been made, the best we can do is to place your organization on our list for consideration next year (1979: 130-1).

In this example, the effect of stating that the company's contributions have already been made for this year is to claim that the requested act of donating is not a future act. (Of course, the offer to put the charity on a list for later consideration may be seen simply as a delay of responding to the request, but the way in which the delay is achieved is through the use of the third strategy). Again, the letter containing this explanation is perceived as polite in part because the writer's refusal is accounted for by claiming the invalidity of the reader's request.

Strategy 4. (Cite reasons for your inability to perform the requested act). Bowman and Branchaw offer an example explanation which refuses a customer's order for a tractor to be delivered in two weeks. The writer is advised to acknowledge that the usual time of delivery is two weeks, and the remainder of their example follows.

Because of the steel workers' strike and an unprecedented demand for Low Tractors this season, it will take us six to eight weeks to fill your order (1979: 130).
Note that this example demonstrates the effect of citing reasons that deny the company's ability to comply exactly with the customer's request. Once more, this explanation makes the letter polite in part because the writer has accounted for her/his refusal and dismissed the reader's request through the use of this strategy.

It is worth pointing out that this strategy requires more than a statement of the writer's inability; without including the reason for the company's inability to comply, the explanation has little "politeness" value. In fact, as most textbooks note, solely citing company policy as the explanation for a refusal is as impolite as simply stating inability. For instance, consider the explanation below for refusing the reader's request to come to work late because of baby-sitting difficulties taken from Harcourt, Krizan and Merrier.

Company policy requires that all employees report to work at 8 a.m. Your pay would be docked if you were to come in late... (1987:223).

It seems likely that this kind of "explanation" is unacceptable because polite explanations for refusing must demonstrate that the writer's reasons lay outside her/his control, and also be personally relevant to the reader. In general, the more attentive the writer is to the reader, the more polite the writer's response. Now compare Harcourt et al.'s suggested revision below.
The high quality of your work as a courier has been possible for at least three reasons: (1) your interest in and enjoyment of the work, (2) your commitment to promptness and thoroughness during your rounds, and (3) the scheduling of your work at the time it is most needed—during regular working hours. The flow of work in the Word Processing Center depends on this kind of courier service (1987:223).

The improvement in tone is due to citing reasons for the writer's refusal which appear to be outside the writer's control and which are personally relevant to the reader.³

**Strategy 5.** (Cite reasons that the requested act is actually not desired by the requestor). Huseman, Lahiff and Penrose provide an example explanation in a negative message refusing a customer's request for a refund on a sale-priced suit which is not defective. A portion of their example appears below.

You can be sure that any clothing you buy at Grenier's will be brand new and that you are the original purchaser. We feel that we owe that to our customers (1988: 169).
The effect of the authors' statement that they owe it to their customers to guarantee their clothing as unused is to imply that this particular refusal is necessary for all their customers' (which includes this customer's) benefit and therefore that the request is not actually desired by the reader.

Since violations of the sincerity conditions, on which Strategy 4 and 5 are based, do not invalidate a reader's request as a speech act (instead, they claim only its infelicitousness), I would expect that Strategy 4 and 5 may be less convincing than the other three based on the propositional content conditions. In fact, if people dislike being told that they really do not want what they think they do, Strategy 5 could possibly insult the reader.

Interestingly, a number of textbooks suggest an approach to explanations which appears to fall under Strategy 5. Bowman and Branchaw provide an instance.

...when possible...connect the reasons to a long-term reader benefit (for example, keeping prices low, providing better service to all customers, receiving the exact item of choice, or avoiding credit difficulties) (1979: 127).

Bovee and Thill offer similar advice: "The tactful business communicator highlights the benefits of the decision to the audience
instead of focusing on the company" (1989: 229). However, as I suggested about Strategy 4, Strategy 5 also appears to require that the reasons cited be made personally relevant to the reader in order for the explanation to be perceived as sufficiently polite. The following explanation for refusing the reader's request is taken from McNally and Schiff.

Billing you on a monthly basis, you'll agree, would result in higher administrative costs that could well result in higher rates. Annual payment therefore ensures you of efficient service at very competitive rates (1986:190).

In this example, the writer uses Strategy 5, giving reasons why the reader does not actually want his request granted. Future research might investigate the impact on politeness when explanations are carefully tied to the reader's personal interests. In addition, researchers might document the relative politeness of the five strategies.

The Pedagogical Implications of the Classification

Now I want to turn to the question of why some explanations for refusing requests are more difficult to write than others. Making
use of the five strategies discussed above, it appears that explanations which rely on any of the propositional content conditions (i.e., Strategies 1, 2 or 3) are the easiest to use. Since any of the strategies based on the propositional content conditions will necessarily refer to some aspect of the reader's request, little invention (i.e., creative effort) is required by the writer in a situation which lends itself to the use of these three strategies. For example, the writer who may appropriately claim that an item referred to in the reader's request does not exist (Strategy 1) need only know what items the reader referred to and whether these exist or not. In fact, I think the reason that none of the textbooks I used in preparing this paper included an example explanation using Strategy 1 is a reflection of the ease with which such explanations are composed.

On the other hand, composing explanations founded on the sincerity conditions (Strategy 4 or 5) appears to be considerably more challenging (as evidenced by the proportionately larger number of examples using these strategies in textbook examples). With these strategies, the writer cannot simply refer to some aspect of the reader's request. Instead, in Strategy 4 s/he must compose reasons which imply her/his inability to perform the requested act by examining the entire situation of the request. For instance, in the example above which illustrated the use of Strategy 4, the writer cited the reasons for her/his inability to fill an order for a
tractor as (a) a steel workers' strike and (b) unusual demand. The "material" for composing this explanation lay outside the reader's actual request itself, and so required more inventive effort on the part of the writer.

In addition, composing explanations using Strategy 5 will be difficult because the writer must discover reasons which support the claim that the reader does not really desire her/his own request to be fulfilled. The use of both Strategy 4 and 5 requires thorough and effective audience analysis since the reasons composed for the writer's inability (in 4) and for the reader's lack of desire (in 5) must be personally relevant to that reader. Furthermore, the writer using Strategy 4 must convince the reader that the reasons for the writer's refusal lay beyond the writer's control in order to be most polite.

What strategies will apply in any given situation? It seems unlikely that more than one strategy based on the propositional content conditions (Strategy 1, 2 and 3) will be applicable in any one situation, and of course it is possible that none of them will apply; instead Strategy 4 or 5 alone might be appropriate. For instance, if Jane requests a refund on a sale-priced suit from C's Fashions, it is difficult, though not impossible, to imagine a situation in which Strategy 1 applies (i.e., it seems unlikely that either the suit, C's Fashions, or Jane do not exist). It is also unlikely that Strategy 2 could apply in this situation (i.e., Jane
surely issued her request to the right store, although it is imaginable that C's Fashions has filed bankruptcy and that Jane will be advised to contact their attorneys as the proper agents for issuing her refund.) It is also difficult, though not impossible, to imagine how Strategy 3 might apply here (e.g., the store may have already sent Jane her refund). In any case, it is highly unlikely that a number of these three strategies will apply in any one situation.

The point here is that, while explanations for a refused request will be founded on at least one of these five strategies, each request's situation will dictate which particular strategies are applicable. In contrast to the first three strategies, Strategy 4 would appear to be applicable in any situation (i.e., the writer is always attempting to convince her/his reader of her/his inability to fulfill the reader's request in an explanation for refusing). And Strategy 5 might be applicable in a large number of situations (however difficult it is to compose reasons that lead the reader not to desire for her/his request to be granted).

The differences in the ease of invention and the thoroughness and effectiveness of audience analysis which are required in using these five strategies suggest that writing teachers initiate novice writers to composing negative messages (explanations, in particular) with assignments for situations in which Strategy 1, 2 and/or 3 applies. Only later, after students have gained some facility in composing the
easier explanations, should assignments require them to construct explanations for situations in which only Strategy 4 and/or 5 may apply.

There are other pedagogical implications of this analysis of explanations in negative messages as well. For instance, teachers armed with the knowledge that explanations are founded on one of five strategies should have a distinct advantage in diagnosing the ineffectiveness of their students' explanations. Consider the example above in which a teacher instructs students to reply to a letter from a hypothetical customer who requests that the students' manufacturing company send her/him a case of their high-grade motor oil; the student must refuse the order because her/his company sells only to wholesale distributors. If one student's letter contains only the following explanation, *We regret that we will not be able to fill your order*, then the knowledgeable teacher can do more than simply note the impoliteness of the student writer's letter or correct this particular letter's explanation. Instead, the teacher can offer the student a general principle for constructing any convincing explanation for a refusal: it is more polite to deny you are the agent of a requested act (Strategy 2) than simply to state your inability to comply.
SUMMARY

In this paper, I have attempted to illustrate the explanatory power of the theory of speech acts for understanding explanations in negative messages. Such explanations have received little attention from researchers in professional writing and yet textbooks consistently advise their use. In particular, writers are advised to include logical, polite explanations in negative messages. The textbooks' approach to teaching writers about such explanations includes listing the qualities that effective explanations should possess and, also, giving example letters which are supposed to illustrate explanations with these qualities. Unfortunately for writing teachers and novice writers, the textbooks' examples are not as useful as they could be because the authors do not discuss the specific linguistic cues which produce the desired qualities.

In applying speech act theory, I argued that most negative messages can be defined as responses to the speech act request, in which the writer refuses to comply with the reader's request. In addition, the need for such letters is explained by the role of requests in the organization of discourse. Moreover, the use of an explanation in order to maintain goodwill is substantiated by research in sociolinguistics. This research has investigated the ways in which people lessen the social threat involved in some speech acts by using so-called "politeness" strategies.
Most importantly, explanations in negative messages were classified into five groups based on universal politeness strategies for refusing requests. These strategies are founded on the felicity conditions for issuing well-formed requests and amount to a claim by the writer that the reader's request has been dismissed because it was ill-formed. These strategies include:

*(Strategy 1) Deny that an item referred to in the request exists.
*(Strategy 2) Deny that you are the agent of the requested act.
*(Strategy 3) Deny that the requested act is a future act.
*(Strategy 4) Cite reasons for your inability to perform the requested act.
*(Strategy 5) Cite reasons that the requested act is not desired by the requestor.

Although convincing explanations in a negative message will be based on one of these strategies, not every strategy will apply in every situation. Moreover, explanations for situations in which Strategy 1, 2 or 3 apply require no real invention on the part of the writer, while those for situations in which Strategy 4 or 5 apply require both considerable inventive effort and a thorough and effective analysis of the writer's audience in order to compose reasons for refusing that are personally relevant to the reader, as well as beyond the writer's control.
NOTES

1 The thirteen textbooks include: Bovee & Thill (1989); Bowman & Branchaw (1979); Dumont & Lannon (1987); Harcourt, Krizan & Merrier (1987); Himstreet & Baty (1977); Huseman, Lahiff & Penrose (1988); Lesikar (1979); McMurrey (1988); McNally & Schiff (1985); Murphy & Hildebrandt (1984); Oliu, Brusaw & Alred (1988); Sigband & Bell (1986); and Wilkinson, Wilkinson & Vik (1986).

2 Although it may seem strange to call the student's response here 'polite,' note the difference in tone if the student had simply responded with No. The use of any strategy is more polite than explicit refusal.

3 There is one sincerity condition that I have omitted from this paper, which might have provided a sixth strategy: cite reasons for your unwillingness to perform the requested act. Since the writer must cite reasons in order to be most polite but need not include an explicit statement of his or her inability, the reader is often left to judge whether the cited reasons lead to the writer's inability (Strategy 4) or unwillingness to perform the requested act. Obviously, it is more polite to claim inability than unwillingness since inability presupposes that the writer's reasons for refusing are not within his or her control. For example, imagine that you tell your son, Please pick up your books off the table. If he responds with I can't, you are less likely to get angry with him than if he responds with I won't. It is important to remember that
the use of a particular strategy for refusing a request need not necessarily reflect the actual reason for the refusal; the purpose of the strategies is to maintain social relations (i.e., to be polite). Therefore, even though many decisions to refuse the reader's request in the business world may be the actual result of the writer's unwillingness, if the writer wants to maintain the goodwill of the reader by being as polite as possible, he will be better off implying that he is unable to fulfill the reader's request. Future research might investigate whether readers actually perceive the reasons given for refusing under Strategy 4 as unwillingness or inability.
REFERENCES


INTRODUCTION

Although the most comprehensive work on cohesion, Halliday and Hasan's theory (1976) is not without limitations. Most importantly, Halliday and Hasan's theory intentionally excludes formal cohesive elements (e.g., syntactic parallelism), while claiming that all cohesion is a semantic phenomenon. Other researchers have noted that one of the problems with Halliday and Hasan's theory involves the authors' almost complete reliance on one fictional text for analysis (e.g., Johns 1980, Markels 1983, and Stotsky 1983) and, although a number of studies have analyzed other discourse genres and expanded Halliday and Hasan's categories to include formal cohesive devices (e.g. Witte & Faigley 1981, Markels 1983 and Hartnett 1986), no one has offered a theory which captures the nature of both semantic and formal cohesion. However, Manning (1988) convincingly illustrates the utility of models of visual perception for analyzing discourse. Similarly, I will argue here that visual figure-ground perception can be usefully applied to an analysis of discourse in order to elucidate the nature of both semantic and formal cohesion. Specifically, I will propose a repetition theory of cohesion in which cohesion is the
result of repetitions which form a homogenous background against which semantic distinctions are foregrounded.

In addition, Halliday and Hasan's theory provides no effective way in which to distinguish the nature of reference cohesion from lexical cohesion. Halliday and Hasan propose that reference is distinguished from lexical cohesion because reference is grammatical. Yet, the authors group both reference and lexical cohesion together by claiming they both result in cohesion because of shared referents. In fact, they state the nature of these two categories is not always easily distinguished (1976:279). However, the fundamental distinction between sense and reference within the field of semantics offers a method by which reference and lexical cohesion can be distinguished. First, an analysis of current research on cohesion is presented. Second, a theory of cohesion as repetition based on perceptual theory is proposed. And, finally, a summary is included.

CURRENT THEORIES

The most important and comprehensive work on cohesion is unquestionably Halliday and Hasan's *Cohesion in English* (1976). Halliday and Hasan define cohesion as a semantic phenomenon which creates a text by linking elements of a discourse with each other. First, I will present an overview of Halliday and Hasan's
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categorization of cohesive devices along with other researchers' attempts to expand or modify that categorization. Next, I will discuss problems with Halliday and Hasan's theory which lie beyond the scope of their categories.

The Categories

Halliday and Hasan's seminal work posits four major types of cohesion: reference, substitution/ellipsis, conjunction, and lexical. Each of these is discussed below along with other related research.

Reference. Halliday and Hasan explain that some textual items indicate missing, presupposed referents, thereby creating a connection or tie within the text. They offer the following example of cohesion produced in this way.

(1) Doctor Foster went to Gloucester in a shower of rain. He stepped in a puddle right up to his middle and never went there again (1976:31).

In this example, the italicized words he and his presuppose the missing referent, Dr. Foster, while there presupposes the referent, Gloucester. In other words, the personal and demonstrative pronouns italicized in (1) are cohesive because they presuppose referents
located elsewhere in the text.

Although Halliday and Hasan omit such elements as verb tense from their discussion, others have noted that tense is often used cohesively (e.g., Witte & Faigley 1981). I discuss this cohesive device here since both pronouns and tense are deictic in nature (i.e., devices for "pointing" in a discourse). For instance, consider the example below.

(2) He does not even think Surely Judith didn't write him about that letter or It was Clytie who sent him word somehow that Charles has written her (Faulkner 1936:353).

In (2) the italicized section of the sentence is cohesive partly because the tense of both verbs (didn't and was) is the same.

Substitution/Ellipsis. Halliday and Hasan also note that connections can be made within a discourse by substituting or omitting certain items. For example, they offer the following example of cohesion produced through substitution.

(3) My axe is too blunt. I must get a sharper one (1976:89).

In (3) the italicized word one presupposes and substitutes for axe,
thus creating a cohesive tie between the two sentences. Halliday and Hasan claim that "reference is a relation on the semantic level, whereas substitution is a relation...of linguistic 'form'" (1976:89). Nevertheless, the authors argue that "the concept of cohesion is a semantic one" (1976:4). Thus, the authors distinguish between two of their categories by claiming that only one of them is semantic, but insist that all cohesion is semantic. Either the authors are using the term semantic in two different senses or they contradict themselves. In either case, the nature of cohesion remains unclear. Are connections within a text semantic in nature or both semantic and formal? The authors themselves state that they are intentionally "excluding from consideration the effects of formal devices such as syntactic parallelism, metre and rhyme..." (1976:10), but if these formal devices are cohesive, then how can cohesion be a purely semantic phenomenon?

Halliday and Hasan offer the following example in order to argue that syntactic parallelism doesn't produce a text.

(4) Although the light was on he went to sleep.
    Although the house was unfurnished the rent was very high. Although he was paid a high salary he refused to stay in the job (1976:20).

The authors explain, "this sort of grammatical parallelism is not
irrelevant to internal cohesion...but by itself it does not make a string of sentences into a text" (1976:20). Unfortunately, the authors do not explain how parallelism is relevant.

Although a number of researchers have followed Halliday and Hasan in defining cohesion as a purely semantic phenomenon (e.g., Bamberg 1983, Tierney & Mosenthal 1983, and McCulley 1985), others have noted the importance of non-semantic sources of cohesion (Lybbert & Cummings 1969, Witte & Faigley 1981, Goodin 1982, and Markels 1983). For example, Witte and Faigley note that cohesion is often the result of syntactic parallelism and consistency in verb tense and point of view. Compare Lybbert and Cummings' example of cohesion produced through syntactic parallelism in (5) with a revision in which no parallelism occurs in (5') below.

(5) The aim of the Platonic philosophy was to exalt man into God. The aim of the Baconian was to provide him with what he required while he continues to be a man (1969:36).

(5') The aim of the Platonic philosophy was to exalt man into God. To provide him with what he required while he continues to be a man was what the philosophy of Bacon aimed to do.
I would certainly contend that (5) is more cohesive than (5'); yet the only salient difference between the two is the order and configuration of their syntax. Syntactic parallelism obviously produces cohesion. But neither Halliday and Hasan, Witte and Faigley, nor Lybbert and Cummings offer a theory of cohesion which accommodates both semantic and formal cohesive devices like parallelism.

Markels argues that cohesion is both a syntactic and semantic phenomenon. However, she does not deal with parallelism. Instead, the author offers the following example to illustrate that Halliday and Hasan's cohesive devices may occur without producing cohesion.


The author then argues that one key in producing cohesion is the concept of dominance. She explains that "dominance is attained not simply by repetitions of... [lexical items and their] pronoun substitutes, but by the consistent appearance of those repeated terms in subject position" (1983:453). Markels' claim, however, predicts that the example below will not display cohesion.

(6') John likes oranges. Oranges grow in California and Florida. My parents took John to California last year and visited some orange groves.
I would argue that (6') exhibits more cohesion than (6); yet (6') maintains the same group of subjects as (6). Thus, Markels' theory cannot explain the relatively greater cohesion of (6') compared to (6), and Halliday and Hasan's theory cannot explain the lack of cohesion in (6).

In short, Halliday and Hasan claim that cohesion is a semantic phenomenon and exclude formal cohesive devices like syntactic parallelism, but include formal cohesion produced through substitution/ellipsis in their theory. While others have listed a variety of formal cohesive devices (e.g., parallelism, given-new arrangement, rhyme, verb tense, etc.), no one has offered a unifying theory of both semantic and formal cohesion.

Conjunctives. Halliday and Hasan also note that the use of conjunctives connects discourse elements. The authors explain that, unlike the other forms of cohesion which presuppose a missing item, conjunctives specify "the way in which what is to follow is systematically connected to what has gone before" (1976:227). They offer the following example of such cohesion.

(7) They fought a battle. Previously, it had snowed
(1976:228).

In (7) the word *previously* presupposes a time relation between the propositions expressed by the two sentences, thus linking them with
each other. As Halliday and Hasan note, conjunction creates a different kind of connection from the other cohesion categories since it is the very meaning of the conjunctive item that creates a connection, and no specific textual item (i.e., a referent or a word) is presupposed.

**Lexical.** Finally, Halliday and Hasan posit a category of lexical cohesion in which "the cohesive effect [is] achieved by the selection of vocabulary" (1976:274). Within this category, the authors posit two general classes of lexical cohesion: reiteration, including the use of (a) repetition of the same word, (b) synonyms, (c) superordinates, and (d) general words (e.g., place in (7) below), and collocation. They give the following example of lexical cohesion.

(8) Can you tell me where to stay in Geneva? I've never been to the place (1976:275).

According to the authors, in (8) the italicized word place presupposes the referent Geneva and thus creates a link between the two sentences. Unfortunately, Halliday and Hasan's definition of the lexical category is problematic because we could argue that all their categories are the result of vocabulary selection. For example, choosing the word one to substitute for axe in example (3) above is a vocabulary selection. Likewise, choosing the word previously to
connect the propositions expressed by example (7) above is a vocabulary selection.

So how is this last category distinguished from the others? Halliday and Hasan argue that reference and substitution/ellipsis, as well as conjunction (although to a lesser degree), are grouped together as grammatical, while the last category is lexical. Yet, the authors group both reference and lexical cohesion together by claiming they both result in cohesion because of shared referents. In fact, they state that "the boundary between lexical cohesion of the type we are calling REITERATION, and grammatical cohesion of the REFERENCE type, is by no means clearcut" (1976:279). Consider the following examples where the cohesive terms appear in italics.

(9) Jane loves volleyball. She likes to play every day. [grammatical: reference]
(10) Jane loves volleyball. Jane likes to play every day. [lexical: reiteration of same word]
(10') Jane loves volleyball. The girl likes to play every day. [lexical: reiteration of general noun]
(10'') Jane loves volleyball. Girls like to play every day. [lexical: collocation]

The use of she in (9) is cohesive because of its dependence on Jane for its interpretation (i.e., their common referent). However, the
second occurrence of Jane in (10) might be construed as cohesive whether Jane refers to the same person or two different ones. In fact, the authors write that "reference is irrelevant to lexical cohesion [involving the repetition of the same lexical item]" (1976:284).

In addition, it seems reasonable to expect that the uses of both girl in (10') and girls in (10'') would be cohesive for the same reason, especially since their usage is classified as lexical cohesion by Halliday and Hasan. Unfortunately, the referents of girl and girls are not the same. As Halliday and Hasan explain, "many instances of cohesion are purely lexical, a function simply of the co-occurrence of lexical items, and not in any way dependent on the relation of reference" (1976:283). In fact, they provide a list of the possible reference relations between lexical cohesive devices: identical, inclusive, exclusive or unrelated. Clearly, the nature of lexical cohesion cannot be understood by claiming that it depends on shared referents. But how then can its nature be understood? Unfortunately, Halliday and Hasan offer no other explanation besides the frequent co-occurrence of lexical items.

Halliday and Hasan comment about their other category of lexical cohesion, collocation (e.g., in (10'') above), "here we shall simply group together all the various lexical relations that do NOT depend on referential identity and are not of the form of reiteration...and treat it under the general heading of COLLOCATION" (1976:287). The
authors themselves note that collocation is the most problematic part of lexical cohesion and that its study is a major task for future research (1976:287).

Stotsky (1983) attempts to solve part of the problem with Halliday and Hasan’s lexical category by positing a revision of these cohesive devices based on an analysis of expository essays. She proposes that the class of reiteration describes a group of lexical cohesive devices which express systematic relationships; this class includes all of Halliday and Hasan’s types as well as antonyms (categorized under collocation by Halliday and Hasan) and derivatives (omitted by Halliday and Hasan). Consider the example below.

(11) June studies psychology at L.S.U. She plans to be a clinical psychologist when she graduates.

Note that psychologist is cohesive in (11) because it is a derivative of psychology, which occurs in the preceding sentence. Stostky’s inclusion of derivatives accounts for one type of cohesion not included in Halliday and Hasan’s theory. In addition, she proposes that the class of collocation describes a group of lexical cohesive devices which frequently co-occur, but express no systematic relationships. Consider the following example.

(12) Jack didn’t laugh because the joke was so stupid.
Is the use of joke and laugh in (12) cohesive? If these words frequently co-occur, shouldn't we be able to discern some systematic relationship between them? Unfortunately, neither Stotsky nor Halliday and Hasan offer an explanation.

Hartnett (1986) also proposes a revision of cohesion categories in which cohesive devices are grouped according to their function: static or dynamic ties. The author explains that "cohesive ties vary in the kinds of mental processes they can express; many ties simply hold a reader's attention on a topic [static ties], while others develop a topic rhetorically [dynamic ties]" (1986:142). For instance, consider the examples below.

(13) The dog was old and sick. And it died.
(13') The dog was old and sick. Therefore it died.

Hartnett argues that the use of an additive conjunct like and creates a static tie between the two propositions expressed by the two sentences in (13), while the use of a causal conjunct like therefore creates a dynamic tie in (13'). In other words, and simply holds the reader's attention in the discourse, while therefore signals a development in the discourse.

Hartnett classifies superordinates/hyponyms and temporal, causal, and adversative conjuncts as dynamic cohesive devices. And she groups parallel structure, tense, and the rest of Halliday and
Hasan's categories as static cohesive devices. Although Hartnett's theory elucidates the function of both semantic and formal cohesive ties, she does not offer an explanation of the nature of cohesion except to propose that ties express mental processes. However, most of us assume that any use of language expresses mental processes, thereby limiting the utility of Hartnett's theory for elucidating the nature of cohesion. Ideally, we should strive to understand the nature of those mental processes which are specific to cohesion.

Other Complaints

A number of researchers have complained about the comprehensiveness of Halliday and Hasan's theory because of their reliance on one fictional text for the majority of their examples. For instance, Johns writes that Halliday and Hasan's theory requires further change, especially in the lexical category, where coding is especially difficult. Originally, most of the...coding was done on British literature...but items which appear [there]...are not those typical of modern business writing (1980:41).

Other researchers have also questioned the comprehensiveness of Halliday and Hasan's theory (e.g., Stotsky 1983, Markels 1983, and
Another group has questioned the explanatory power of Halliday and Hasan's theory because it provides a quantitative measure of the cohesiveness of a text (e.g., Stotsky 1983, Tierney & Mosenthal 1983, and Hartnett 1986). For example, Hendricks states,

It takes Halliday and Hasan about seven pages to explain their scheme for coding the types of cohesion...And when one imagines the whole text of, say, Alice in Wonderland subjected to such an analysis, the result is bound to be a mass of data so overwhelming as to be practically useless (1988:104).

Consider the following example from Halliday and Hasan.

(14) Sometimes just being alone seems the bad thing.
Solitude can swell until it blocks the sun

According to Halliday and Hasan's theory, the italicized words in (14) are both used cohesively with being alone. Thing can be described as cohesive because it is a general word that depends for its referent on being alone; solitude is cohesive because it is a synonym of being alone. But what have we explained by noting that
each sentence contains one lexical cohesive tie? With this short example, the result of our cohesion analysis is not massive, but it is less revealing than we might hope.

Another problem concerns the role of reader presuppositions and repetitions of textual elements in producing cohesion. A number of researchers has argued for the importance of reader presuppositions (e.g., Bellert 1970, Halliday & Hasan 1976, van Dijk 1980, Witte 1981, and Hartnett 1986). However, Halliday and Hasan, along with Hartnett, argue for the importance of presuppositions in producing cohesion, while the others focus on the importance of such presuppositions for producing coherence. In addition, early researchers argued for the importance of textual repetition (e.g., Lybbert & Cummings 1969 and Bellert 1970). However, Lybbert and Cummings focus on the importance of repetitions for producing cohesion, while Bellert focuses on the importance of repetitions for producing coherence.

As evidenced by the previous discussion of the role of reader presuppositions and textual repetitions, an additional problem concerns the relationship of cohesion with coherence. While most researchers agree that the use of cohesive devices is a necessary but insufficient component of coherence (e.g., Halliday & Hasan 1976, van Dijk 1980, Bamberg 1983, McCulley 1985, and Tierney & Mosenthal 1983), there appears to be little additional agreement about the nature of the relationship between these two phenomena. For example,
one researcher has found that only certain lexical categories of cohesion predicted coherence (McCulley 1985), while others have assumed the importance of all Halliday and Hasan's categories for producing coherence (e.g., Bamberg 1983).

Although a number of studies have improved the comprehensiveness of cohesion theory by analyzing a variety of discourse genres as well as by proposing new and modified types of cohesive elements, I have discussed four general problems with current theories of cohesion in this section. First, no theory has convincingly defined the nature of lexical cohesion or distinguished the nature of this category from reference and conjunctive cohesion. Second, no theory has yet offered a convincing and revealing explanation of the nature of all cohesion, including both semantic and formal devices. Third, we do not currently understand the role of reader presuppositions and repetitions of textual elements for producing cohesion. And, fourth, we do not currently understand the nature of the relationship between cohesion and coherence. I hope to show, in the next section, that the use of an analogy with visual perception theory can elucidate some of these unknowns.

PERCEPTION AND DISCOURSE ANALYSIS

Manning suggests that "we require a broader theory of 'effective representation' (i.e., communication or rhetoric) in which writing
can be compared to other forms of signification" (1988:242). His work on the relevance of visual perception and writing has provided an illuminating theory of the distinction between literary and technical discourse (1988). Specifically, Manning illustrates that "distinct types of line drawings replicate the literary/technical contrast in a visual medium" (1988:241). That contrast is due to the differences in the viewer/reader's perceptions. Consider the following example, adapted from Manning's article.

Imagine a drawing of a bird which is partly composed of several similar lines to create the illusion of feathers. This iterative detail "promotes the perception of actual physical appearance" (1988:252). In contrast, imagine a map which is partly composed of clearly distinct features (e.g., red lines for state highways and black lines for county roads). This contrastive detail "promotes the perception of conceptual comparisons" (1988:252) not physical appearance. The viewer perceives the drawing as a substitute for the bird it represents, while s/he perceives the map as a standard by which the roads it represents can be understood. Manning argues that the most effective technical writing is perceived as a standard, predominated by contrastive detail, while the most effective literature is perceived as a substitute, predominated by iterative detail. Thus Manning establishes the relevance of models of visual perception to discourse analysis. Similarly, I argue here that the nature of cohesion and coherence can be better understood by
analogy with models of visual perception. In this section, I will present a theory of cohesion based on such perception theory and provide an alternative categorization of cohesion types in order to address some of the problems with current classifications discussed in the previous section.

**Cohesion as Repetition**

Visual perception theory has long considered figure-ground perception basic. In his classic book, *Visual Thinking*, Arnheim writes that perception

relies on the simple distinction between figure and ground: an object, defined and more or less structured, is set off against a separate ground, which is boundless, shapeless, homogeneous, secondary in importance, and often entirely ignored (1969:284).

To illustrate, consider the figure below.³
Note that, although the "0" in both (A) and (B) appears in the same row and column, it is significantly easier to perceive the "0" in (B) because the repetition of "X"s provides a homogeneous background against which the "0" is novel. As Broadbent, a major figure in psychology, writes "any novel stimulus is especially likely to be perceived" (1958:106). In other words, the repeated elements are perceived as a uniform background which foregrounds the non-repeated elements.

I believe that the nature of cohesion can best be understood by analogy with figure-ground perception. Consider example (5) again, repeated below.

| (A) XTKLPWXE | (B) XXXXXXXX |
| MWIZKLSQ    | XXXXXXXX    |
| PWEJVODF    | XXXXX0XX    |
| RHCTUGBN    | XXXXXXXX    |

(5) The aim of the Platonic philosophy was to exalt man into God. The aim of the Baconian was to
provide him with what he required while he continues to be a man (Lybbert & Cummings 1969:36).

Note again that the two sentences in (5) display parallel syntactic structure as illustrated by their parallel italicized portions. I believe the repetition of syntactic structure prompts our perception of cohesiveness in this example. In my view, both writers and readers use the repetition of elements as a background of similarity against which differences in meaning can be produced and perceived. In fact, as I mentioned in the previous section, other researchers have considered the importance of repetition for holding a text together. In fact, Lybbert and Cummings appear to perceive at least some discourse ties in much the same way as I have proposed in this repetition theory of cohesion; they write that syntactic "parallelism produces a symmetrical pattern that heightens the contrast" (1969:36). That contrast is between the syntax and both Platonic and Baconian in example (4) above. Unlike current theories which consider cohesion a semantic phenomenon, the repetition theory proposed here views cohesion as a general perceptual phenomenon and permits us to capture the nature of both formal and semantic cohesive elements.

**Formal Cohesion.** Types of formal cohesive devices would include: (1) syntactic parallelism, (2) rhyme, alliteration, and meter, (3)
thematic progression, (4) enumeration, and (5) typography. However, all formal cohesion is the result of repetitions of formal, structural elements in a discourse. As one example, notice that typography can be used to further enhance the cohesiveness of (5) above.

(5"") The aim of the Platonic philosophy was to exalt man into God. The aim of the Baconian was to provide him with what he required while he continues to be a man.

In addition to cohesion produced through the use of the parallel syntax of (5), example (5'') illustrates the use of boldface to further highlight the distinctive "figures" of Platonic and Baconian. In other words, the repetition of unenhanced typography forms a background against which the novel, boldface typography is distinguished. Although semantic distinctions are foregrounded by the use of this example's parallel syntax and typography, it is largely the formal similarities (i.e., repetitive syntax and type) which hold the sentences together.

Examples (5) and (5'') illustrate the importance of recognizing that cohesion is not binary perception, which is either completely present in or completely absent from a discourse. Instead, we appear to perceive degrees of cohesion. Both discourses are cohesive, but
illustrates an additional type of cohesive element compared to (5). Future experimental research might continue to investigate the optimum number or type of cohesive elements for producing cohesion in a text.

As another example, consider the use of enumeration in the excerpt below quoted by Journet and Kling from a nursing dictionary.

(15) The malignant cells may spread to other parts of the body by (1) direct extension into adjacent tissue, (2) permeation along lymphatic vessels, (3) traveling in the lymph stream to the lymph nodes...(1984:17).

Note that each description of spreading in (15) is numbered. The repetition of this enumeration creates a background of similarity among the three descriptions, thus producing a link among them. Their similar background, in turn, foregrounds the semantic distinctions among them.

Since Halliday and Hasan illustrate that their category of substitution/ellipsis creates ties between "formal" discourse elements of the same syntactic class, these cohesive devices would also fall within the general category of formal cohesion. Consider the example of cohesion produced through ellipsis below.
(16) What were they doing? - Holding hands (Halliday and Hasan 1976:198).

Note that the answer holding hands presupposes the complete They were holding hands. Thus, the omitted structural elements of subject and verb are found in the previous sentence, creating a formal link between the sentences. Although the formal elements of subject and verb are not explicitly repeated in (16), we can assume that they are repeated in the mind of the listener/reader in order to interpret the incomplete structure of the second sentence; again, the repetition creates a background of similarity.

Earlier, I used the following example of Halliday and Hasan's to exemplify cohesiveness achieved through substitution.

(3) My axe is too blunt. I must get a sharper one (1976:89).

The authors classify the cohesion in (3) as nominal substitution where one substitutes for axe. They state that "a substitute [like one in (3)] is a sort of counter which is used in place of the repetition of a particular item" (1976:89). In my view, the use of one here is cohesive because it is interpreted as a repetition of axe
and thus provides a similar background for interpreting the semantic component of the sentences. Unfortunately, there are a couple of problems with categorizing substitution: (a) it is sufficiently similar to ellipsis to warrant their inclusion in the same category since they both describe the replacement of one item in a text by another of equivalent grammatical category; (b) it is sufficiently similar to reference to warrant their inclusion in the same category since both describe the use of lexical items which depend on other lexical items in the discourse for their referents (e.g., it and one). Substitution then appears to lie somewhere in the middle of the continuum between formal and semantic cohesive devices.

Although there are no doubt a variety of additional cohesive devices which result from the repetition of formal discourse elements (e.g. thematic progression and rhyme), space prohibits their inclusion in this paper. Instead, future studies might investigate the utility of the repetition theory of cohesion presented here for describing other formal cohesive devices.

Semantic Cohesion. Now let's turn to the relevance of the repetition theory for semantic cohesive elements. Halliday and Hasan's reference and lexical categories would be included here. Semantic cohesion can be distinguished from formal cohesion by the semantic nature of the elements which are repeated to create ties within a discourse. The following example from Halliday and Hasan was used above to exemplify cohesion produced through pronominal reference.
(1) Doctor Foster went to Gloucester in a shower of rain. He stepped in a puddle right up to his middle and never went there again (1976:31).

I noted then that he, his and there are consider to be cohesive because they presuppose referents located elsewhere in the text. In my view, it is the repetition of reference that is salient in producing our perception of cohesion since that repetition provides a homogenous background against which semantic distinctions can be made.

I noted earlier that Witte and Faigley (1981) have observed the importance of consistent verb tense for producing cohesion. I included the following example of such cohesion.

(2) He does not even think Surely Judith didn’t write him about that letter or It was Clytie who sent him word somehow that Charles has written her (Faulkner 1936:353).

Note that it is the repetition of the same tense that holds the italicized portion of this sentence together. In addition, it is this similar background, which highlights the distinction between the
In the section on current theories of cohesion, I attempted to illustrate the inadequacy of these theories for distinguishing referential cohesion from lexical. In fact, there is a fairly simply way in which to make that distinction if we rely on the established practice within the field of semantics of differentiating reference from sense. The classic example used to illustrate this distinction appears below and is attributed to Frege.

(17) The morning star is the evening star.

Simply put, although morning star and evening star have the same referent, they obviously have different senses. Thus, each lexical item has both a deictic and a sense component. I am proposing that there is a distinction between the ties created by each of these components.

I used the following examples to illustrate the inadequacy of Halliday and Hasan's explanation of the nature of semantic cohesion (their categories of reference and lexical cohesion).

(9) Jane loves volleyball. She likes to play every day.
(10) Jane loves volleyball. Jane likes to play every day.
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(10') Jane loves volleyball. The girl likes to play every day.

(10'') Jane loves volleyball. Girls like to play every day.

In both my view and Halliday and Hasan's, the use of she in (9) is cohesive because of its common referent Jane in the first sentence. However, Halliday and Hasan offer no explanation for the cohesion of the second occurrence of Jane in (10), although they note that reference is irrelevant in cases where identical lexical repetition. Within the repetition theory proposed here, such cases may be construed as cohesive for any or all of the following reasons: (a) the repetition of visual form, (b) the repetition of semantic referent, and (c) the repetition of semantic sense.

I also argued earlier that Halliday and Hasan's explanation of the cohesion in (10') and (10'') is not ideal; their theory claims that, while the cohesion produced in (10') and (10'') is similarly due to vocabulary, (10') is due to the common referent of Jane and girl while (10'') is simply due to frequent co-occurrence of Jane and girl. In contrast, the repetition theory presented here captures the similarity and difference between the cohesion in these two examples more clearly and accurately. Specifically, in both examples, the sense of girl is repeated, while in (10') the deictic the presupposes the repetition of the referent of girl and Jane in addition.
(Although Halliday and Hasan note the cohesive properties of the definite article *the*, their theory does not explain the similarity in cohesion between examples such as these.)

Since verb tense and other highly deictic words (e.g., *the* or *above*) as well as pronominals can be used cohesively it seems appropriate to divide semantic cohesion into that which is primarily accomplished through deixis (e.g., *she* in (9) above) and that which is primarily accomplished through sense (e.g., *girl* in (10'') above).

In order to be more accurate in describing cohesion produced through the repetition of a word's sense, consider the examples from Halliday and Hasan below.

(18) I turned to the ascent of the peak. The ascent was perfectly easy (1976:279).

(18') I turned to the ascent of the peak. The climb was perfectly easy.

(18'') I turned to the ascent of the peak. The task was perfectly easy (1976:279).

In these cases, the authors themselves note that the examples (of their category called, appropriately, reiteration) are cohesive because of repetition. However, Halliday and Hasan claim that it is the repetition of a referent that is cohesive. I have proposed that
both the repetition of reference and the repetition of sense produces cohesion in such examples. To be more specific, I propose that semantic features are repeated. Semantic feature theory represents the sense of a word by prime binary features. For example, the sense of the word boy could be represented by the features [+male] and [-adult], while the sense of the word man could be represented by the features [+male] and [+adult]. In this way, the theory explains the relative "distance" among words by positing a difference in semantic features. For example, a difference in just one value [adult] for boy and man but for two values [adult] and [male] for man and girl captures the observation that man is more closely related to boy than girl.  

Although the complete set of semantic features for a word may be difficult to agree upon, this theory is useful for understanding the nature of examples such as those above. For example, in (18') the words ascent and climb would both contain at least the features [+volitional] and [+motion]. The repetition of these features is one cause of the cohesiveness of these sentences. Likewise, in (18'') the words ascent and task would share at least the feature [+volitional]. My view of cohesion as repetition of semantic features in these two examples predicts that (18') will be perceived as more cohesive than (18'') because of the degree to which the word pairs share features. It would be interesting to see whether future research substantiates that prediction.
Halliday and Hasan claim that the use of antonyms (within their category of collocation) produces cohesion because of the words' frequent co-occurrence. The authors claim that such cohesion "is achieved through the association of lexical items that regularly co-occur" (1976:284), and that "the analysis and interpretation of lexical patterning of this kind is a major task in the further study of textual cohesion" (1976:285). The authors offer the following example of this type of cohesion.

(19) Why does this little boy wriggle all the time? 

Unfortunately, however, the authors offer no real explanation of why the use of antonyms such as those in (19) is cohesive. In contrast, if we propose that all cohesion is the result of repetition and, specifically, that some semantic cohesion is the result of feature repetition, we can note that girl and boy are cohesive because at least the features [+human] and [-adult] are repeated.

CONCLUSIONS

Although representative only, I envision a classification of cohesion based on earlier work and the repetition theory presented in the last section which is illustrated in Figure 2.
With the repetition theory of cohesion presented in the last section, we have come a long way in solving the problems posed at the end of the section on current theories. First, repetition theory offers a revealing explanation of the nature of all cohesion, including both semantic and formal devices. I argued that models of the visual perception of figure-ground relations are analogous to our perception of cohesion in discourse. Specifically, repetitions of formal and semantic elements provide a kind of homogenous background against which novel semantic distinctions are foregrounded. Second, repetition theory distinguishes the nature of Halliday and Hasan's
categories of reference and lexical cohesion by proposing that lexical items can produce ties with either their deictic or sense components (or both). And, third, repetition theory explains the relevance of repetitions of discourse elements for producing cohesion.

However, some of those earlier questions remain: How can we distinguish between the kind of connections made by using semantic cohesive devices and conjunctives? What is the role of reader presuppositions in making a text? These questions require a theory of coherence which can effectively distinguish cohesion and coherence. Again, future research might benefit from using models of visual perception to answer these questions.
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NOTES

1Space prohibits anything but a brief description of Manning's work. The reader should consult his article for a more skillful and comprehensive presentation.

2I am grateful to Frank Parker for providing this figure.

3For a more detailed explanation of semantic feature theory see Lyons (1977).
REFERENCES


CHAPTER FIVE

FORMAL COHESION
INTRODUCTION

In their seminal work, *Cohesion in English*, Halliday and Hasan (1976) argue that cohesion is a non-structural, semantic relation. Indeed, cohesion studies of texts using Halliday and Hasan's scheme have proliferated since its publication (e.g., Johns 1980, Witte & Faigley 1981, Goodin & Perkins 1982, Fahnestock 1983, Markels 1983, Stotsky 1983, Tierney & Mosenthal 1983, Frawley & Smith 1985, McCulley 1985, and Hartnett 1986). Moreover, Witte and Faigley write that "because *Cohesion in English* is a pioneering effort to describe relationships between and among sentences in text, we anticipate that cohesion will be studied in future research addressing the linguistic features of written texts" (1981:190). However, Stotsky notes that Halliday and Hasan's scheme must be modified to accurately represent cohesion in expository essays. Likewise, in her study of cohesion in business writing, Johns writes that the theory "requires further change...[because] most of the Halliday and Hasan coding was done on British literature, especially *Alice in Wonderland*; ...items which appear in Lewis Carroll's writing are not those typical of modern business writing" (1980:41). Unfortunately, there has been little substantive addition to the theory of cohesion set forth by Halliday and Hasan thirteen years ago, despite its "pioneering" nature.
In this paper, I want to suggest that cohesion may be better understood as a general perceptual phenomenon instead of a purely semantic one. Specifically, I will propose that cohesion is the result of repeating semantic and structural elements. This repetition, in turn, appears to provide a uniform background against which semantic distinctions are foregrounded (much the same as repeated visual patterns form a background against which visual distinctions are foregrounded). Most importantly here, I want to argue that Halliday and Hasan's scheme for coding cohesive devices is descriptively inadequate because of the authors' claim that cohesive relations are semantic, not structural. I believe their exclusion of structural cohesion results directly from their use of a fictional text in formulating their theory. In fact, there appear to be a number of structural (hereafter, formal) cohesive relations in texts. My main purpose here, then, is to substantiate the occurrence of these formal cohesive devices by analyzing a wide variety of professionally written, non-fictional texts.

To this end, I will first discuss the limitations of Halliday and Hasan's theory of cohesion. Second, I will briefly outline an alternative view of cohesion as a general perceptual phenomenon. And, third, I will present examples of formal cohesion produced through (1) thematic progression, (2) syntactic parallelism and (3) graphic devices (including the use of typography, enumeration and charts).
HALLIDAY AND HASAN’S THEORY OF COHESION

In *Cohesion in English*, Halliday and Hasan argue that cohesive relations are semantic. The authors state that cohesion "is achieved through relations in MEANING..." (1976:10), and they posit four major categories of cohesive devices: reference, substitution/ellipsis, conjunction and lexical. Halliday and Hasan state that they are "excluding from consideration the effects of formal devices such as syntactic parallelism, metre and rhyme..." (1976:10) Similarly, Halliday and Hasan omit Functional Sentence Perspective (FSP) from their categories of cohesion because FSP is structurally produced. In short, Halliday and Hasan define cohesion as a semantic phenomenon despite recognizing that some cohesive devices are formal, not semantic. In contrast, other researchers have noted the importance of parallelism (e.g., Witte & Faigley 1981:199) and FSP (e.g., Goodin & Perkins 1982:59) in explaining cohesion and coherence.

In fact, Halliday and Hasan show some ambivalence about their choice to omit formal devices from their discussion. For instance, the authors indicate the importance of formal devices in cohesion by noting that "cohesive relations are realized...by the selection of structures, and of lexical items in structural roles" (1976:303). In addition, the authors use a syntactic distinction to explain the difference between two of their categories: substitution and reference. Specifically, they state that "substitution is a relation
in wording rather than in the meaning" (1976:88). Moreover, their terminology for subcategories of substitution/ellipsis (which are "nominal, verbal and clausal") suggest that the authors see this category of cohesion as syntactic and therefore FORMAL.

While choosing to limit the scope of Cohesion in English to semantic cohesion is in itself fairly unremarkable, the fact that analysts of written texts have continued for 13 years to use Halliday and Hasan's theory of cohesion without substantial addition is remarkable. I noted that Witte and Faigley (1981) expected future research to modify Halliday and Hasan's scheme since it was a "pioneering" effort. Unfortunately, there has been a dearth of such research. Markels (1983) provides one exception in arguing that cohesion is both semantic and syntactic. Stotsky (1983) also provides an exception in arguing for a modification of the category of lexical cohesion. And Hartnett (1986) provides one other exception in positing a distinction between static and dynamic cohesive devices. However, despite the need for this kind of research, Markels' paper proposes only one new category of cohesion (syntactic). And both Stotsky and Hartnett modify Halliday and Hasan's original categories. In essence, no research has established the range of formal cohesive devices available to writers.

Another related limitation of Halliday and Hasan's theory concerns their almost complete reliance on an analysis of one fictional, narrative text. Most cohesion studies, in contrast, have
investigated cohesion in non-fictional texts. Some research has illustrated linguistic differences in the use of cohesive devices among written genres even within Halliday and Hasan's categories. For example, the use of intratextual reference as a cohesive device is much more common in fiction than in scientific writing (Frawley & Smith 1985). Similarly, the types of lexical cohesion found in expository essays are different from those found in the fictional text used by Halliday and Hasan (Stotsky 1983). In addition, there are marked differences in the distribution of referential and lexical cohesive ties even within a genre: for instance, among letters, reports and business textbooks (Johns 1980:40). Thus, Halliday and Hasan's theory of cohesion may not adequately represent the types of cohesive devices found in non-fictional discourses.

In order to supplement Halliday and Hasan's original theory of cohesion, I will illustrate here that three types of FORMAL cohesive devices commonly occur in non-fictional texts. Like Meyer, I believe that "the exploration of the regularities of technical discourse plays an essential part in the development of a theory of coherence" (1987:8). Therefore, I have analyzed texts which were professionally written and collected for publication in a reader for technical writers (Journet & Kling 1984). By choosing the texts in a reader, I have tried to insure that the analyzed texts (a) included written texts of many types (e.g., budget review memos, encyclopedia descriptions, recipes, financial reports, etc.); (b) were "naturally"
written by professional writers in a range of settings (e.g., the large U.S. Office of Technology Assessment, the small Ken Cook Co., the private Philips Corporation, etc.); and (c) were representative of the variety of purposes and audiences for which professionals write (e.g., descriptions for the novice public, instructions for the consumer, funding requests for government agencies, etc.).

FORMAL COHESION

Before offering examples of FORMAL cohesion in this section, a few, general words about the nature of cohesion will be included. Like Halliday and Hasan, I agree that MEANING is involved in cohesive relations. However, it may be helpful to modify their definition (in which cohesion is the linguistic result of purely SEMANTIC ties) in order to understand cohesion more clearly. In his article establishing the relevance of perceptual phenomena to the study of discourse, Manning writes that "a clear perception of differences demands a common background of similarity against which differences may stand out" (1988:244). To illustrate, find the "O" in each of the figures below.
Although each "0" appears in the same row and column of each figure, it is significantly easier to locate the "0" in (2) because the repetition of X's provides a uniform background against which the "0" is distinctive. In an early study of cohesion, Bellert noted that part of "the coherence of a text consists, roughly speaking, in repetitions" (1970:336). I want to suggest that textual cohesion (both written and oral) is analogous to the perceptual phenomenon illustrated by the X's in (2). In my view, both writers and readers use the repetition of elements as a background of similarity against which differences in meaning can be produced and perceived. In fact, my view is similar to previous accounts. For instance, Lybbert and Cummings write that syntactic "parallelism produces a symmetrical pattern that heightens the contrast" (1969:36). Briefly then,
cohesion is the result of repetition.

For the sake of brevity, a full discussion of this view of cohesion cannot be offered here, but constitutes a separate paper (See Campbell under review). Instead, I want to concentrate in this paper on supplementing Halliday and Hasan's original categories of cohesive devices by substantiating the use of FORMAL repetition as a cohesive device. It is important to note that semantic relations will necessarily be involved in any formal cohesive relations. Nevertheless, I will discuss only formal cohesion here for the sake of explication.

In the remainder of this paper, I will present examples of three types of formal cohesive devices: (1) thematic progression, (2) syntactic parallelism, and (3) graphic devices (including typography, enumeration and charts).

**Thematic Progression**

In this section, I will describe one formal cohesive device which is called thematic progression. The elements which are repeated in thematic progression are information units. Specifically, they are called *topics* (i.e., given/old information) and *comments* (i.e., new information). To understand thematic progression, the notion of Functional Sentence Perspective (FSP) must be explained. Both of these concepts rise out of the work of the Prague School Linguists,
especially Mathesius. (See Danes (1974) for a complete treatment of these concepts.) FSP describes the placement of topics near the beginning of sentences and of comments after topics. For example, consider the following excerpt from the first paragraph of Philips Corporation's specifications for a word processor:

(1) The PHILIPS 2001 is a modular, high performance, standalone word processing system...[emphasis added]
(Journet & Kling 1984:56).

The topic of this sentence (i.e., "the PHILIPS 2001") appears in boldface. Note that even the topic of the first sentence of a text can be interpreted as "old" information and, in addition, that it precedes any comment or "new" information. This placement of topic before comment apparently makes it easier for readers to comprehend sentences (Clark & Haviland 1977).

As another example of the placement of topics and comments within sentences, consider the following partial description written for meteorologists below:

(2) Virga and effects of wind shear are not prominent. A cloud composed of many units may or may not cover
the entire field of view from the ground. Cloud water content is highly variable...[emphasis added] (Journet & Kling 1984:51).

Note that the topic of each sentence in (2) appears in boldface. Most of us are meteorological novices and cannot consider these topics as truly "old" information. Nevertheless, most of us can probably pick out the topics of these sentences because in English, as in most of the world's languages, it is very common for the topic of a sentence to occur in initial position. Excerpt (2) illustrates that the categorization of information as "old" or "new" may depend on the knowledge of the writer and reader.

Thematic progression is a formal cohesive device because it describes the two most common patterns by which sentences are linked through the repetition of topics and comments. Thematic progression then refers to the progression from the topic of one sentence to the topic of another. For instance, consider the sentences in the following excerpt which appears within a financial analysis of Service Corporation International (SCI):

(3) As structured, SCI traded the property...for $11.0 million of its common stock and incurred no tax liability on the property's appreciation...SCI did give American General a concession...SCI will continue to lease the property from American General
for two years at an annual rate of $150,000." [emphasis added] (Journet & Kling 1984:213).

The topic in each sentence appears in boldface. In this example, note that the topic "SCI" remains the same in each sentence, while the comments vary. The type of thematic progression represented in (3) is often referred to as AB-AC. In other words, the topic of each sentence (A) in AB-AC progression remains the same, while the comments (B and C) add new information about that same topic.

The sentences in (4) below, which describe one objective from within a government grant application, exhibit another form of thematic progression:

(4) Interpret the resulting information and formulate a Recovery Plan. This plan will include designations of Critical Habitat and will outline steps to be taken...[emphasis added] (Journet & Kling 1984:162).

Note in (4) that the topic of the second sentence (i.e., "this plan") and part of a comment on the first sentence (i.e., "a Recovery plan") appear in boldface. In this example then, plan is repeated as the comment of the first sentence and the topic of the second. The type of progression illustrated here is often called AB-BC. In other words, the topics do not remain the same in this
pattern; instead, the comment (B) of one sentence becomes the topic (B) of the next sentence.

The following excerpt from a description of a wastewater treatment process also exhibits AB-BC progression:

(5) Celanese has two other plants currently under construction at chemical plants in Pampa and Bishop, Texas. The Bishop system is designed to remove 80% of a 75,000lb/day load... [emphasis added] (Journet & Kling 1984:62).

Note that the comment (i.e., "plants in...Bishop") of the first sentence in (5) appears as the topic (i.e., "the Bishop system") of the passivized second sentence. The passive construction is often a useful tool for producing effective patterns of thematic progression.

The final example of cohesion produced through thematic progression is taken from a proposal for conducting a market feasibility analysis:

(6) We are prepared to conduct this market feasibility analysis for a fee of $12,000 plus direct costs. Direct costs include transportation [sic], lodging per diem, telecommunications, and report production. We will provide five copies of a fully documented report.
within six weeks of receiving your authorization to proceed [emphasis added]. (Journet & Kling 1984:149)

Note that this example illustrates both an AB-AC and an AB-BC progression. Specifically, the topic of the first sentence (i.e., "we") occurs again as the topic of the third sentence (AB-AC), while the comment of the first sentence (i.e., "direct costs") appears as the topic of the second sentence (AB-BC).

At this point, it may be instructive to consider the effect on cohesion when these patterns of thematic progression are violated. For example, the paragraph below is adapted from (6) above.

(6') This market feasibility analysis will be conducted for a fee of $12,000 plus direct costs. Transportation, lodging per diem, telecommunications, and report production will be included in direct costs. Within six weeks of receiving your authorization to proceed, you will receive five copies of a fully documented report.

While the sentences in (6') are certainly interpretable, there is no question that (6) above is more cohesive because of its "preferred" arrangement of topics and comments (i.e., its use of the patterns of thematic progression discussed here).
In this section, I have described one way in which formal cohesion is produced; namely through the repetition of information units called topics and comments. Thematic progression results in the repetition of topics and comments among sentences. The repetition of these information units provides a uniform background of similarity in form against which readers may more easily focus on distinctions in meaning between sentences.

Syntactic Parallelism

Syntactic parallelism is a formal cohesive device because it describes the way in which syntactic structure may be repeated in order to create a link between semantic elements. For example, the following excerpt is taken from a description of oil shale processing written by the U.S. Office of Technology Assessment:

(7) The alternative approaches are:

* TIS processes in which the shale is left underground...
* MIS processes in which a portion of the shale deposit is mined out...
* AGR processes in which the shale is mined...

(Journet & Kling 1984:66).
Note that each of the clauses in (7) has roughly the form X processes in which shale is Y. In other words, each clause consists of a head noun followed by a restrictive relative clause. In Lybbert and Cummings words, the formal, "symmetrical pattern heightens the contrast" (1969).

Another example of parallelism occurs in the following excerpt from a description of a data base written by IBM:

(8) If you change a segment that the program isn't sensitive to, it doesn't affect the program. In the same way, if you change a field that the program isn't sensitive to, it doesn't affect the program (Journet & Kling 1984:75).

Note that the two sentences in (8) have roughly the form If you change X, then Y. In brief, each sentence begins with a conditional clause. Again, the repetition of this syntactic form provides a uniform background which foregrounds semantic differences.

Parallelism need not occur only within adjacent sentences as above, but is frequent among headings, also. For example, the following list of headings is taken from a brochure written to explain how to plan and manage a product support program:
Note that each heading has roughly the form How can you X a total program. Specifically, the interrogative form is used in each heading.

Parallelism can produce cohesive ties between prose in different sections of a text as well. For example, the following excerpts are taken from an internal budget review report at Lexington Public Power Supply System:

(10) I. DETAILED PLANNING AND BUDGET REVIEWS

Purpose: To (a) further develop the Supply System, (b) improve integrity of the budgets...

II. JOINT REVIEW OF PROGRAMS BY DIRECTORS--APRIL 14

Purpose: To review the current status and results of the 1982 A&G planning and budget process...
III. SENIOR MANAGEMENT REVIEWS--APRIL 29-30

Purpose: To present organizational budgets to the Managing Director for review and approval...

(Journet & Kling 1984:174-6).

Note that under each of the three headings in (10) the description of the purpose of each review session takes the form To X. In other words, each statement of purpose begins by repeating the infinitive verb-form.

Any syntactic structure may be repeated in order to create cohesion. For instance, an engineering journal contains the following excerpt:

(11) Things mechanics do not like to see in manuals:

*Copies of photos or blueprints. A poor picture or print cannot be made better on any copier.

*Extensive use of decimal numbers for page, chapter, or paragraph identification...

*The placement of sketches and drawings vertically on the page, requiring the rotation of the book or person to read it...

(Journet & Kling 1984:124)

Note that each statement in (11) begins with a noun phrase.
Again, it may be useful at this point to consider the effect on cohesion when parallel syntax is not used. The example below is adapted from (11) above.

(11’) Things mechanics do not like to see in manuals:

* Don’t use copies of photos or blueprints. A poor picture or print cannot be made better on any copier.
* When decimal numbers are extensively used to identify page, chapter, or paragraph, it can be confusing.
* Would you present sketches and drawings horizontally, instead of vertically, on the page so that the book or person can read it more easily?

The various syntactic forms used in listing mechanics’ dislikes in (11’) are considerably less cohesive than the repeated, parallel forms used in (11).

In this section, I have described formal cohesion in some varied instances of syntactic parallelism (i.e., where a syntactic structure is repeated). This repetition of form provides a uniform background against which the semantic differences in a text are foregrounded and therefore more easily perceived.
Graphic Repetition

In this section, I want to illustrate some varieties of graphic cohesion found in written texts. Like Waller, I believe in the necessity of "including typographic and spatial factors in the linguistic analysis of complex text" (1980:252). Likewise, Reich and Cherry state "the derivation of meaning from a text is a complex task which can benefit from graphic as well as purely linguistic information" (1979:376). In fact, experiments have shown that there is much disagreement among subjects concerning which words are the key concepts in a text without the use of typographical cuing (Foster 1979:197). Graphic cohesive devices, then, help to limit the possible meanings of a text. And, since the perception of only one, intended meaning appears to define effective technical discourse but ineffective literature (Manning 1988), no researcher would find many examples of graphic cohesion in Halliday and Hasan's great, fictional text. I will discuss three types of graphic devices here: typography, enumeration, and charts. In each case, the repetition of some visual element creates cohesion.

Typography. Typography is a formal cohesive device when typographic features are repeated, producing a uniform background against which semantic differences are foregrounded and therefore easily perceived. For example, the following excerpt comes from the
description of a data base for computer programmers:

(12) An accounting program that calculates and prints bills for the clinic's patients would need only the PATIENT, BILLING, and PAYMENT segments [Journet & Kling 1984:74].

Note that three words in (12) appear in all capital letters. These words name "places" in the data base. The repeated use of typographical features creates a formal link between these three words. So the repetition foregrounds the semantic distinction between the "places" and other semantic referents (e.g., "PATIENTS" and "patients").

Typographic cohesion can be produced within a variety of textual settings other than the sentence, as above. For instance, the Armed Forces' recipe for beef stew contains the following column headings:

(13) INGREDIENTS
   WEIGHTS
   MEASURES
   METHOD
   [Journet & Kling 1984:91]
Note that each of the column headings in (13) appears in all capital letters. The cohesive effect of this typographic repetition is identical to that in (12) above.

As a final example of typographic cohesion, consider the following list of headings taken from a financial analysis of a group of funeral homes:

(14) **The Industry**
    **The Company**
    **Principal Business**
    **Company Structure**
    **Funeral Homes**
    **Cemeteries**
    **Flower Shops**

[Journet & Kling 1984:207-210]

Note that the headings in (14) vary a number of typographic qualities: type size, boldface and italics. The repetition of boldface and the largest type size denotes "equivalent" headings (i.e., "The Industry" and "The Company"). Likewise, the repetition of italics and medium type size denote equivalent headings (i.e., "Principal Business" and "Company Structure"). In each case, the repetition of typographic features aids in distinguishing between a group of equivalent headings and any other group.
Consider the effect on cohesion when these typographic devices are not used in the example below which is adapted from (14).

(14')
The Industry
The Company
Principal Business
Company Structure
Funeral Homes
Cemeteries
Flower Shops

In this list of headings, only "regular" typography is used, and therefore the semantic distinctions among headings are not foregrounded through the use of a repetitive background.

Enumeration. Enumeration is a graphic cohesive device when enumerating elements are repeated, again creating a background which highlights semantic differences. For instance, the excerpt below is taken from a nursing dictionary:

(15) The malignant cells may spread to other parts of the body by (1) direct extension into adjacent tissue, (2) permeation along lymphatic vessels,
(3) traveling in the lymph stream to the lymph nodes...[Journet & Kling 1984:17].

Note that each description of spreading in (15) is numbered so that each is similar at one level (i.e., they each describe spreading) and dissimilar at another level (i.e., they each describe different types of spreading). The repetition of formal elements again provides a uniform background which highlights semantic differences between the kinds of spreading.

Enumeration often involves elements other than numbers. For example, consider the excerpt below from a progress report:

(16) Summary of Activities That Are Behind Schedule
   a. Installation of baghouse test module.
   b. Relocation of construction facilities.
   c. Bid package for Unit 5 precipitator control house HVAC.
   (Journet & Kling 1984:181)

Note that in (16) the description of each activity is lettered instead of numbered. In addition, these letters appear spatially separate from the text, unlike the numbers used in (15) above. In (16) the repetition of spatial orientation (i.e., separation from text) also foregrounds the semantic distinctions between "activities"
and the rest of the text.

As a final example of enumerative cohesion, consider the excerpt below from Deere & Company's basic instructions for changing motor oil:

(17) There are three main kinds of oil filters:

* Through bolt
* Internal
* Spin on

(Journet & Kling 1984:85)

Note that the enumerative elements in (17) are neither numbers nor letters, but simply asterisks. Again though, the types of oil filters are connected by the repetition of a graphic element (i.e., "*") and of a spatial orientation (i.e., separation from the text).

Consider the difference in cohesion when enumerative elements are not repeated in the example below which is adapted from (17).

(17') There are three main kinds of oil filters: through bolt, internal and spin on.

The lack of enumerative elements in (17') certainly doesn't result in incoherence, but the degree of cohesion (and therefore the ease of perceiving semantic distinctions) is reduced in (17') compared to
The repetition of enumerative elements in (17) foregrounds the semantic distinction between the group of oil filters and the rest of the text.

Charts. The final type of graphic cohesion considered involves the use of charts. (The term "chart" here refers to the general class of which charts, graphs, diagrams and tables are examples.) In general, charts are cohesive when a graphic element is repeated, producing a uniform background which heightens the contrast between semantic elements.

Manning (1989) has provided an illuminating account of chart types. A brief explication of his theory will also illuminate the cohesive properties of each type. Manning argues that there are four basic chart types which are characterized by four possible combinations of two elements: units and properties. Specifically, one possible combination gives us a chart, which represents the relation between one unit and one property. For example, we might use a pie chart to illustrate the distribution of money in 1989 (one property) at Louisiana State University (one unit). Another possible combination gives us a graph, which represents the relation between more than one unit and one property. For example, we might use a bar graph to illustrate the distribution of money in 1989 (one property) at five universities (five units). Yet another possible combination gives us a figure, which represents the relation between one unit
and more than one property. For example, we might use a figure to depict the distribution of money separately over five years (five properties) at L.S.U. (one unit). Finally, the last possible combination gives us a table, which represents the relation between more than one unit and more than one property. For example, we might use a table to illustrate the distribution of money separately over five years (five properties) at five universities (five units).

Because all graphs repeat units (e.g., five universities) and all figures repeat properties (e.g., the distribution of money over five years), and tables repeat both units and properties, the use of any of these three chart types is inherently cohesive. For instance, the example table below is modified from a proposal written by a consulting firm of engineers.

(18) Table 2 Estimated Budget Solid Waste Characterization

<table>
<thead>
<tr>
<th>Personnel Services</th>
<th>Hours</th>
<th>Rate $/hr</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Director</td>
<td>120</td>
<td>$36</td>
<td>$4,320</td>
</tr>
<tr>
<td>J. Staff Engineer</td>
<td>376</td>
<td>17</td>
<td>6,392</td>
</tr>
<tr>
<td>Statistician</td>
<td>56</td>
<td>25</td>
<td>1,400</td>
</tr>
</tbody>
</table>

(Journet & Kling 1984:140)

Note that the table in (18) contains repeated classifications of
personnel (i.e., units), as well as repeated figures for hours worked and hourly wage rate (i.e., both properties). The repetition of these chart elements provides a background against which semantic contrasts (e.g., between personnel and hourly rates) are foregrounded.

Charts can also be used cohesively in other ways. For example, consider the excerpt below from an informative report on television studio production facilities:

(19) The importance of independent producers can be seen in data describing prime time programming shares for 1970 and 1978. To illustrate, Table One describes the market share distribution of...series. (Journet & Kling 1984:192)

Note that in (19) the text repeats the units (i.e., producers) and properties (i.e., market shares both for 1970 and for 1978) which are represented in the table which appears below it on the same page. The repetition highlights the semantic contrasts between the producers and their market shares.

As another example of cohesion produced through the use of charts, Figure 2 was taken from a description of a pen written by the editors of Encyclopedia Britannica.
Note that this figure is inherently cohesive because it repeats properties (e.g., point and lever) of one unit (i.e., a fountain pen). Now consider Figure 3. Note that some of the same properties are repeated in both Figure 2 and Figure 3 (e.g., "point"). While both diagrams are cohesive...
alone, their co-occurrence in the description of pens produces another cohesive relation through repetition of the same properties. These repetitions create a similar background which helps to distinguish the semantic differences between the properties of the two types of pens.

Cohesive ties may also involve two chart types. For instance, an owner's handbook for a lawn edger/trimmer contains a diagram in which each individual part of the edger is numbered (Journet & Kling 1984: 106). In addition, the handbook contains a table which gives a description of the edger's parts, as well as the co-indexed numbers from the diagram (Journet & Kling 1984:107). In this case, the repetition of the numbers in both the diagram and the table creates a formal cohesive tie. Consider the effect on cohesion in this example, if the table simply omitted the numbers which are co-indexed with those denoting parts in the diagram. In this case, cohesion between the two charts would be destroyed.

In this section, I have described various types of graphic cohesion: typography, enumeration and charts. In each case, the repetition of some visual element in a text creates a uniform background against which semantic distinctions are foregrounded and therefore more easily perceived.
CONCLUSIONS

Although Halliday and Hasan claim that cohesion is a semantic relation, I have suggested that cohesion might be better understood as a general perceptual phenomenon in which repetitions of both formal and semantic elements provide a uniform background against which semantic distinctions are foregrounded and therefore more easily perceived. Other researchers have noted that formal cohesive devices (e.g., syntactic parallelism and typography) are important in producing cohesion. I have argued here that the exclusion of such formal devices limits the utility of Halliday and Hasan's theory and that this exclusion is the result of their reliance on the analysis of a fictional text in developing their theory. In order to supplement Halliday and Hasan's categories of cohesive devices, I presented three types of formal cohesion based on an analysis of non-fictional, professionally written texts. First, I discussed cohesion produced through the repetition of topics and comments (thematic progression); second, I illustrated cohesion produced through the repetition of syntactic structure (parallelism); and finally I discussed cohesion produced through the repetition of typography, enumerators and chart elements (graphic devices). Future research should explore the utility of the perceptual model for explaining how semantic cohesion is produced. In addition, researchers might investigate the use of a perceptual model for distinguishing between cohesion and coherence.
REFERENCES


CHAPTER SIX

COHESION AND COHERENCE
INTRODUCTION

The relationship of cohesion with coherence is uncertain. While most researchers agree that the use of cohesive devices is a necessary but insufficient component of coherence (e.g., Halliday & Hasan 1976, van Dijk 1980, Bamberg 1983, McCulley 1985, and Tierney & Mosenthal 1983), there appears to be little additional agreement about the nature of the relationship between these two phenomena. First, one researcher has found that only certain lexical categories of cohesion predicted coherence (McCulley 1985), while others have assumed the importance of all Halliday and Hasan’s categories for producing coherence (e.g., Bamberg 1983). Second, many researchers have proposed a role for the presuppositions of the reader in understanding cohesion and coherence (e.g., Bellert 1970, Halliday & Hasan 1976, van Dijk 1980, Witte 1981, and Hartnett 1986). However, only two of these five argue that presuppositions play a part in producing cohesion (Halliday & Hasan 1976 and Hartnett 1986), while the other three argue for the relevance of presuppositions to coherence. And, third, researchers have emphasized the role of repetition, but some have claimed repetition is important for
coherence (e.g., Lybbert & Cummings 1969 and Bellert 1970), while others argue for its importance in cohesion (e.g., Halliday & Hasan 1976 and Witte & Faigley 1981).

Although a number of studies have improved the comprehensiveness of cohesion theory by analyzing a variety of discourse genres as well as by proposing new and modified types of cohesive elements, I have discussed at least three general problems with current theories of cohesion (Campbell in review). First, no theory has convincingly defined the nature of lexical cohesion or distinguished the nature of this category from reference and conjunctive cohesion. Second, no theory has yet offered a convincing and revealing explanation of the nature of all cohesion, including both semantic and formal devices. And, third, we do not currently understand the role of reader presuppositions and repetitions of textual elements for producing cohesion and/or coherence or the nature of the relationship between cohesion and coherence.

With the repetition theory of cohesion presented in Campbell (forthcoming), we have come a long way in solving these problems. First, repetition theory offers a revealing explanation of the nature of all cohesion, including both semantic and formal devices. I argued that models of the visual perception of figure-ground relations are analogous to our perception of cohesion in discourse. Specifically, repetitions of formal and semantic elements provide a kind of homogenous background against which novel semantic
distinctions are foregrounded. Second, repetition theory distinguishes the nature of Halliday and Hasan's categories of reference and lexical cohesion by proposing that lexical items can produce ties with either their deictic or sense components (or both). And, third, repetition theory explains the relevance of repetitions of textual elements for producing cohesion. However, some of those questions remain: What is the role of reader presuppositions in making a text? What is the nature of coherence and how can it be distinguished from cohesion? How do coherence and cohesion interact? I hope to show, in the next section, that the use of an analogy with visual perception theory can also elucidate these unknowns.

PERCEPTION AND DISCOURSE ANALYSIS

Manning suggests that "we require a broader theory of 'effective representation' (i.e., communication or rhetoric) in which writing can be compared to other forms of signification" (1988:242). His work on the relevance of visual perception and writing has provided an illuminating theory of the distinction between literary and technical discourse (1988). Specifically, Manning illustrates that "distinct types of line drawings replicate the literary/technical contrast in a visual medium" (1988:241). That contrast is due to the differences in the viewer/reader's perceptions. Consider the
following example, adapted from Manning's article.

Imagine a drawing of a bird which is partly composed of several similar lines to create the illusion of feathers. This iterative detail "promotes the perception of actual physical appearance" (1988:252). In contrast, imagine a map which is partly composed of clearly distinct features (e.g., red lines for state highways and black lines for county roads). This contrastive detail "promotes the perception of conceptual comparisons" (1988:252) not physical appearance. The viewer perceives the drawing as a substitute for the bird it represents, while s/he perceives the map as a standard by which the roads it represents can be understood. Manning argues that the most effective technical writing is perceived as a standard, predominated by contrastive detail, while the most effective literature is perceived as a substitute, predominated by iterative detail. Thus Manning establishes the relevance of models of visual perception to discourse analysis. Similarly, I argue here that the nature of both cohesion and coherence can be better understood by analogy with models of visual perception. In the next section, I will present a theory of coherence based on such perception theory and propose a description of the interaction between cohesion and coherence.
Coherence as Fulfillment

The nature of coherence, like the nature of cohesion, can be elucidated by analogy with perceptual theory. In a psychology classic, Broadbent describes perceptual anticipation:

When a tennis player strikes a ball, the stroke is not controlled by information coming from the ball at the instant when the racket reaches it...The eye indeed records the position of the ball well in advance of the movement, but the position is not that at which the blow is struck, because the ball moves during reaction time (1958:284).

I propose that coherence is the result of the fulfilled of such perceptual anticipation. For instance, imagine that the tennis player above anticipates the position of the ball at his right side and prepares to use a forehand shot; the ball then passes by his left side, requiring a backhand shot. The event is incoherent to the player if (1) what he anticipated did not occur and (2) he cannot infer a reason for the unfulfillment (e.g., a gust of wind changed the course of the ball).

There would appear to be two general types of fulfillment based on knowledge of the world and knowledge of language. Part of our
knowledge of the world can be described in terms of scripts. Schank and Abelson define a script as "a predetermined, stereotyped sequence of actions that defines a well-known situation" (1977:41). So, for example, a violation of our expectations about a script, as in (1) below, will produce incoherence.

(1) (A police officer has pulled over a car on the freeway.)
Driver: What's the problem, Officer?
Officer: No problem. I just wanted to tell you how much I like your car.

Drivers expect the events in the above scene to include at least an explanation of some driver error by the officer. Since that anticipated event does not take place in the discourse above, that discourse is perceived as incoherent.2

In contrast, our knowledge of language can be described in terms of phonological, syntactic, and semantic structure. A violation of our expectations about linguistic structure will also cause incoherence. (In fact, such violations might be perceived as more seriously incoherent than violations based on our knowledge of the world.) For example, consider the two short discourses below.
(2) A: Do you play golf on the weekends?
   B: No. I ndake instead.

(2') A: Do you play golf on the weekends?
   B: No. I dake instead.

When talking with other English speakers, we expect that the phonological rules of our language will be followed. However, in (2) the use of the word ndake violates these expectations because English prohibits the use of nd in word-initial position. Thus (2) is perceived as incoherent. Note that, although (2') also contains an unknown word dake, it is perceived as more coherent than (2) because the unknown word conforms to our expectations about the phonological structure of English words.

What I am proposing here is actually quite similar to the positions of a number of researchers who have noted that at least part of the coherence of a text depends on the presuppositions of the reader (e.g., Bellert 1970, Witte 1981, Fahnestock 1983, and Hartnett 1986). Bellert writes that interpreting a text is partly a result of drawing a set of consequences from a written utterance (1970:335). For example, consider the sentence below.
(3) Play stopped in the bottom of the third inning while the team from the Dominican Republic changed pitchers (Gammons, 1989:16).

Since (3) is the first sentence in a story titled "Plei Bol" appearing in *Sports Illustrated*, the reader may draw some of the following conclusions: (a) this is a story about baseball; (b) the story is describing part of a game in which one team is from a country called the Dominican Republic; and (c) the Dominican Republic's pitcher is not doing a good job and is being replaced early in this game.

The reader's conclusions serve to limit his or her expectations about what will appear in the rest of the story. For instance, consider the following.

(3') Play stopped in the bottom of the third inning while the team from the Dominican Republic changed pitchers. The Mexican club...had just taken a 3-0 lead, and the stadium...was in a fandango of excitement (Gammons, 1989:16).

In (3'), the reader's expectations appear to be fulfilled (i.e., not violated). For example, the appearance of club, stadium and 3-0 lead all suggest that this is indeed a story about baseball. Thus, the
reader perceives this short text as coherent (so far) since his expectations are fulfilled.

In contrast, consider the following example.

(3') Play stopped in the bottom of the third inning while the team from the Dominican Republic changed pitchers. Russell bought apples at the store.

In (3'), the reader's expectations appear to be unfulfilled (i.e., violated). In other words, this short text will be perceived as incoherent if the reader anticipated a story about baseball, and s/he cannot infer an acceptable reason for being informed about Russell's shopping in connection with the Dominican Republic's baseball game.

The theory of scripts affords us a way of describing another type of what Halliday and Hasan call collocation. In (3') the use of club, stadium and 3-0 lead produces coherence because these words and their meanings are all associated with the same script—a baseball game. In contrast, the words inning and apples are not associated with the same script and thus do not produce coherence.

The Relationship between Cohesion and Coherence

Now I want to turn to coherence and semantic cohesion produced through the repetition of semantic features because it is precisely
this area which has blurred the relationship between cohesion and coherence. McCulley (1985) establishes that, of all Halliday and Hasan's lexical cohesion categories, only synonomy, hyponomy, and collocation (i.e., what I have labeled antonomy and script-association) predict coherence. Although no explanation is offered by McCulley, I believe the Repetition theory of cohesion (Campbell in review) and the Fulfillment theory I have outlined here can offer such an explanation. Consider the text below.

(4) I had a car. But the Ford quit on me.

Note that the relationship between the two italicized words in (4) is one of hyponomy: the sense of the word Ford includes the sense of the word car. In other words, all of the semantic features of car (e.g., [-living], [+4-wheeled], [+combustion engine], etc.) are included in the sense of the word Ford. Thus the use of these two words is cohesive because of the repetition of semantic features. In addition, note that the use of the word Ford fulfills our expectations about the word car; in fact, Ford may be the prototypical car for some of us. Thus the use of these two words is coherent because the expectations which result from the use of car are fulfilled by Ford.

In contrast, consider the text below.
(4') I had a car. But the Sterling quit on me.

Note that the use of the two italicized words car and Sterling is cohesive because of the repetition of semantic features (i.e., a Sterling is a British car). However, for most Americans the use of these two words in (4') is relatively incoherent compared to those in (10) because our expectations prompted by our knowledge of the word car are not fulfilled by the use of Sterling.

In essence, I am claiming that the use of words related through hyponomy, synonymy, and antonomy will produce both cohesion and coherence, while script-association will produce only coherence because it involves only fulfillment and not repetition. Therefore, McCulley found that of all Halliday and Hasan’s categories of cohesion only hyponomy, synonymy, and collocation predicted coherence.

COHERENCE CONDITIONS ON COHESION

Some of our expectations are founded on our knowledge of discourse (the intersection of our knowledge about the world and about language). It appears that there are constraints on the types of repetition we expect in well-formed texts. This section describes two such conditions. First, a redundancy condition on semantic cohesion is discussed. And, second, a similarity condition on formal
cohesion is described.

The Redundancy Condition

Our expectations about well-formed texts appear to be best fulfilled when sufficient new information is added whenever sense elements are repeated (i.e., in one type of semantic cohesion). For instance, consider the examples below.

(5) I had a Ford. But the old buggy died.
(6) I had a Ford. But my car died.

Note that the italicized and boldfaced items highlight sense repetition in both (5) and (6). In (5), the use of Ford and old buggy results in the repetition of semantic features (e.g., [-living], [+4-wheeled], [+transportation], etc.). Likewise, the use of Ford and car is cohesive as discussed above in example (4). In addition, (6) demonstrates repetition through the use of I had and my, which both signify the locus of ownership. Note that (5) is significantly more acceptable than (6). This perception appears to depend on the relative lack of new information in (6) compared to (5). Our efficient use of language is thus "enforced" by a constraint on the amount of sense repetition we expect in a well-formed text. Thus, too much redundancy in a text is perceived
as relatively incoherent.

The Similarity Condition

Our expectations about well-formed texts also appear to include a constraint on the lexical items which may be connected through the repetition of formal elements (i.e., in formal cohesion). For example, consider the examples below.

(7) The HARD drive was repaired. But the DISK drive was broken.

(7') The hard drive was REPAIRED. But the disk drive was BROKEN.

(7'') The HARD drive was repaired. But the disk drive was BROKEN.

Note that the repetition of distinctive typography (i.e., the use of all capital letters) in each of these examples produces formal cohesion. The lexical items hard and disk are thus connected in (7); repaired and broken in (7'); and hard and broken in (7''). Note also, however, that (7'') is significantly less acceptable than (7) or (7'). Apparently, we expect that formally connected lexical items must be sufficiently like each other and unlike other items. Thus, the connection made between hard and broken violates our expectations.
about well-formed texts, making (7″) relatively incoherent compared to (7) or (7'). Notice also that this similarity condition on formal cohesion accounts for the need to reserve one typographic option for one type of connection so that readers don’t focus on unintended connections. For instance, consider the examples below.

(8)?Consult The Handbook before submitting your thesis or dissertation.

(8′) Consult The Handbook before submitting your THESIS or DISSERTATION.

Note that typography connects The Handbook, thesis, and dissertation in (8), whereas only thesis and dissertation are connected in (8′). The formal cohesion effected by the use of italics in (8) connects lexical items which are not sufficiently alike and thus (8) violates the similarity condition, making (8) relatively incoherent compared with (8′).

SUMMARY

Researchers show little agreement about the nature of the relationship between cohesion and coherence, although most assume that they are related. Using perceptual theory, Campbell (in review) proposes a Repetition theory of cohesion in which repetitions connect
elements in a text. Here I have argued that perceptual concepts are also useful in describing the nature of coherence. A Fulfillment theory was described in which reader's expectations determine the relative coherence or incoherence of texts. In addition, two coherence conditions on cohesion were proposed. First, the Redundancy Condition constrains the amount of old information which is acceptable in a discourse. Second, the Similarity Condition constrains the lexical items which can be acceptably connected through formal cohesion.
NOTES

1Space permits only a short discussion of Manning's ideas. For a comprehensive and skillful presentation, consult his work.

2I am not claiming that this discourse is completely impossible to comprehend. It seems clear that both cohesion and coherence are not binary perceptions, which are either perfectly present or perfectly absent. Instead, we appear to perceive relative degrees of these phenomena. My claim here is that the discourse between the officer and driver is perceived as relatively incoherent compared to one in which the officer explains that the driver was exceeding the speed limit; thus conforming to the driver's anticipation based on his knowledge of this script.

3While the use of words from a script produces coherence, that usage cannot be called cohesive within this theory proposed here because no real repetition of referents or features is involved.

4I want to thank Tom Walsh for providing the relevant data for this condition.
REFERENCES


CONCLUSIONS
The fundamental argument of the six articles collected in this dissertation is that discourse analysis can be a lucrative approach to understanding professional writing and therefore to improving writing instruction. Chapters Two and Three demonstrate the utility of Speech Act theory for understanding problems in tone. Although textbook advice is often too vague or unprincipled to benefit novice writers, the discourse analysis approach offers a principled, explicit account of such advice. Chapters Four, Five, and Six demonstrate the need for a better theory of cohesion. Professionally written discourse is analyzed in order to show that current theories are inadequate. This discourse analysis approach should ultimately result in better pedagogy since it provides a way of describing the knowledge that expert writers must have in order to produce well-written texts.

However, as Chapter One argues, discourse based research is relatively unpopular among writing researchers. That chapter demonstrates the importance of declarative discourse knowledge in the writing process in order to encourage more attention toward building a comprehensive model of that knowledge. In addition, Chapter One shows how discourse theory can be put to use in the writing classroom in order to improve writing teachers' ability to deal effectively with students who cannot infer the
principles of good writing. Finally, that chapter attempts to clear away two potential obstacles to more enthusiasm about discourse theory in professional writing. First, writing specialists should recognize that both process and discourse research must study cognition indirectly by investigating the products of that mind. Second, writing specialists should take responsibility for discourse research themselves instead of relying on those outside composition.
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PROFESSIONAL ORGANIZATIONS
American Dialect Society
Conference on College Composition and Communication
Linguistic Society of America
Modern Language Association
National Council of Teachers of English
South Atlantic Modern Language Association

PUBLICATIONS

Review

Articles

Articles (forthcoming)


Under review:
"Discourse Based Research: The Need for a Model of Declarative Discourse Knowledge," College Composition and Communication.


Textbook (in preparation)
Exercises in Professional Writing (Co-author with Kathryn Riley, Frank Parker, and Alan Manning).
DOCTORAL EXAMINATION AND DISSERTATION REPORT

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