Applications of Syntax and Pragmatics to Research in Writing.

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Applications of syntax and pragmatics to research in writing

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APPLICATIONS OF SYNTAX AND PRAGMATICS TO RESEARCH IN WRITING

A Dissertation

Submitted to the Graduate Faculty of the Louisiana State University and Agricultural and Mechanical College in partial fulfillment of the requirement for the degree of Doctor of Philosophy in The Interdepartmental Program in Linguistics

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Researchers in writing have expressed disillusionment with transformational-generative syntax over the past decade. Such disillusionment is caused partly by the different research goals and assumptions about language held by researchers in syntax and those in writing, and partly by unrealistic expectations about the pedagogical usefulness of syntactic theory. However, rather than abandoning the study of linguistics, writing specialists may benefit by reexamining the relation between their field and that of linguistics. First, researchers in writing should distinguish more clearly between applied research and pedagogy. Syntactic theory can be used to explain and analyze certain structural phenomena in student writing, even though this theory does not always suggest immediate pedagogical strategies. Second, writing specialists should investigate areas of linguistics other than syntactic theory. Findings from pragmatics, sociolinguistics, and functional linguistics are applicable to the study of how writers adapt discourse to particular audiences, and to the study of how grammatical competence manifests itself in performance.
Chapter 1
Issues in Applying Linguistics to Research in Writing

Many observers from both within and without the field of linguistics would agree that the past 30 years—beginning with the publication of Chomsky's *Syntactic Structures* (1957)—have witnessed a revolution in linguistic theory, a phenomenon that meets the following criteria set out by Laudan (1977; emphasis in original):

1. A scientific revolution occurs, not necessarily when all, or even a majority, of the scientific community accepts a new research tradition, but rather when a new research tradition comes along which generates enough interest (perhaps through a high initial rate of progress) that scientists in the relevant field feel they have to come to terms with the budding research tradition.

2. A scientific revolution occurs when a research tradition, hitherto unknown to, or ignored by, scientists in a given field, reaches a point of development where scientists in the field feel obliged to consider it seriously as a contender for the allegiance of themselves or their colleagues. (137-138)

While there remains disagreement as to whether Chomskyan linguistics meets the criteria for a paradigm as set forth by Kuhn (1970), the evidence for its status as a scientific revolution as defined by Laudan is very strong (see Newmeyer, 1986, for an excellent recent discussion). In 1980, Newmeyer characterized this revolution as following from "the recognition that a linguistic theory is a formal model of a speaker's abstract competence." As Newmeyer argues,

It is this scientific idealization more than any specific proposal about transformational rules, deep structures, or semantic representations that has enabled linguistics to break from the grip of taxonomy and anecdotality. On the basis of this
idealization, more has been learned about the nature of language in the last 25 years than in the previous 2500. (250)

Yet at the same time, the enthusiasm of researchers in writing for linguistic theory, especially linguistic theory a la Chomsky, has declined over approximately the past 15 years. Many in the field of writing would agree, for example, with this observation by Williams:

Not too many years ago, a seminar at the MLA set as its topic why linguistics in the service of literary criticism had been such a failure. The seminar could have asked why it had also failed in composition, for at that time, those attempting to exploit linguistics in teaching writing could have pointed to little that was promising and to less that had been delivered, particularly on any of those occasionally extravagant predictions made in the '50s and '60s. It's certainly not too late for such a seminar, because in the few years since then, not many of even the more modest proposals have been realized. (1982: 417)

In trying to reconcile the growth of Chomskyan linguistics with its simultaneous decline in studies on writing, the logical question that arises is, why has this disillusionment occurred? The purpose of this introductory chapter is to examine some possible causes for the frustration that researchers in writing have felt with linguistics, while the purposes of the remaining chapters is to explore in more detail what Newmeyer (1983) has called the "limits and possibilities" of linguistic theory, with respect to insights it can provide to researchers in composition and technical writing.

The Initial Attraction of Linguistic Theory

We might begin by considering why researchers in writing were ever attracted, in the first place, to linguistic theory, especially transformational-generative (TG) grammar. In order to understand this initial attraction, it is necessary to consider what TG theory offered
to these researchers that previous linguistic theories did not. The initial attraction of early TG grammar is, I believe, the product of several properties: its focus on English, its apparent usefulness for establishing models of language production and comprehension, and its use of formalism to capture generalizations. This section examines each of these properties in more detail, looking at how they represented new emphases within linguistics and at why researchers in writing were attracted by them.

The Focus on English

TG grammar, as presented in *Syntactic Structures* (1957) and *Aspects of the Theory of Syntax* (1965), stood in marked contrast to structuralist linguistics in that Chomsky based his new approach almost totally on English. While the goal of some structuralist theorists had been to show that languages could vary in an infinite variety of ways, a "breadth" approach, Chomsky's initial tactic was to explore in depth the properties of English. In a similar manner, Chomsky focused in these works on a synchronic analysis of English, rather than a diachronic one; this stood in contrast to, say, traditional philology, with its emphasis on etymology and the historical interconnections between different language families.

Obviously, Chomsky's emphasis on English was one point of appeal for writing specialists. Since they were attempting to characterize the language of students writing in English, a theory of language that focused on English was a priori of greater interest than one which focused on other languages.

The Focus on Syntax

*Syntactic Structures* and *Aspects* also represented a departure from then-extant approaches to linguistics because of their emphasis on syntax. The implications of this departure are summarized by Newmeyer
(1986) as follows:

By focusing on syntax, Chomsky was able to lay the groundwork for an explanation of the most distinctive aspect of human language: its creativity. The revolutionary importance of the centrality of syntax cannot be overstated. Phonological and morphological systems are essentially closed and finite; whatever their complexity or intrinsic interest, their study does not lead to understanding of a speaker's capacity for linguistic novelty, or to an explanation of the infinitude of language. Yet earlier accounts had typically excluded syntax from langue altogether.

Another way of looking at this contrast is to say that structuralist approaches had focused on looking at language "below" the level of syntax: syntactic structure, on the structuralist view, was less an object of investigation in its own right than a "container" for the linguistic elements on which they chose to focus: morphemes (formal units of meaning which comprise words) and phonemes (units of sound which comprise morphemes).

Chomsky's emphasis on syntax as an entity worthy of investigation in its own right was more in line with the interests and needs of most writing specialists than was the structuralist emphasis on morphology and phonology. First of all, it can be argued that syntax is a greater source of variety—and "deviance"—in written English than are morphology and phonology. Whereas morphology and phonology have limited use for the analyst of expository prose (apart from the study of vocabulary and metrics), syntax is central to the concept of style. If style is defined as the selection among alternative ways of expressing the same proposition, then syntax must enter into the picture, since stating a proposition involves making a predication (in a verb phrase) about a referent (in a noun phrase)—in other words, propositions (in natural language) are stated in sentences.
Implications for Models of Language Production and Comprehension

This aspect of early TG syntax has a more complex history than other of its aspects, and represents an issue that is still unresolved within linguistics itself. Nevertheless, we can draw some generalizations about how researchers interested in investigating language production and comprehension regarded Chomsky's theory.

Chomsky's earliest articulation of the distinction between competence and performance comes in Aspects (1965), where he emphasizes that his generative grammar is a model of competence, rather than a model of how a speaker or listener might actually go about encoding or decoding utterances in real time. In the same work, however, he argues that any adequate theory of performance (i.e., of real-time production and comprehension) would, ideally, be congruent with a theory of competence. The main point is that Chomsky was careful not to equate a theory of competence with a theory of performance. Thus competence was presented as a necessary, but not sufficient, component within a model of performance.

Within writing theory, however, Chomsky's caveats against conflating competence and performance were not always heeded. Chapter 2 explores this problem in greater detail, and also speculates about the reasons for the confusion between competence and performance among many writing specialists. For now, suffice it to say that writing specialists often appropriated TG syntax as a means of discussing the ways in which writers produce (or might be taught to produce) sentences. An obvious example of the optimism with which writing specialists approached TG grammar as a potential tool for analyzing sentence production can be seen in research on sentence-combining. Sentence-combining researchers have relied, explicitly or implicitly, on a performance-based interpretation of TG syntax to validate their approach, and have tended to maintain the assumption that "big sentences grow from little ones" when students write. Consider, for example, the
following claim made by Lindemann:

Generative-transformational theory suggests that we transform sentences intuitively by adding to, deleting from, or rearranging kernel sentences. Sentence-combining applies this principle to writing instruction. (1982: 140).

While controversy has arisen over the pedagogical efficacy of sentence-combining, little reassessment has taken place about the assumption that "kernels" and "transformations" are valid constructs for discussing the process of producing written texts.

The Appeal of "Manageable Formalism"

A final reason that TG syntax appealed to writing specialists was that, unlike competing linguistic theories, it offered them an elegant formal system for capturing generalizations about syntactic variation. Chomsky's early distinction between underlying and surface structure—the former described by phrase structure (PS) rules, and the latter derived by applying obligatory and optional transformations—offered an explanation for speakers' intuitions about the relationship between syntactically different versions of the same proposition (e.g., active and passive structures), as well as a precise way of describing this relationship (i.e., via a derivation). In contrast, previous approaches to syntactic analysis—for example, the immediate constituent analysis used in structuralism or the Reed-Kellogg sentence diagrams used in elementary and secondary schools—offered only limited insights into how syntactic variation arises, since these analytic methods typically focused on surface structure.

Similarly, Chomsky's use of transformational rules allowed a much greater level of generalization than surface structure description alone, or than a grammar limited to PS rules. For example, describing the possible combinations of auxiliary verbs in English (modals, have, and be) would require 12 PS rules ($3^1 \times 2$ combinations, allowing for
three modes and two tenses), plus a highly complex set of cooccurrence restrictions on the affixes associated with each auxiliary verb (to ensure, for example, than an uninflected verb follows a modal). In contrast, adding a transformational component allows us to generate (i.e., describe) the possible auxiliary structures in English by using only two PS rules and one transformational rule, as follows:

**PS Rules:**

\[
\begin{align*}
\text{AUX} & \rightarrow \text{TNS} \rightarrow \text{(Modal)} \rightarrow \text{(have-en)} \rightarrow \text{(be-ing)} \\
\text{TNS} & \rightarrow \text{(past)} \text{ or } \text{(present)}
\end{align*}
\]

**T-Rule:** \( \text{Affix} \rightarrow \text{V-form} \rightarrow \text{V-form + Affix} \text{ (obl1g)} \)

(Where \( \text{Affix} = \text{TNS, -en, -ing} \))

This approach not only reduces the number of rules needed to describe the auxiliary system of English, but also provides a much simpler and revealing account of the discontinuous dependencies between auxiliaries and affixes (for example, the fact that in an active sentence, the present participle affix always occurs on the verb form following auxiliary be.

In short, the complementary systems of PS and transformational rules enabled researchers to capture significant generalizations about English syntax, using formalism that was not only precise but also (at least in its early stages) accessible to the non-linguist. In the late 1960s and early 1970s, dozens of secondary works appeared which bridged the gap between linguists and non-linguists: some written by syntacticians, others by specialists outside linguistics. Given the resources available to explain TG theory during its formative stages, it was relatively feasible, at least in principle, for researchers in fields other than linguistics to instruct themselves in the fundamentals of this theory.
Subsequent Problems

Understanding why researchers in writing have not maintained their early attraction to TG syntax requires understanding the points at which these fields have diverged in recent years. These points of divergence reflect, I believe, more general causes of two types. First, researchers in TG theory and writing perceive themselves as pursuing different goals. The goal of syntactic theory is (as stated in the earlier quotation from Newmeyer) to construct a formal model of a speaker’s syntactic competence, i.e., of the unconscious knowledge that underlies the speaker’s ability to produce and comprehend utterances in his or her native language.

It is more difficult (at least for me) to provide a single statement of the ultimate goal of current research in writing, although the general trend lately seems to be toward constructing a picture of the process(es) that a writer goes through in constructing a text. This statement would, I believe, satisfy many researchers in the field, although there have been a number of conceptual and methodological problems with the way this goal has been pursued in recent studies. Obviously, too, although many writing specialists today evince a concern with process over product, the study of one presupposes a testable theory about the other. For example, suppose a researcher wants to test the following hypothesis:

Experienced and inexperienced writers produce texts of different qualities because they use different composing strategies.

It would seem self-evident that the researcher must first offer an explicit, empirically verifiable definition of the product (i.e., the “text”) as well as a valid, reliable metric for evaluating the quality of a text (in addition to defining terms such as “experienced” and “inexperienced”).

The main point, at any rate, is that the fields of TG syntax and writing differ significantly in terms of the phenomena they hope to
explain. TG theory attempts to model the unconscious knowledge of an ideal speaker-listener, in a homogeneous speech community, by examining utterances acontextually, with the ultimate goal of identifying universal (i.e., innate) properties of syntactic knowledge. As argued below, however, research in writing diverges from TG theory at every one of these points.

A second general reason for the schism between TG theory and research in writing seems to lie partly in how writing specialists define "applied linguistics" (at least implicitly) and what they expect "applied research" to accomplish. Given the fact that TG theory has been used successfully to illuminate phenomena in fields such as neurolinguistics, psycholinguistics, language acquisition, second-language learning, and language variation— all areas whose primary focus is not syntax—one cannot help but wonder why many researchers in writing feel that TG theory has little relevance to their field. One possible problem, discussed at the end of this section, seems to derive from the conflation of two separate roles: "applied researcher" and "practitioner."

The remainder of this section, then, discusses some specific points at which researchers in syntax and writing diverge in terms of the phenomena that they study, and offers a tentative definition of "applied research" that may be useful in assessing the role of TG theory in the study of writing.

The Concept of the "Ideal Speaker-Listener."

In Aspects (1965), Chomsky states that linguistic theory is concerned primarily with an ideal speaker-listener in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions as memory limitations, distractions, shifts of attention and interest, and errors (random or characteristic)
in applying his knowledge of the language in actual performance.

(3) Chomsky’s characterization of the linguist’s ideal speaker-listener departs in several significant ways from the students whom writing specialists typically study. The primary distinguishing characteristic is, of course, “ideal”: from Chomsky’s perspective, such idealization is necessary in order to define the abstract linguistic knowledge common to all speakers of a language (and, ultimately, to all speakers of all languages). In contrast, the influences on language that Chomsky dismisses as “irrelevant” are exactly those that many writing specialists find relevant.

These different emphases are by no means mutually exclusive: in general, we may say that researchers in both TG syntax and writing must be interested in both “ideal” and “real” language users. Linguists attempting to define abstract grammatical knowledge cannot do so unless they can first determine what the “irrelevant” conditions are, so that they can be factored out. Writing specialists, by the same token, cannot define individual and group variance from an “ideal” unless they know what that “ideal” is supposed to look like. The difference between these two research programs might better be defined in terms of focus: TG syntax “foregrounds” the invariant, while research in writing “foregrounds” the variant.

Homogeneous vs. Heterogeneous Speech Communities

Drawing again on the passage from Chomsky cited earlier, we can define a second way in which the goals of TG syntax and those of writing research have diverged. This point of difference has to do with their assumptions about the population that they are dealing with. Just as Chomsky envisions an “ideal” speaker-listener, so he envisions a “completely homogeneous” speech community, an idealized population whose members display a uniformity in their judgments of and intuitions about
particular syntactic structures. In contrast, researchers in writing must typically concern themselves with heterogeneity, not only among the population of writers themselves but also among their audience (i.e., real or hypothetical readers).

One reason that researchers in writing cannot assume some ultimate level of homogeneity, as Chomsky can, lies in the differing natures of spoken and written language. Linguistic competence, as it has been defined within Chomsky's research program over the past several decades, is assumed to constitute an innate (i.e., biologically determined) and species-specific property—one common to all human beings, barring severe neurological impairment or deprivation of linguistic stimuli during the critical period for language acquisition. All humans who acquire language (which is to say all humans, with the exceptions just named) acquire linguistic systems that are qualitatively similar in terms of their primary components (i.e., syntax, semantics, phonology, and morphology).

On the other hand, the ability to produce written texts is not a viable candidate for an innate property of the human species, given the simple fact that not all normal human beings manifest their linguistic competence through writing (or reading). Writing appears to be not a biologically determined property of the human species, but instead a learned, culture-specific activity. As such, writing is subject to a wide range of individual and group variation, which we may reasonably expect to reflect variables such as intelligence, motivation, experience, and practice. Consequently, the writing teacher faced with a classroom of, say, 20 college freshmen obviously cannot make the same assumptions about the homogeneity of their writing abilities as one can about their linguistic competence (in Chomsky's sense of the term).
Acontextuality vs. Contextuality

A third point at which TG theory and writing research diverge is in their relative concern with context in evaluating syntactic structure. Mainstream studies in TG syntax almost invariably study sentences in isolation, which is a logical outgrowth of this theory's emphasis on syntax (rather than on discourse) and on structure (rather than on contextually determined meaning). In contrast, while researchers in writing may be interested in examining particular sentences, the study of syntactic structure in this field is often less an end in itself than a means to an end—i.e., to the study of the effectiveness of larger units of text. As a consequence, TG theory alone does not exhaustively answer the questions that writing specialists are asking.

Universal vs. Language-Specific Concerns

A final point on which TG theory and research in writing have diverged is related to their relative emphasis on universal and language-specific features, respectively. Although the exploration of substantive and formal universals was stated as the ultimate goal of TG theory as early as Aspects (1965: 27-30), that work draws almost exclusively on English for its data. (German and French do appear briefly, in a discussion of certain inflectional processes that cannot be illustrated clearly by English data [170-179].) Because the theory presented in Aspects relied upon an intensive analysis of one language, it was relatively accessible to researchers not trained in formal linguistics; and because the language Chomsky analyzed was English, his analysis appeared relevant to researchers interested in understanding the structure of English.

Subsequent developments within TG theory, however, have reflected a concern with increasingly universal (i.e., less language-specific) and abstract properties of linguistic competence, a tendency discussed in
greater detail in Chapter 2. From the perspective of researchers in writing, it can be argued that this interest in abstract language universals has lessened both the accessibility and the apparent relevance of recent TG theory to that field.

The Conflation of Applied Research and Pedagogy

One recurring charge that has been laid against TG syntax by writing specialists is that "formal grammar instruction doesn't improve writing ability" and that "research does not support the notion that learning grammar (i.e., on the part of the writing students) is useful in attaining any other goal, except learning grammar" (Lindemann, 1982: 117). Such research findings, however, do not lead logically to the conclusion that TG syntax is irrelevant to writing specialists. Such a conclusion seems to grow instead from the faulty equation of two different roles: "applied researcher" and "practitioner." A clearer picture might emerge of the usefulness of linguistics to researchers in writing if the distinction between these roles were maintained.

The distinction between theoretical and applied linguists does not parallel the distinction often made between, say, scientists or theoreticians and technicians and practitioners. The applied researcher typically studies the implications of a theory for one specialized domain. Within linguistics, the use of the term "applied" and its related forms should therefore be understood as referring to the use of concepts and principles from linguistic theory to investigate the language of a particular population, or the language of the general population under particular conditions. For example, neurolinguistics may be classified as an applied field, in the sense that neurolinguists focus their research on one population, i.e., those subjects who display abnormal linguistic production or comprehension due to neurological damage from stroke, tumor, or trauma. Likewise, psycholinguists study normal subjects under experimental conditions that manipulate variables
in perception (e.g., response time).

Ideally, there is an interactive relationship between theoretical linguists and their applied counterparts in fields like neuro- and psycholinguistics. Applied researchers typically report their findings within the framework of theoretical linguistics, often stating their conclusions in terms of how close the fit is between linguistic theory (ultimately a model of competence) and the actual linguistic behavior observed by the applied researcher (who is attempting to model some realm of performance). If the fit is not a close one, further empirical investigation must determine whose findings need modification. Researchers in, say, syntactic theory may suggest that applied researchers are not controlling for certain nonlinguistic variables (i.e., that they are incorrectly attributing a result to the subject's linguistic knowledge). Likewise, results obtained in applied linguistics may eventually lead to a modification of the competence theory that was applied. The point is that "theoretical" and "applied" linguistics actually represent complementary, interactive lines of research.

Likewise, there should be an interactive relationship between applied researchers and practitioners, since the applied researcher often acts as an intermediary between "pure" theoreticians and practitioners. (For this reason, applied researchers often have experience as practitioners, in order to gain insight into the practical constraints that practitioners are working within.) For example, an applied researcher in neurolinguistics may draw upon linguistic theory to develop techniques for diagnosing and administering therapy to aphasic persons. These techniques, in turn, would actually be carried out by a practitioner trained primarily in testing and rehabilitation procedures. Problems encountered by the practitioner, if reported to the applied researcher, may eventually lead to improvements in the procedures. Practitioners themselves do not typically bring about a
change in the theory itself, but they may indirectly bring about a change in how the theory is implemented, i.e., used to study or benefit a particular population.

While specialists in fields such as neurolinguistics appear to be fairly comfortable with this division of labor, specialists in writing do not. Evidence for this comes, as stated earlier, from their apparent expectations that syntactic theory should somehow be directly transferrable to the writing classroom. I believe that these unrealistic expectations arise from the fact that applied researchers and practitioners in writing do not (as yet) exist clearly as separate groups. Instead, applied researchers in writing exist largely as a subset of practitioners (i.e., teachers of writing), a tendency that can be confirmed by examining the biographical notes that accompany articles in journals like *College Composition and Communication*. Consequently, specialists in writing have relied on pedagogical usefulness as the main criterion for evaluating the relevance of TG syntax to their field, even though there is no a priori reason to expect it to transfer directly to the writing classroom. This situation will no doubt improve in the future, with the growth of additional graduate programs that prepare professionals to conduct research on writing. The fact that such programs are a relatively recent development, however, may explain the field's prior emphasis on more pedagogically oriented studies.

**Plan of the Remaining Chapters**

The studies presented in this dissertation investigate in more detail several issues related to recent and future applications of linguistics to research in writing. Chapters 2 and 3 both concern the application of TG syntax to composition. Chapter 2, "The Metalanguage of Transformational Syntax: Relations Between Jargon and Theory," traces the development of technical terms within TG syntax. These terms are then analyzed from two perspectives: first, the way that they reflect
differences in the assumptions and goals of standard and extended standard theory; and second, the way that standard theory terminology may have lead writing specialists to misinterpret the claims of syntacticians. Chapter 3, "Anomalous Prepositions in Relative Clauses in Student Writing," examines a specific nonstandard structural pattern reported by several analysts of college writing. This chapter presents and evaluates three possible explanations for this pattern, reflecting three different kinds of linguistic influences: prescriptive conventions, psycholinguistic processes, and syntactic rules. It is concluded that none of these approaches alone provides a full explanation of the data; instead, the phenomena under question are best explained as arising from the interaction of several domains of linguistic knowledge.

Chapters 4, 5, and 6 address applications of pragmatic theory to research in technical writing. Chapter 4, "Pragmatics and Technical Communication: Some General Considerations," responds to previous research on the application of pragmatics to technical and business writing. This chapter argues that certain pragmatic phenomena can best be understood not by attempting to isolate pragmatics from syntax and semantics (as has previously been proposed), but rather by acknowledging and investigating the interrelation of these domains with pragmatics. Chapter 5, "Speech Act Theory and Indirectness in Professional Writing," defines the notion of "indirect style," outlines a theory of the pragmatic variables that determine when such a style is appropriate, and presents a taxonomy of specific linguistic features that signal indirectness. Chapter 6, "Conversational Implicature and Unstated Meaning in Technical Writing," uses pragmatic theory to explain how readers are able to infer implied meaning in technical communication; the examples studied are letters that have a negative intent but that do not state the negative message explicitly.

Chapter 7, the conclusion, discusses "Linguistic Theory and
Research in Writing: Prospects for the Future." This chapter argues that researchers in writing and linguistics should continue to explore connections between their fields. Drawing upon the concerns of writing specialists as outlined in Chapter 1, Chapter 7 suggests specific areas of linguistic research that may prove beneficial in the future to writing specialists. Likewise, it suggests some ways that linguists might benefit from investigating the properties of written language. This chapter closes by outlining some of the more general theoretical criteria that writing specialists might apply to their field.
Notes

I do not mean to suggest here that phonology and morphology are of limited use to all specialists who deal with written language. Certainly the language arts teacher who is attempting to teach spelling needs an intimate understanding of sound-symbol relationships, in order to account for regularities and irregularities in the English spelling system. Likewise, the ESL teacher requires an understanding not only of syntax but also of morphology and phonology, since interlingual contrasts may manifest themselves on all of these levels. The same is true of the basic writing teacher, who must often analyze interdialectal contrasts. For different reasons, morphology may also be of use to the technical writing specialist who wishes to understand, say, the processes by which technical writers create new words to describe new concepts or entities. My point here is simply that morphology and phonology are not of high priority for most specialists in composition or technical writing.

Most blatantly, Flower & Hayes have claimed that their protocol analyses "capture a detailed record of what is going on in the writer's mind during the act of composing itself" (1981: 368). It would seem that anyone with even a passing familiarity with current cognitive psychology would recognize the problems with such a claim; Flower & Hayes' research strategy is analogous to trying to model an internal combustion engine by having the driver of a car report on the steps s/he goes through to get the car started. It is gratifying to see that the limitations of protocol analysis have since been pointed out by other researchers in composition, for example Cooper & Holzman (1983).

Chapters 2 through 6, respectively, represent versions of the following papers: Riley (forthcoming, b); Riley & Parker (forthcoming); Riley (1986); Riley (forthcoming, c); and Riley (forthcoming, a).
Chapter 2
The Metalanguage of Transformational Syntax:
Relations Between Jargon and Theory

"The metaphors we are avoiding steer our thought as much as those we accept." (I. A. Richards, The Philosophy of Rhetoric)

Linguists have long been interested in the jargon used in professional fields, having as their object not merely the collection of jargon terms but also the investigation of how such terms are adopted or created within a given profession and how they are interpreted by nonspecialists (see, for example, Caso 1980 and Landau 1980). Ironically, however, linguists have given little attention to the jargon of linguistics itself. The few works that do examine the terminology used by linguists concentrate, for the most part, on problems that have arisen from the inconsistent use of terminology across linguistic fields (for discussion, see Firth 1948, Hartmann 1971, and Hartmann 1973). To my knowledge, though, no extended study has been made of how linguistic jargon constitutes a semantically cohesive vocabulary.

This question is especially of interest with respect to the jargon used by linguists working within the transformational-generative (TG) theory of syntax. Since its inception, TG grammar has undergone what might be termed a "paradigm shift": Standard Theory (ST), dating from 1957 to approximately 1970, displays a theoretical orientation different from that of Extended Standard Theory (EST), which dates from 1970 to the present. In turn, this shift in theoretical outlook has been paralleled by a shift in metalanguage. Upon examining those ST and EST terms with dual reference—that is, those terms that have both specialized
(metalinguistic) and nontechnical meanings— one finds that the ST and EST lexicons are unified by diametrically opposed metaphorical frameworks. Furthermore, the semantic differences between the ST and EST lexicons reinforce the theoretical differences between these two approaches to TG syntax. Finally, in their attempts to apply transformational theory to other domains, nonlinguists in fields such as composition have misinterpreted the metalanguage, and hence the claims, of ST, apparently as a result of the metaphorical framework that unifies ST jargon. In short, an analysis of the jargon used in ST and EST can provide insight into how both linguists and nonlinguists regard linguistic theory.

The Metalanguage of ST and EST: Background and Glossary

The metalanguage of ST has its origins in Chomsky's Syntactic Structures (1957) and Aspects of the Theory of Syntax (1965). Following 1965, as Tb theory developed, new terminology was constantly added, especially to refer to particular transformational rules that were being formalized. (A representative sampling of such terms can be drawn from nearly any introductory text from the early 1970s, such as Burt 1971 or Akmajian and Heny 1975.)

The following compilation of ST jargon is restricted to those terms with dual reference—i.e., those terms that have both a metalinguistic meaning within ST and a nontechnical meaning. For example, the term Affix Hopping contains one term with only a metalinguistic meaning (Affix) and one with dual reference (Hopping). In such cases the lexical item with dual reference has been extracted for analysis.1

1 A tree diagram, or phrase marker, is a hierarchical representation of a structure described by either a phrase structure (PS) rule or a transformational rule. For example, the following PS
rules can be represented by an equivalent tree diagram:

```
A --> B-C-D
|      |      |
B --> E   B C D
|      |      |      |
C --> F   |      |
|      |      |      |
D --> G-H E F G H
```

node: a labeled point in a tree structure. A branching node is one that can be expanded; a terminal node is one that cannot. In the tree diagram above, A, B, C and D are branching nodes, while E, F, G, and H are terminal nodes.

daughter; sister: if node B is immediately dominated by node A, then B is the daughter of A. If two or more nodes are daughters of the same node, then they are sisters. In the tree diagram above, the sister nodes B, C, and D are daughters of A; E is the daughter of B; F is the daughter of C; and the sister nodes G and H are the daughters of D.

deep; underlying: a deep or underlying structure is one generated by the base component, or PS rules, or a grammar.

surface: a surface structure represents the final result of any transformational rules that have applied to an underlying structure. Surface structures are not equivalent to sentences (S's), although in their superficial syntactic structure they resemble S's more than underlying structures do.

kernel: the set of kernel S's in a language is the set of S's produced by applying only obligatory transformational rules to underlying structures. For example, if Passive is considered an optional transformational rule, then (a), but not (b), is a kernel S:

(a) The dog chased the cat.

(b) The cat was chased by the dog.

pruning: the elimination of a node which, as the result of a transformational rule, no longer dominates any material.

For
example, given a rule such that E-F-G-H $\rightarrow$ F-G-H-E, node B would be pruned from the resultant tree structure:

```
    A
   /|
  B C D
 /|
E F G H
```

```
    A
   /|
  C D
 /|
F G H E
```

cycle: the domain of application of rules within a structure containing one or more embedded S's. Each S defines a cycle.

raising: the movement of an element from an S at a lower level in a tree diagram to an S at a higher level.

flip-flop; hopping; inversion; shift: terms used in conjunction with affix (e.g., Affix Hopping) to describe the movement of affixes from their base-generated position onto the following verb form.

support; insertion: the introduction of "dummy" items (such as auxiliary do or the subject it) into a structure.

While the genesis of ST jargon can be traced fairly directly to Syntactic Structures and Aspects, the metalanguage of EST has developed from more diverse sources, dating approximately from the early 1970s. Basically, however, the technical terms used in EST fall into two categories: terms for more general relationships among syntactic elements and terms for particular rules, conditions, and filters. The following list, like that of the ST terms, is restricted to terms with dual reference; again, a brief gloss is provided for each term.

command: B c-commands (i.e., constituent-commands) C if the first branching node dominating B dominates C, and B does not dominate C, nor C, B. For example, B c-commands C in the following
structure:

```
     ___A___
    |     |
    B    C
```

government: A governs B if A is the minimal governing node (Verb, Adjective, Preposition, Noun, Tense, or Possessive) c-commanding B. For example, Tense governs the noun phrase (NP) in the following structure:

```
     S     
    |     |
    NP    Tense VP
    |     |
    he    will    read    the    book
```

binding: an argument (NP position) is bound if it is coindexed with a c-commanding argument; otherwise it is free. For example, an anaphor such as herself must be bound, as in the following structure where Mary c-commands herself:

```
     S     
    |     |
    NP,   Tense   VP
    |     |
    Mary  past    hurt    herself
```

barrier: an NP or S-bar boundary that blocks government.

ccontrol: the coreference relationship that holds between an empty pronominal NP (PRO) in an infinitive complement and its antecedent. For example, in (a), PRO is controlled by Mary; in (b), PRO is controlled by John; and in (c), PRO is controlled by Mary.

(a) Mary wants PRO to leave.
(b) Mary persuaded John PRO to leave.
(c) Mary promised John PRO to leave.

*trace*: an empty node left at the site from which a constituent
has been moved, and which is coindexed with the moved constituent.

*condition; constraint*: used to describe structures which
prohibit the application of a rule during a derivation. For example,
the Coordinate Structure Constraint states that no constituent can be
moved out of a coordinate structure.

*filter*: a restriction on the surface structure resulting from
a derivation. For example, the For-to-filter states that any clause
containing the complementizer for immediately followed by to is
ungrammatical.

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<th>Alphabetical Listing of Terms</th>
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<td>IT</td>
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<td>cycle</td>
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<td>tree</td>
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The Metaphorical Frameworks of ST and EST Jargon

In the preceding section, ST and EST terms with dual reference were compiled and their technical meanings briefly summarized. This section analyzes patterns in the nontechnical meanings of the terms used in each theory, patterns which suggest a different metaphorical framework for each lexicon.

The ST lexicon contains, first of all, a relatively high proportion of terms whose nontechnical usage is often associated with botanical forms: cycle, kernel, node, pruning, and tree. Second, several terms refer either to human roles or to observable human activities: for example, daughter, sister, flip-flop, hopping, raising, and support. Third, there is a group of terms that are often used to refer to levels of human consciousness: deep, underlying, and surface. Thus most of the ST terms have a nontechnical usage that refers to observable entities (either botanical or human) and to physical activities. Furthermore, many of the terms are associated with movement, growth, or change; for example, the botanical terms denote either stages of growth or growing organisms themselves. Because of these recurring properties, the ST lexicon is unified by what might be called a dynamic or creative metaphorical framework, one whose predominant associations are with process, growth, and creativity.

In contrast to the many dynamic terms found in the ST lexicon, the EST lexicon is characterized by a high degree of terms referring to abstract, volitional states. For example, the nontechnical usage of command, condition, control, and government typically refers to abstract social relationships among humans, rather than to observable physical activities. Furthermore, while the ST terms suggest a highly dynamic system, one associated with process, growth, and creativity, the EST terms suggest a highly restrictive one. For example, barrier, binding, command, constraint, control, and filter.
all refer to either volitional or physical means of confinement or limitation.

In summary, both the ST and EST lexicons contain terms that have not only a technical meaning but also a nontechnical one. When the nontechnical meanings of these terms are considered, two opposing, or perhaps complementary, metaphorical frameworks emerge. The predominant metaphor suggested by ST jargon is one of creativity, due to the recurrence of terms associated with the movement and growth of observable entities. In contrast, EST jargon is largely characterized by terms associated with stasis and restriction, as well as by more abstract volitional terms. Finally, note that the ST lexicon contains more terms with dual reference than does the EST lexicon. This fact may explain, in part, why nonlinguists have felt fairly comfortable about adopting ST and its jargon, a point discussed in a later section.

Jargon as a Reflection of Theory

The preceding section established that the ST and EST vocabularies are each dominated by a different metaphorical framework. This section discusses the way in which the metaphorical unity of each theory's lexicon reflects the orientation of linguists working within that theory. That is, researchers working within each theory have been guided by different priorities and goals, and these in turn are reflected in the jargon associated with each theory.¹

It is well-known that ST began not so much as a refinement of the linguistic theories immediately preceding it but as a reaction against them. In particular, one of Chomsky's earliest and most persistent claims concerns the inadequacies of structuralist and behaviorist approaches to language (for expediency, Chomsky's term, traditional grammar, will be used to refer to these earlier approaches). In Syntactic Structures (1957), Chomsky demonstrates
the formal limitations of phrase structure grammars; for example, their inability to handle discontinuous dependencies such as the affix system in English or to capture structural relations such as those that exist between active and passive pairs.

It is in several works of the 1960s that Chomsky begins to focus on sociological and philosophical issues related to linguistic theory: that is, on issues pertaining to the status of theories within the linguistic community, and on issues pertaining to the relationship between assumptions about language and assumptions about the mind. At several points in Current Issues in Linguistic Theory (1964), Chomsky argues explicitly that traditional grammars are limited not only because of their formal structure but also because of their assumptions about language acquisition and use. The following passage, for example, criticizes structuralist linguistics for an approach which Chomsky perceives as overly mechanistic:

In general, modern descriptive statements pay little attention to the 'creative' aspect of language; they do not face the problem of presenting the system of generative rules that assign structural descriptions to arbitrary utterances and thus embody the speaker's competence in and knowledge of his language. . . . In the extent that this is true, 'structural linguistics' will have suffered from a failure to appreciate the extent and depth of interconnections among various parts of a language system. By a rather arbitrary limitation of scope, modern linguistics may well have become engaged in an intensive study of mere artifacts. (23-24).

Continuing along these lines, Chomsky characterizes taxonomic linguistics as "pre-Darwinian" and "concerned solely with the collection and classification of countless specimens" (25). He further charges that the taxonomic model "seriously underestimates the richness of structure of language and the generative processes"
that underlie it," and that "these inadequacies and limitations may in part be traceable to an impoverished conception of the nature of human cognitive processes" (27). Chomsky concludes that traditional linguistics "has failed totally to come to grips with the 'creative' aspect of language use" and "intricacy" of language (111).

Aspects (1965) continues these criticisms of traditional linguistics. For example, in arguing against the empiricist view of language acquisition, Chomsky asserts that "there is surely no reason for taking seriously a position that attributes a complex human achievement entirely to months (or at most years) of experience, rather than to millions of years of evolution or to principles of neural organization that may be even more deeply grounded in physical law" (59). Thus Chomsky posits the innateness hypothesis, together with the development of a theory of competence, as concerns that separate TG theory from the structuralist and behaviorist schools.

In another work from the same period, Language and Mind (1968), Chomsky further elucidates what he perceives as the shortcomings of traditional grammars, and again explicitly contrasts his own goals and assumptions with those held by structuralist and behaviorist linguists. Here he states that a theory of linguistic competence ... is qualitatively different from anything that can be described in terms of the taxonomic methods of structural linguistics, the concepts of S-R psychology, or the notions developed within the mathematical theory of communication or the theory of simple automata. ... What is involved is not a matter of degree of complexity but rather of quality of complexity. (4)

It is their philosophical bias, rather than any methodological one, for which Chomsky criticizes traditional linguists most strongly. The "essential weakness in the structuralist and behaviorist approaches," he argues, "is the faith in the shallowness of
explanations, the belief that the mind must be simpler in its structure than any known physical organ and that the most primitive assumptions must be adequate to explain whatever phenomenon can be observed" (22). He concludes that "the real problem for tomorrow is that of discovering an assumption regarding innate structure that is sufficiently rich" (69).

Having reviewed some of Chomsky's earlier statements concerning the goals and assumptions of ST, let us now turn to the question of how ST jargon reflects the central concerns of the researchers working within that theory. First, whether or not one agrees with Chomsky's assessment of the structuralist and behaviorist schools, it should be apparent from the passages cited above that he finds fault with them for a fairly consistent set of reasons. Several recurring criticisms emerge from these excerpts: the notion that traditional theories disregard (or, less strongly, underestimate) the creativity and complexity of the language faculty; the notion that they treat language acquisition too simplistically; the notion that methodologies such as segmentation and classification fail to capture the intricacy of language and, by extension, the complexity of human cognitive capacities. In short, Chomsky takes traditional theories to task because he perceives them as chipping away only at the tip of a very large and interesting iceberg.

Chomsky, on the other hand, is clearly interested in establishing not only new means but also new ends for the study of language. Throughout his early manifestoes, Chomsky indicates that he finds traditional grammars too mechanistic, too preoccupied with achieving what he calls descriptive, rather than explanatory, adequacy (1965: 24-27). He finds other properties of language to be of central importance: the "basic regularities" of language (1965: 5); the ability of humans to utter and understand "indefinitely many sentences" (1965:15); the "complex human achievement" reflected by
language acquisition (1965: 50); the "extent and depth of
interconnections among various parts of a language system" (1964:
23); and the "internal organization and intricacy" of language (1964:
111).

Such passages reveal Chomsky's interest in what could properly
by called the creative or dynamic properties of language systems. In
reacting against structuralist and behaviorist theories throughout
his works from the 1950s and 1960s, Chomsky focuses his attention,
and that of his readers, on a conception of language as a system of
"rule-governed creativity" (1964: 22). Chomsky's central concern
during these decades can be characterized as an attempt to extend the
upper bound of linguistic theory; that is, to broaden the base of
assumptions about the knowledge that human beings bring to language
acquisition and use, simply by virtue of their psychological makeup.
In short, the goal of ST is to construct a more powerful theoretical
system for characterizing "knowledge of language."

With these theoretical concerns in mind, it should be clear
that the metaphorical framework suggested by ST jargon is entirely
consistent with that theory's assumptions about the high degree of
creativity inherent in the language faculty. Rather than regarding
language as a "set of artifacts" to be studied in isolation from any
largely psychological system, Chomsky and other linguists who concur
with his philosophical outlook have emphasized the potential insight
that linguistics can provide about the structure of the human mind.
Regarding language as an intricate, creative, yet rule-governed
system, linguists within the ST framework have adopted and introduced
a metalanguage that is highly compatible with their paradigm. The
recurring qualities of ST jargon are those associated with the
properties that distinguish living organisms from nonorganic
entities: process, movement, and growth. The dynamic and creative
qualities of ST jargon thus strongly parallel the central concerns of
the theory itself, its emphasis on the creative aspects of language.

Having examined the way that ST jargon reflects the orientation of linguists working within ST, let us now move to the question of how EST jargon reflects a different orientation. One central concern in EST might be defined as limiting the power of a transformational grammar. This is not a new issue in TG theory; what is new is the amount of emphasis on the issue. For example, in *Studies in Semantics in Generative Grammar* (1972), Chomsky addresses the need to restrict the grammar:

The gravest defect of the theory of transformational grammar is its enormous latitude and descriptive power. Virtually anything can be expressed as a phrase marker ... . Virtually any imaginable rule can be described in transformational terms. Therefore a critical problem in making transformational grammar a substantive theory with explanatory force is to restrict the category of admissible phrase markers, admissible transformations, and admissible derivations ... (124-25).

Recall that "explanatory force" refers to a grammar's ability to account for the rapidity and uniformity of language acquisition, in spite of the fact that a language learner is presented with limited data within a limited period of time. Logically speaking, the more generalizations a grammar can capture, the more plausible it is as a model of competence. (For example, if a grammar contains one transformational rule, "Move Alpha," and five constraints that rule out derivations resulting in ungrammatical sentence, that grammar is more general than one that requires ten transformations and no constraints to account for the same data.) Following this general line of reasoning, Chomsky proposes the following goal:

For the moment, the problem is to construct a general theory of language that is so richly structured and so restrictive in the conditions it imposes that, while meeting the condition of
descriptive adequacy, it can sufficiently narrow the class of possible grammars so that the problem of choice of grammar (and explanation, in some serious way) can be approached. (125)

More recently, Chomsky has explicitly contrasted the goals of EST with those of ST. In *Language and Responsibility* (1979), Chomsky explains this reorientation as follows:

... we can be sure that universal grammar, once we have understood it correctly, imposes severe restrictions on the variety of possible rule systems. But this means that the permissible rules cannot express in detail how they function, and it also means that the rules tend to overgenerate--one cannot include *within the rules themselves* the restrictions placed on their application. What many linguists have tried to do is to abstract from the rules quite general principles that govern their application. (1981)

Again contrasting ST and EST, Chomsky states, "The theory presented in [The Logical Structure of Linguistic Theory (1955)] permitted a great number of rules. I tried at first to provide a system rich enough to express as much as I could imagine. Now, in a sense, I'm trying to do the opposite, to limit the expressive power of rules" (1982).

The system of constraints, conditions, and filters developed within EST constitutes one type of "general principle" that has been proposed to limit the expressive power of transformational rules. In *Concepts and Consequences of the Theory of Government and Binding* (1982), Chomsky explains the relationship between the transformational component, on the one hand, and the system of constraints, conditions, and filters.

It has been proposed in recent work that [the transformational component] can be reduced--at least for core grammar--to the single rule *Move* (that is, "move any category anywhere")....
The principles of (Government-Binding Theory) will interact to determine where and how the rule Move can apply. If so, then the class of syntactic components in finite and in fact extremely limited in variety. (15)

The passages cited above should serve to indicate the general direction of EST. From one perspective, the ultimate goal of EST is the same as that of ST: to develop a grammar that attains explanatory adequacy, one that "offers an explanation for the intuition of the native speaker on the basis of an empirical hypothesis concerning the innate predisposition of the child to develop a certain kind of theory to deal with the evidence presented to him" (Chomsky 1965: 25-26). From another perspective, however, EST departs from its predecessor in that it is concerned with limiting the power of the grammar. Note that Chomsky repeatedly emphasizes the importance of "restricting" possible components of the grammar, of characterizing "a fairly narrow class" of grammars and an "impoverished" system of rules, of imposing "severe restrictions" and "limiting the expressive power of rules." In short, while ST is concerned with increasing the power of the grammar, EST is concerned with constraining it.

Having reviewed some of the major goals and methods associated with EST, it is again possible, as with ST, to suggest several ways in which the jargon parallels the theoretical framework. While still reflecting the view that language is a complex psychological phenomenon, EST is largely an attempt to discover the universals within this complexity, and has as a prescribed goal the restriction of an all-too-powerful grammar. In turn, this shift in emphasis has been paralleled by a shift in metalanguage. As demonstrated earlier, EST jargon is unified by qualities such as stasis, restriction of activity, and abstract, volitional states. The choice of a metalanguage with these properties reflects a theoretical concern with restricting the power of the grammar. That is, both EST and the
metalanguage associated with it focus on concepts such as restriction, limitation, and an "impo

To summarize, the different metaphorical frameworks suggested by the ST and EST lexicons serve to reinforce the different theoretical frameworks behind these two schools of transformational syntax. The dynamic nature of ST jargon reflects an emphasis on the creative properties of the language faculty. In contrast, the static, restrictive nature of EST jargon reflects an emphasis on limiting the expressive power of the grammar.

Several remarks are appropriate at this point. First, since each theory and its lexicon developed gradually, it would be misleading to suggest that linguists working within either theory chose their lexicon with the conscious intent of reinforcing a philosophical viewpoint. Various terms in each theory were contributed by different linguists working over a period of more than a decade. In light of this gradual development, however, the cohesiveness of these lexicons is perhaps more remarkable than would be the case if the terms had all been set forth at one point in time by one linguist. Each set of terms, although contributed by different researchers, is bound together by a unified metaphorical framework. The internal consistency of each lexicon suggests that jargon plays an integral role in how linguists communicate with one another.

A second point that should be emphasized is the fact that the metaphorical cohesiveness of the ST and EST lexicons is primarily a function of the nontechnical meanings of particular lexical items. That is, Chomsky and other linguists have adopted the jargon of TG syntax from other vocabularies, and in doing so have endowed each term with a specialized meaning, one not necessarily meant to convey the denotative or connotative properties of the term as it is used.
outside of linguistics. As the following section demonstrates, however, nonlinguists have often interpreted linguistic jargon according to its nontechnical meaning, rather than according to its specialized meaning within transformational theory.

**Misinterpretations of Linguistic Jargon**

A survey of how linguistic jargon has been used by researchers in other fields provides strong evidence that the nontechnical meanings of technical terms affect the way that nonspecialists interpret scientific theory. In particular, researchers in fields such as folklore, literary criticism, and composition have often misinterpreted ST jargon—and hence ST itself—by attributing nontechnical meanings to technical terms. This section discusses some representative instances of such misinterpretation, and suggests that is results at least partly from the semantic properties of ST jargon. The examples that follow are drawn mainly from composition research, and focus on the misinterpretation of the terms deep structure and generate.

In its technical sense, deep structure has a limited, specific meaning: such a structure is one "generated by a base component" of a grammar (Chomsky 1965: 136). Researchers in related fields, however, have often interpreted the term as referring to much broader and less well-defined concepts. One common misconception is that deep structure refers to "grammatical universals." For example, Hakutani (1973) claims the following:

The duality of deep and surface structure ... enables us to focus our attention on the common ground all languages are based on. Structural linguists, who were preoccupied with the differences in language that reflect differences in a society's view of the world, might have overlooked the similarities at the deeper level of language structure. (282)
Hakutani is correct in pointing out that transformational theory is concerned with discovering the "common ground" shared by different languages; shared features are candidates for inclusion in a universal grammar and, as such, might reveal tendencies in language that are innate to the human organism. However, he is incorrect in suggesting that language universals are to be found at the level of deep structure, since deep structure refers simply to a stage in the derivation of a particular sentence in a particular language.

A related misconception is the notion that deep structure refers to a stage in sentence production—that is, that a derivation, beginning with a deep structure, represents a real-time performance model. In particular, some applied researchers have equated deep structure with a level of human consciousness, a kind of pre-articulatory state of mind that precedes the utterance (or writing) of a sentence. For example, Hakutani claims that "The surface structure is what we speak and what we hear. The deep structure is what we think; it is more abstract and related to meaning, expressing the basic logical relations between nouns and verbs" (280-281).

Grinder and Elgin (1973) also treat deep structure as a stage in production and comprehension, and go on to apply this misconception to their discussion of poetry:

"...while the function of the phonological sequences "selected" by the speaker in ordinary discourse is simply to allow the listener to discover the Deep Structure (meaning) of that sequence, the sequence of phonological units occurring in a line of poetry serves a double function. It allows the listener or reader to recover the deep structure, and at the same time it affords him a kind of sensual and aesthetic pleasure. (371)"

Grinder and Elgin further propose that "a poem (or any other piece of literary language) begins, just like any other piece of language, as
a tree structure. This tree structure contains all semantic elements of the total content of the poem" (176).

In a similar way, Bornstein (1977) suggests that deep structure is a stage of sentence production: "Phrase structure rules generate the sentences that are found in the deep structure. Transformational rules change around these sentences, making them into surface structures. Both types of rules are assumed to be part of the individual's linguistic competence" (37). Such a statement further fails to distinguish between structures (strings of elements) and sentences; while structures can be generated by phrase structure rules, sentences cannot, and hence by definition sentences cannot be "found in" the deep structure. (Similarly, a transformational rule operates on structures, not on sentences, and hence a rule cannot "change around" a sentence.) Silber (1979) also treats deep structure as part of the performance process, and further suggests that written and spoken sentences differ with respect to their deep and surface structures: "Writing requires clear syntactic boundaries and junctions, while the surface structure of spoken utterances often fails to produce the deep structure accurately and completely. Thus, sentences often omit subjects, verbs, or other elements, resulting in what we call fragments" (298).

More recent examples of the idea that deep structure constitutes a kind of subconscious production stage can be found in Heatherington (1980) and Lindemann (1982). Heatherington states that phrase structure rules yield a terminal string that "is merely a list of directions, cueing the speaker to insert certain words"; she further describes this string as "the almost subconscious underlying syntactic arrangement of sentence parts" (77). Lindemann offers the following assertions, which explicitly interpret deep structure as part of the production process: "Both generating a kernel sentence and transforming it are mental operations which yield ordered slots
for vocabulary items. The sentence to this point is said to have a deep structure, as contrasted with a surface structure, the appearance it has when it's spoken or written" (123). She goes on to say that "A sentence receives a surface structure when the ordered slots of a transformed kernel sentence are filled with appropriate selections from the English lexicon, a kind of internalized, mental dictionary" (124).

In addition to misinterpreting TG as a production model, such statements also reveal some misconceptions about the status of kernel sentences. A kernel sentence does not exist prior to the application of transformational rules, since phrase structure rules cannot generate a kernel sentence. Rather, kernel sentences are a subset of all sentences, namely those whose surface structures result from the application of only obligatory transformations. It is further misleading to speak of a kernel sentence as being "filled with" lexical items, since a sentence without lexical items is not a sentence at all, but rather a string of categorical elements.

As these examples illustrate, a great deal of confusion surrounds the term deep structure. What started out in the primary literature as a technical term describing one structure in the stage of a derivation has acquired, in the applied literature, properties far beyond those ever attributed to it by Chomsky. For many researchers in fields outside of linguistics, deep structure has acquired denotations that depart radically from its technical meaning, and has come to signify universality or a level of human consciousness. The question of interest is that of how such associations came to be attached to this term.

One assumption that is apparently being made by these researchers is that TG is a replica (rather than a model), and further that it replicates language production or the thought processes that precede language production. (This point will be
taken up in more detail in the discussion of the term generate.)

Another phenomenon that appears to have taken place is that some applied researchers have interpreted the deep in deep structure in its nonlinguistic, rather than in its technical, sense. Instead of using deep structure to refer to the output of the phrase structure component, such researchers have assumed that deep conveys the meanings that one might find for it in a dictionary: "mysterious," "obscure," "profound," "extending far downward" (as into the mind), and so forth. In short, at least some of the theoretical misconceptions held by nonlinguists can be directly attributed to the metaphorical nuances of the linguistic jargon that they have encountered.

Ironically, Chomsky himself has warned against such misinterpretations. In Reflections on Language (1975) (a work that predates those by Bornstein, Silber, Heatherington, and Lindemann), Chomsky tries to clarify the meaning of deep structure:

The term "deep structure" has, unfortunately, proved to be very misleading. It has led a number of people to suppose that it is the deep structures and their properties that are truly "deep," in the nontechnical sense of the word, while the rest is superficial, unimportant, variable across languages, and so on. This was never intended. . . . On occasion, the term "deep structure" has been used to mean "grammar" or "universal grammar" or "abstract properties of rules" or in other confusing ways. No one, I hope, will be misled into believing that the properties of abstract initial phrase markers necessarily exhaust what may be "deep," or that assumptions about such structures constitute the fundamental thesis of transformational grammar, without which it collapses. (82)

Four years later, in 1979, Chomsky turns his attention once again to the confusion surrounding deep structure. The following excerpt from
Language and Responsibility again shows Chomsky attempting to "demystify" the term:

... the greatest confusion comes from people working at the periphery of the field, for example, some literary critics who use the term in a vaguely Wittgensteinian sense. Many people have attributed the word deep to grammar itself, perhaps identifying "deep structure" and "universal grammar."

I have read many criticisms saying how ill-conceived it is to postulate innate deep structures. I never said that, and nothing I have written suggests anything of the sort, though such a view has been maintained by others.

Similarly, I have often read that what I am proposing is that deep structures do not vary from one language to another, that all languages have the same deep structure; people have apparently been misled by the word deep and confuse it with invariant. Once again, the only thing I claim to be "invariant" is universal grammar. (171-172)

As Chomsky suggests in these passages, the misinterpretation of deep structure by researchers in fields related to linguistics seems to stem at least partly from a tendency to attribute nontechnical definitions to this technical term.

A second term that has been misinterpreted by researchers in applied fields is generate. Like deep structure, generate and generative have specific meanings in transformational theory; a generative grammar is one capable of assigning structural descriptions to sentences (Chomsky 1965: 8). Radford (1981) provides the following analogy to illustrate the sense in which a grammar can be said to generate structures:

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 on 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. (91)

As this analogy illustrates, the meaning of generate in
linguistic theory is distinct from its nontechnical meaning "to
produce." A generative grammar is akin to Radford's set of
"municipal regulations" in that it states well-formedness conditions
on sentences. The phrase structure rules for English, for example,
define all and only those deep structures that are well-formed in
English. However, since these rules are part of a model of
competence rather than one of performance, they make no direct claims
about how speakers or listeners go about producing or comprehending
sentences. (Likewise, to say that a given sentence can be derived in
terms of certain transformations is not to imply that a
speaker/listener actually performs such processes when constructing
or deconstructing a sentence.)

Unfortunately, though, applied researchers, from the 1960s to
the present, have frequently misinterpreted generate as being
synonymous with produce or create. For example, Thomas (1965)
attributes the following goals to linguists working in ST: "In effect
they are saying, 'Since we can't describe the "competence" of a
native speaker, then we can at least try to construct a grammar that
does all the things a native speaker does'" (7). This analysis
exactly reverses the explicit goal of ST: namely, to build a model of
competence, not one of performance. In fact, Chomsky explains this
goal quite clearly in the first section of Aspects—entitled, aptly
enough, "Generative grammars as theories of linguistic competence"—
with statements like the following:

... a generative grammar is not a model for a speaker or a hearer. ... When we speak of a grammar as generating a sentence with a certain structural description, we mean simply that the grammar assigns this structural description to the sentence. When we say that a sentence has a certain derivation with respect to a particular generative grammar, we say nothing about how a speaker or hearer might proceed, in some practical or efficient way, to construct such a derivation. These questions belong to the theory of language use—the theory of performance. (9)

Despite such explanations, numerous applied researchers writing in the 1970s and 1980s have continued to interpret TG syntax as a performance model. For example, Hunt (1973) claims that the rules in such a grammar "will produce or generate the one little sentence The cat will drink the milk" (164). He further claims that "When you listen you work from larger to small, but when you speak or write you work from small to large" (165), and that a generative grammar "gives you explicit directions on how to make big sentences out of little ones. ... The grammar merely tries to describe what you know and what you do" (168). Thus Hunt explicitly relegates performance processes (such as student writing) to the purview of TG.

Malmstrom and Weaver (1977) attribute similar properties to generative grammars. After illustrating a derivation, they claim that "According to Chomsky, this process we have just gone through is a model of what native speakers do instantaneously, without conscious thought, in producing sentences" (86). Given the passage from Chomsky cited immediately above, however, it is clear that derivations are not intended to reflect the performance process, even on an unconscious level. Bornstein (1977) also defines a generative grammar as one which "sets forth rules or instructions for producing
an infinite number of sentences in a language" (240), and further associates such a grammar with production by claiming that "a knowledge of transformational grammar can help a writer to avoid or correct errors" (221). By presenting TG syntax as a model of the production process, such passages reveal a fundamental misunderstanding of the properties of such a grammar.

More recent works by applied researchers have continued to perpetuate such misunderstanding, rather than attempting to correct it. For example, Heatherington (1980) believes that "the most basic concern in TG grammar is to describe and predict how a native speaker produces or generates grammatical sentences" (77). She further claims that "It is the working out of various transformations which produces sentences as we know them, the kind of utterances that we speak, read (sic), and write (sic)" (64). Faigley (1981) likewise asserts that "Chomsky's theories of transformational grammar . . . implied the existence of mental processes like transformations in the coding and decoding of language" (295). Faigley further implies that good writers have mental access to a greater number of kernels and transformations: "skilled adults begin the writing stage of the composing process with more so-called kernels to transform into longer sentences . . . many more propositions as well as more transformations underlie the sentences of skilled adults" (296).

Along the same lines, Lindemann (1983) attributes production status to TG syntax: "Long before the sentence is spoken, the speaker selects items from the phrase-structure rules to generate mentally a simple declarative sentence, called a kernel sentence. Once this kernel sentence has been generated, a series of operations, called transformations, may be applied to the declarative sentence" (122). Lindemann's claim reveals both technical and theoretical misunderstandings. On the technical level, phrase structure rules alone do not generate a kernel sentence; rather, such a sentence
results from the application of obligatory transformations (such as Affix Hopping) to the deep structure specified by phrase structure rules.

A more far-reaching misconception—one held not only by Lindemann but, apparently, by many of the researchers just cited as well—results from attributing production status to the grammar. It is one thing to claim that the sentences written by a "skilled adult" (or anyone else) can be described or analyzed by means of a TG. In fact, this ability is exactly what one would expect, since the grammar is constructed as a means of describing all (and only) the grammatical sentences in a language. However, the fact that a sentence can be described by means of a TG does not provide proof (or even evidence) that speakers/hearers generate deep structures or perform transformations as part of the production/comprehension process.

To summarize this section, what we find in both the case of deep structure and generate is a continuing tendency on the part of applied researchers to attribute far more to these terms than was ever intended by Chomsky or other linguists. Furthermore, such misinterpretation persists even after specific caveats against it have appeared in the primary literature—that is, despite clear explanations by Chomsky of the proper and improper use of such technical terms. The logical question is, why does this mismatch occur?

One force that seems to be at work is that applied researchers are responding to the metaphorical framework suggested by the nontechnical meanings of ST terms. In the discussion of deep structure, for example, it was noted that applied researchers often interpret deep in its nontechnical sense—i.e., as referring to a "mysterious" or "unconscious" stage within the process of language production. Such an interpretation, in turn, entails the (incorrect)
assumption that TG is a production model. The term *generate* may be at the heart of this problem, since its nontechnical meaning is "to produce."

Furthermore, the ST lexicon as a whole contains numerous terms that suggest process, movement, and growth. Confronted with such a metalanguage, applied researchers appear to have been more strongly influenced by the metaphorical properties of ST terms than by their nontechnical meanings. Since ST jargon, in its nontechnical sense, suggests a dynamic system that exists in "real time," applied researchers have mistakenly interpreted ST as a "real time" model: that is, as a set of claims about language production and comprehension.

**Conclusion**

This chapter has investigated several issues pertaining to the relation between jargon and theory in one technical field, TG syntax. Based on this analysis, it appears that an interesting contrast exists between the function of jargon for specialists and nonspecialists. Specialists—in this case linguists—develop jargon as a way of talking about a theory: the theory precedes and determines the jargon. When using a term with dual reference (e.g., *generate*), specialists "foreground" the agreed-upon technical meaning of the term and set its nontechnical meaning aside. In the case of nonspecialists, however, we find evidence that the jargon may determine the theory. Upon encountering a term with dual reference, the nonspecialist is likely to foreground the nontechnical meaning of the term, since that meaning is more immediately accessible, and proceed to impose the nontechnical meaning on the theoretical construct that the term refers to.

The phenomena discussed in this chapter suggest several areas for future studies of the relation between jargon and theory. First,
a semantic analysis of the jargon used in a particular technical field can shed light on the use of metaphors and models within scientific theory at large. Since a theory is essentially a set of claims about an unobservable (or as yet unobserved) phenomenon, we can expect theorists to use metaphors as a means of constructing a theoretical model. For example, TG syntax is an attempt to describe a mental system. Because such a system cannot be directly observed, it must be described by means of a model (an indirect representation) rather than by means of a replica (a direct representation). In turn, the model itself must be internally consistent in order to be comprehensible, and one way to achieve this internal consistency is through the use of a semantically unified lexicon. Thus it is predictable that a major change in the model itself—as in the movement from ST to EST—will result in a major change in the metaphorical properties of the technical lexicon.

Second, it is clear that the nontechnical meanings of technical terms have a strong effect on how nonspecialists perceive the claims that specialists are making about their subject. It is an open question as to whether specialists should take this effect into consideration when they select technical terms that have dual reference. (For example, could, or should, Chomsky have predicted—and perhaps avoided—the misinterpretations that have come to be attached to generate and deep structure?) An awareness of the potential for misinterpretation can, in any case, perhaps alert both specialists and nonspecialists to the need for a careful definition of terms, especially in interdisciplinary fields.
Several terms common to both the ST and EST lexicons have been excluded from this analysis: competence, performance, transformation, and generate/generative. The purpose of this exclusion is to clarify the differences between the metaphorical frameworks suggested by the ST and EST lexicons.

Newmeyer (1980), in a useful summary of "Syntax in the 1970s" (175-207), cites a series of works by Stanley Peters and Robert Ritchie in 1969, 1971, and 1973 as leading to a new concern with constraining the expressive power of transformational rules. "Remarks on nominalization" (1970) could also be added to this list, since Chomsky is concerned in that work with moving away from a transformational analysis of gerund clauses. The year 1970, then, seems to constitute a watershed date in TG theory, and may be defined, albeit somewhat artificially, as the starting point for EST.

Such terms appear, for example, in sentences like the following:

(a) She doesn't strike me as a very deep person.
(b) The motives underlying his behavior are less than honorable.
(c) He seems very confident on the surface, but I think he's actually rather insecure.

See Lakoff and Johnson (1980: 15-21; 101-103) for a discussion of the use of spatial terms such as deep in metaphors for psychological states.

The discussion of developments in ST and EST in this section focuses on works by Chomsky. Although by no means the only linguist who has worked in both theories, he can certainly be regarded as one of the most influential spokesmen for both of them. In addition, since Chomsky has contributed to the development of both theories, interesting contrasts can be drawn between his earlier work in ST and
his more recent work in EST.

"For an extensive discussion of how researchers in another field, folklore, have misinterpreted linguistic theory, see Parker (1984).

Chomsky (1965: 17-18) describes kernel sentences as "sentences of a particularly simple sort that involve a minimum of transformational apparatus in their generation." He further warns that "One must be careful not to confuse kernel sentences with the basic strings that underlie them." In early ST, the subset "kernel sentences" defined simple, active, passive, declarative sentences.

'See Marshall (1977) and Riley (1984) for discussions of this phenomenon in neuro- and psycholinguistics.
Chapter 3
Anomalous Prepositions in Relative Clauses

Introduction

Although the competence-performance distinction posited by Chomsky (1965) is by now a familiar concept, it is by no means a uniformly agreed-upon one. Newmeyer (1983), in reviewing the controversy that has surrounded this distinction, discusses several reasons that some theorists have been dissatisfied with the competence-performance dichotomy. He observes, for one thing, that "for any given linguistic phenomenon, no hard-and-fast criterion exists to decide which aspects should fall under competence" (37). Furthermore, the fact that competence can be hypothesized only indirectly, that is by means of observations about performance, has led some theorists to abandon the distinction altogether, or at least to expand the notion of competence "to the point where it all but equals performance" (36). In short, two types of disagreement have arisen. At the extreme, one might argue that the competence-performance distinction is itself an invalid one. Alternatively, one might maintain the validity of the distinction, but remain uncertain about which domain a particular phenomenon should be assigned to.

These issues are brought up not in the hopes of resolving them but rather because they bear on the data discussed here. The competence-performance distinction seems to be basically valid, but the phenomena discussed here do not fit neatly into either domain. However, Newmeyer's observation is encouraging: "many borderline cases . . . . pose an exciting challenge to researchers--a challenge whose resolution might well involve redrawing the boundaries of linguistic competence" (77).
The Phenomena Under Question

The occurrence of two similar anomalous relative clause structures has been reported by Shaughnessy (1977), Smith (1981), and Free (1987). These structures are exemplified in the following sentences from Shaughnessy's subjects:

(a) ... there are more jobs of which I'm sure of that are going down in demand. (61)
(b) ... you can just about demand the price in which you think you should receive. (64)

Our purpose here is to offer several hypotheses that may explain how such structures arise.

This section discusses the subjects from which Shaughnessy, Smith, and Free gathered their data, and also presents and classifies this data. The next section addresses the question of why the relative pronoun which occurs throughout these data, to the virtual exclusion of other relative pronouns. Finally, three alternative hypotheses concerning the anomalous use of prepositions throughout this data are presented and evaluated. It should be clarified at the outset that none of these three hypotheses accounts completely for all the facts. At the same time, the fundamental assumption underlying all interesting investigations of linguistic phenomena is that language and linguistic behavior is rule-governed. Thus, the analyst's role is to explicate the rules. It is hoped that this investigation, although incomplete, will provide one step in that direction.

A Description of the Subjects

The majority of the data gathered by Shaughnessy, Smith, and Free comes from the written work of college students. However, the students themselves do not comprise a homogeneous group. Shaughnessy's subjects are "basic writers" entering the City
University of New York, and her data are gathered from 4,000 placement essays written by these incoming freshmen during the 1970-1974 period (4). The basic writers described by Shaughnessy have certain traits in common. First, "Most of them had grown up in one of New York's ethnic or racial enclaves. Many had spoken other languages or dialects (other than Standard English) at home" (3). Second, most of them failed to meet "even very modest standards of high-school literacy" (2). Third, Shaughnessy estimates that the typical basic writing student has written an average of 350 words a semester during high school, in contrast to "the 1,000 words a week that a British student is likely to have written in the equivalent of an American high school or even the 350 words a week that an American in a middle-class high school is likely to have written" (14).

Somewhat less information is available on Smith's and Free's subjects. Smith's data were gathered from both oral and written English produced by twelve college students (at least some of them freshmen) or graduates; presumably, the data were collected in the Natchitoches, Louisiana area, where Smith teaches. Free's data were drawn from 72 essays written by students at the junior-senior level, presumably at Florida International University. Neither author indicates that any of these subjects were in remedial writing programs.

A Description of the Data
The data gathered by Shaughnessy, Smith, and Free can be divided into two general categories, which will be referred to as Double Preposition structures and Extra Preposition structures. The Double Preposition structure refers to a relative clause of the following general form:

\[(\text{preposition}--\text{which}--X--\text{preposition})\]

Two subgroups appear within the Double Preposition category. The
first subgroup will be referred to as Matched Preposition structures. These are Double Preposition structures in which the same preposition appears at both the beginning and end of the relative clause (see examples (1-6) in Figure 1). In the second subgroup, which will be referred to as Mismatched Preposition structures, two different prepositions appear within the same relative clause (see examples (7-11) in Figure 1). In all of the Mismatched Preposition data, only the clause-final (or "stranded") preposition is an appropriate one for the verb phrase; the clause-initial (or "fronted") preposition is inappropriate.

Figure 1 lists the Double Preposition data reported by Shaughnessy, Smith, and Free.

In contrast to Double Preposition structures, Extra Preposition structures contain a nonsubcategorized preposition. In these relative clauses, although the verb phrase is not subcategorized for a prepositional phrase, a fronted preposition nevertheless appears in the relative clause. Thus the Extra Preposition structure refers to a relative clause of the following general form:

\[
\text{[preposition--which--X--verb phrase]} \\
\text{[-PP]}
\]

Figure 2 lists the Extra Preposition data reported by Shaughnessy, Smith, and Free.
Matched Preposition Structures

(1) . . . there are more jobs of which I'm sure of that are going down in demand . . . (Shaughnessy 1977: 61)

(2) They felt a person with a college education can handle more easily the problems that arise in the type of work in which you are involved in. (Shaughnessy 1977: 65)

(3) And there are so many fields from which to choose from which a student never really knows. (Shaughnessy 1977: 65)

(4) The college-bound student would like to find out in which field he or she would be most interested in. (Shaughnessy 1977: 65)

(5) . . . some creeks in which the backwater gets in. (Smith 1981: 311)

(6) . . . restaurants are giving elderly Americans special rates for which the working American is paying for. (Free 1982: 309).

Mismatched Preposition Structures

(7) He has to fulfill four years of studies of which he cannot earn a living by when he leaves college. (Shaughnessy 1977: 65)

(8) . . . the organization in which a person is affiliated with. (Smith 1981: 311)

(9) . . . my leisure time inwhich [sic] I had plenty of. (Smith 1981: 311)

(10) . . . one should be facing the direction in which he came from. (Smith 1981: 311-312)

(11) One of my fondest memories, in which I came back to over and over . . . (Free 1982: 309)

Figure 1. Double Preposition structures. (In some cases, spelling has been normalized and emphasis added.)
(12) . . . the field in which one chose does not have an opening after college. (Shaughnessy 1977: 64)

(13) . . . you can just about demand the price in which you think you should receive. (Shaughnessy 1977: 64)

(14) . . . they can't find jobs in which they would like to do. (Shaughnessy 1977: 64)

(15) America . . . drove the Indians off land in which was theirs.¹ (Shaughnessy 1977: 65)

(16) There was a movie in which [sic] I saw. (Smith 1981: 310)

(17) It was a night in which [sic] none of us will ever forget. (Smith 1981: 310)

(18) The children in which [sic] Aunt Betty kept had to be taken care of. (Smith 1981: 310)

(19) . . . the scenery in which they will use. (Smith 1981: 311)

(20) . . . literature in which we studied. (Smith 1981: 311)

(21) . . . the one in which the priest stated during his tale. (Smith 1981: 311)

(22) . . . a goal in which he is to accomplish. (Smith 1981: 311)

(23) . . . another part of the growth in which I acquired during my freshman year. (Smith 1981: 312)

(24) She has an art for boosting the male ego in which most men adore. (Smith 1981: 312)

(25) . . . I would absolutely refuse to ever do the same job in which I had last summer. (Free 1982: 309)

(26) . . . a family in Atlanta has seven children in which [sic] the parents claim as dependents. (Free 1982: 309)

Figure 2. Extra Preposition structures. (In some cases, spelling has been normalized and emphasis added.)
Why "which"?

A survey of the sentences in Figures 1 and 2 reveals a tendency for the students who produced this data to rely on which as a relative pronoun. In order to explain the preference for which, we need to examine several environments in which relative pronouns can appear, and derive some principles about the grammaticality of which and that in these environments.

One environment in which the relative pronouns which and that can appear is in a clause modifying a nonhuman antecedent. Each of the following sentences illustrates this environment (all data in this section was constructed by the author).

(27) The book which I bought last week cost fifteen dollars.
(28) The book that I bought last week cost fifteen dollars.
(29) The book, which I bought last week, cost fifteen dollars.
(30) *The book, that I bought last week, cost fifteen dollars.

As shown by (27-30), either which or that can introduce a restrictive relative clause modifying a nonhuman antecedent. In contrast, however, only which can introduce a nonrestrictive relative clause modifying this type of antecedent, as shown by the ungrammaticality of (30).

A second environment in which the relative pronouns which and that can appear is in a clause modifying a nonhuman antecedent and containing a preposition. The following data are similar to (27-30), except that the relative pronoun originates as the object of a preposition.

(31) The house which they live in has hardwood floors.
(32) The house that they live in has hardwood floors.
(33) The house in which they live has hardwood floors.
(34) *The house in that they live has hardwood floors.

These data illustrate a further constraint on restrictive relative clauses modifying nonhuman antecedents: namely that which, but not
that, can be used following a fronted preposition. This principle is reflected by the ungrammaticality of (34).

The general pattern that emerges from these environments is summarized in Figure 3. The hierarchy displayed in Figure 3 might be thought of as a kind of decision tree for choosing between which and that in a relative clause modifying a nonhuman antecedent.
Relative clauses modifying nonhuman antecedents: which, that

Restrictive clauses: which, that

Nonrestrictive clauses: which

Stranded preposition: which, that
Fronted preposition: which
Stranded preposition: which
Fronted preposition: which

Figure 3. Hierarchy of grammaticality for which and that.
The overall pattern illustrated in Figure 3 shows that which is a grammatical option in every environment where that is grammatical. Conversely, however, that is not a grammatical option in every environment where which is grammatical. In other words, that has more restrictions on where it can occur than which does.

Especially relevant to the data presented in Section 2 is the fact that which, unlike that, can appear in all of the preposition environments displayed in Figure 3. This fact may account for the students' tendency to use which with prepositional phrases.

Alternative Hypotheses about Preposition Patterning

The restrictions on relative pronouns described in the preceding section provide a plausible account for one of the phenomena observed in the data under discussion, namely the reliance on which. This section presents three theories that attempt to account for the anomalous preposition patterns in this data. As mentioned earlier, none of these theories accounts completely for all the facts. Accordingly, each theory will be evaluated after it is described, to show what it does and doesn't explain.

Theory 1: Style

Given the fact that most of the data was taken from student writing, one way to try to account for the preposition patterns under question is to assume that these writers were trying to emulate a formal style which is not completely within their control. Specifically, the prescriptive rule that comes to mind as a possible culprit is "Don't end a sentence with a preposition" (or, to give this rule an interpretation more in line with some of the data, "Don't end a clause with a preposition").

The reasoning behind this theory might go as follows. First, students are attempting to achieve a more formal style in teacher-
directed writing. Second, students associate a fronted preposition with a more formal style. Therefore, they tend to use fronted prepositions in teacher-directed writing. This possibility is noted by all three authors. Smith states, somewhat tentatively, that some uses "may be overcorrection stemming from former admonitions against sentence-final prepositions," but points out that not all preposition errors can be traced to this source (311). Likewise, Free speaks of "the hypercorrection we find in a sentence like 'Even fast-food restaurants are giving elderly Americans special rates for which the working American is paying for' [(46)]" (309). Finally, Shaughnessy claims that some anomalous preposition structures "are initiated because the writer is straining to sound formal and in the process gets himself into deeper syntactic waters than he can negotiate without a further development of his memory for written words and structures" (65). In other words, the stylistic hypothesis states that these writers are trying (unsuccessfully) to emulate a more formal style, an effort which results in structural hypercorrection.

How well does the stylistic theory account for the preposition patterns found in the data? One positive point about this theory is that it constitutes a reasonable claim about the subjects. That is, it is reasonable to assume that many students equate "written" with "formal," and further that they may equate "English teacher" with "adherent to prescriptive grammar"—despite the fact that a given English teacher may have informed students that stylistic variation occurs in writing as well as in speech, and despite a given teacher’s professed indifference to prescriptive grammar.

However, several problems arise in trying to fit this theory to the data. At best, it provides a partial account for some of the Mismatched Preposition structures (sentences (1-6) in Figure 1). In these data, it is possible that the fronted preposition reflects the influence of a prescriptive rule. Even in these cases, though, a
A paradox arises. If the writer is attempting to adhere to a prescriptive rule—i.e., one that does not reflect the inherent properties of English and which must be consciously learned (and perhaps consciously remembered), then it seems paradoxical that the same writer would also violate the rule by ending the clause with a preposition. This contradiction could result from a conflict between the formal style to which the student aspires and the vernacular style which he or she can control.

A second problem with the stylistic hypothesis is that it does not account in any straightforward way for Mismatched Preposition structures (sentences (7-11) in Figure 1). Again, a paradox arises if one assumes that these sentences resulted from the attempt to use a prescriptive rule. Note that the fronted preposition in each of these sentences is invariably an inappropriate one for the verb in the relative clause. Thus, it is entirely unclear how a writer could "front" a preposition that was never part of the verb phrase to begin with. (In addition, the same paradox noted above still persists, namely that these writers are violating the very rule that they are presumed to be following.)

A final and related problem is that the stylistic hypothesis does not account at all for Extra Preposition structures. Recall that these sentences contain a fronted preposition, despite the fact that the relative clause is not subcategorized for a prepositional phrase. Again, it is unclear how a writer could "front" a preposition that was never part of the verb phrase.

In summary, the stylistic hypothesis becomes less plausible as one tries to extend it to more data. It accounts only partially for Matched Preposition structures. It does not account well for Mismatched Preposition structures for Extra Preposition structures.
Theory 2: Performance

A second possible hypothesis that might be put forth to explain these preposition errors is that of performance. That is, the errors might be regarded as "slips of the pen," reflecting performance factors such as memory, fatigue, inattention to detail, etc. In more specific terms, to account for a structure of the form [preposition--which--X--preposition], one might hypothesize that the writer fronted the preposition but "forgot" it had been fronted, and so reintroduced it at the end of the relative clause. It would have to be further postulated that the writer either did not proofread the written material or else overlooked the preposition error during the editing stage.

One argument in favor of the performance theory is that it corresponds to analogous data reported in "slip of the tongue" studies. For example, Fay (1981) reports the following errors from spontaneous speech (emphasis added):

(35) You always get the pimply-faced boys that haven't quite yet matured yet. (718)
(36) Would you turn on the light on? (718)
(37) Well, then, get up here and eat it then. (720)

Fay refers to this phenomenon as a "stylistic duplication error" (718).

Another advantage of the performance hypothesis is that it provides a plausible explanation for Matched Preposition structures and for some Extra Preposition structures. One way to explain these errors is to assume that they derive from what Fay calls "blending": "A blend occurs when a speaker has in mind simultaneously two ways of expressing the same message. Instead of one or the other expression being used, they are combined in some way to give a new, synthesized utterance that does not match exactly either of the intended expressions" (719). Fay cites 98 examples of blends (all from
spontaneous speech) and attempts to reconstruct the underlying targets that were blended. Below are several of his examples, along with his hypotheses about the underlying targets.

(38) You're going to be another Joe Oppenheimer when you get up. (722)
Target 1: when you get older
Target 2: when you grow up

(39) . . . if I don't get the ball on the show. (723)
Target 1: the ball rolling
Target 2: the show on the road

(40) When you're working with severely profound children . . .
Target 1: severely retarded children
Target 2: profoundly retarded children

(41) Since it's such a short time since I ate him . . . (742)
Target 1: since I fed him
Target 2: since he ate

First let us see how this type of analysis can be applied to Matched Preposition structures. Below are the sentences that fall into this group, along with the possible conflicting targets in each case.

(1) . . . there are more jobs of which I'm sure of that are going down in demand.
Target 1: jobs of which I'm sure
Target 2: jobs which I'm sure of

(2) They felt a person with a college education can handle more easily the problems that arise in the type of work in which you are involved in.
Target 1: the type of work in which you are involved
Target 2: the type of work which you are involved in

(3) And there are so many fields from which to choose from.
Target 1: fields from which to choose
Target 2: fields to choose from

(4) The college-bound student would like to find out in which field he or she is most interested in.

Target 1: find out in which field he or she is most interested

Target 2: find out which field he or she is most interested in

(5) ... some creeks in which the backwater gets in.

Target 1: ?creeks in which the backwater gets

Target 2: ?creeks which the backwater gets in

(6) Even fast-food restaurants are giving elderly Americans special rates for which the working American is paying for.

Target 1: rates for which the working American is paying

Target 2: rates which the working American is paying for

As these analyses show, Matched Preposition structures can be hypothesized as resulting from two related targets which are blended, thereby creating a surface structure with characteristics of both target structures.

A similar analysis can be applied to some Extra Preposition structures. What we looked for among these data were sentences in which the verb could be replaced by a semantically related verb that is subcategorized for a prepositional phrase. Different semantically related targets can be reconstructed for three of these sentences.

(12) ... the field in which one chose does not have an opening after college.

Target 1: the field which one chose

Target 2: the field in which one chose to work/major

(14) ... they can't find jobs in which they would like to do.

Target 1: jobs which they would like to do

Target 2: jobs in which they would like to work
(25) I would absolutely refuse to ever do the same job in which I had last summer.

Target 1: the same job which I had
Target 2: the same job in which I worked

To summarize to this point, then, the performance hypothesis can account for all Matched Preposition structures and a few Extra Preposition structures. Further, this theory can be applied to both basic and non-basic writers, since there is no a priori reason to believe that performance factors should affect one group more than the other.

Unfortunately, however, some sentences still remain that the performance theory cannot account for. Most Mismatched Preposition structures are not clearly explained by positing blends as their source, as are Matched Preposition structures. One Mismatched Preposition structure can be analyzed in this way:

(8) . . . the organization in which a person is affiliated with.

Target 1: in which a person is a member
Target 2: which a person is affiliated with

However, no set of semantically related targets is immediately apparent as the source to (7), (9), (10), or (11). Again, we run into the paradoxical assumption that the writer fronted a preposition that didn’t originate as part of the prepositional phrase.

A similar problem arises with most of the Extra Preposition structures. While (12), (14), and (25) can plausibly be analyzed as blends, the 12 remaining sentences in this group cannot.

It appears, then, that the performance theory accounts for more data that the stylistic theory does, in that it accounts for some sentences from both the Double Preposition and Extra Preposition categories. However, it still leaves about 60 percent of the total corpus unaccounted for.
Theory 3: Case Assignment

This section presents a third hypothesis for preposition errors, one that draws upon Extended Standard Theory, a model of syntax largely influenced by Chomsky's work since 1977. In contrast to the first two hypotheses, which look to external factors such as style and performance to explain the anomalous use of prepositions, this hypothesis assumes that Double Preposition and Extra Preposition structures result from a reinterpretation of grammar-internal rules concerning case assignment.

In order to explain how this theory accounts for the data, we need first to review the Standard English paradigm for similar structures. For example, Standard English permits (4') as a version of (4), and (14') as a version of (14).

(4) The college-bound student would like to find out in which field he or she would be most interest in.

(4') The college-bound student would like to find out which field he or she would be most interested in.

(14) . . . they can’t find jobs in which they would like to do.

(14') . . . they can’t find jobs which they would like to do.

We need first to explain how the Standard English paradigm allows (4') and (14') while blocking (4) and (14). The discussion of the relevant case assignment principles follows that of Chomsky (1981).

Chomsky postulates a series of case assignment rules which interact with the two movement rules in English, Wh-Movement (WHM) and NP-Movement (NPM). The relevant case assignment principles can be summarized as follows:

1. **Case Filter**: Any surface (i.e., phonetically realized) NP must be assigned case.

2. **Case Assigner**: Prepositions and transitive verbs in English assign objective case ([+OBJ]) to their object NP's.
(3) **Wh-Case Condition:** A moved Wh-phrase inherits the case of its trace.

The trace mentioned in condition (3) can be thought of as a "placeholder" that marks the original site of a moved item. However, the trace itself is not phonetically realized in the surface structure of a sentence.

Let us look first at how these case assignment principles rules out (4) (a Matched Preposition structure) in Standard English, while permitting ("'). As the following derivation shows, the Wh-Case Condition in Standard English requires a moved Wh-Phrase (e.g., which field) to inherit the case of its trace following WHM. (The sentence and its derivation have been simplified in minor ways that do not affect the relevant arguments.)

P-Structure:

\[
\begin{array}{c}
[S' \text{she wants to find out} S \text{comp [she is interested in which field]]}]
\end{array}
\]

\[\text{WHM:}\]

\[
\begin{array}{c}
[S' \text{she wants to find out} S \text{[COMP which field [she is interested in t]]}] \\
[S' \text{which field [she is interested in t]]}
\end{array}
\]

**Case assignment via inheritance:**

\[
\begin{array}{c}
[S' \text{she wants to find out} S \text{[COMP which field [she is interested in t]]}] \\
[S' \text{she is interested in t}] \\
[S' [+OBJ]]
\end{array}
\]

Note that in the last step of this derivation, the Wh-trace (t) is assigned [+OBJ] case by the preposition in. The moved Wh-phrase, which field, then inherits [+OBJ] case in accordance with the Wh-Case Condition. This derivation yields (4'), an acceptable Standard English version of (4):

\[
(4') \text{ She wants to find out which field she is interested in.}
\]

Now let us consider how the case assignment paradigm would have to be reanalyzed in order to generate Double Preposition sentences such as (4). What must be postulated is a revision of the case assignment principles outlined earlier in this section. This
revision retains principles (1) (the Case Filter) and (2) (the Case Assigners); it should be further noted that the Case Filter applies to any Wh-items that are also NP's—relative pronouns, for example. We will assume, however, a paradigm that does not contain (3), the Wh-Case Condition.

Without the Wh-Case Condition, the paradigm runs into a potential problem. Specifically, any moved relative pronouns will run afoul of the Case Filter, since they are NP's and must therefore be assigned case. What we postulate is that Wh-items are assigned case by a method other than the Wh-Case Condition. Suppose that, rather than inheriting case from its trace, a moved Wh-item is casemarked by the insertion of a case assigner, namely a preposition. This strategy can be stated informally as follows:

**Case Assigner Insertion (CAI):** Insert a preposition immediately to the left of a moved Wh-item, thereby assigning [+OBJ] case to the Wh-item.

The following derivation demonstrates how this assumption—i.e., the replacement of the Wh-Case Condition by a rule of CAI—will generate (4). The first two steps in the derivation are the same as those in the Standard English derivation of (4'), so that WHM yields the following structure:

\[
\text{WHM:}\]

\[
\text{[she wants to find out [COMP which field [she is interested in t]]]}
\]

\[
S \quad S' \quad S
\]

However, whereas case inheritance applies as the next step in the derivation of (4'), CAI applies instead in the derivation of (4):

\[
\text{CAI:}
\]

\[
\text{[she wants to find out [COMP in which field [she is interested in t]]]}
\]

\[
S \quad S' \quad [+OBJ] \quad S \quad [+OBJ]
\]

\[
= (4) \text{ She wants to find out in which field she is interested in.}
\]

Positing CAI as a rule that inserts a preposition, rather than
copying one, provides an account of both Matched and Mismatched Preposition structures. Recall that in the Mismatched Preposition structures, the fronted preposition is always an inappropriate one. If we assumed that this fronted preposition had been copied, then there would be no way to explain the mismatch between the fronted and stranded prepositions. It appears that inserting the preposition takes priority over making it match the preposition already in the relative clause. (Interestingly enough, \textit{it} is the inserted preposition in four of the five Mismatched Preposition structures, as well as in all of the Extra Preposition structures. There is no ready explanation as to why \textit{in} is the preposition of choice, but it would not be surprising to learn that \textit{in} is somehow the most unmarked preposition in English, perhaps the one for which the greatest number of verbs are subcategorized. However, there are no studies addressing this question that come immediately to mind.)

Having seen that CAI accounts for Double Preposition structures, let us look at how it accounts for the Extra Preposition data such as sentence (14).

(14) . . . they can't find jobs \textbf{in which} they would like to do. First, consider how (14) is ruled out by the Standard English paradigm, while (14') is permitted.

\textbf{D-Structure:}

\begin{verbatim}
[they can't find jobs [comp [they would like to do which]]]
S          S'   S
\end{verbatim}

\textbf{WHM:}

\begin{verbatim}
[they can't find jobs [COMP which [they would like to do t]]]
S          S'   S
\end{verbatim}

\textbf{Case assignment via inheritance}

\begin{verbatim}
[they can't find jobs [COMP which [they would like to do t]]]
S          S'   S
                     [\d+OBJ]
\end{verbatim}

= (14') They can't find jobs which they would like to do.
Note that the transitive verb do assigns [+OBJ] case to the Wh-trace, and that the moved Wh-item which inherits this case from its trace.

Now consider the derivation of (14), again assuming that case is assigned by CAI instead of by the Wh-Case Condition. Again, the first two steps of the derivation are the same as those for (14'), so that the output of WHM is as follows:

WHM:

[they can't find jobs [COMP which [they would like to do t]]] S

However, if which cannot inherit case from its trace, then CAI must apply:

CAI:

[they can't find jobs [COMP in which [they would like to do t]]] S

= (14) They can't find jobs in which they would like to do.

To summarize this section, what has been postulated is a reanalysis of the Standard English case paradigm which replaces the Wh-Case Condition with a rule of CAI. As shown in this section, the major advantage of this hypothesis over the others is that it accounts for all the data, both Double Preposition and Extra Preposition structures. In addition, CAI is a plausible candidate for a grammatical rule because it constitutes a more "concrete" method of casemarking than does case inheritance, since the inserted casemarker shows up as an adjacent morpheme in the surface structure. A final, though more indirect, advantage of CAI is that it is consistent with the preposition errors of both basic and non-basic writers. For Shaughnessy's subjects, it may be the case that second-language interference promotes the use of CAI; for example, some Romance languages prohibit stranded prepositions. CAI may be employed by these writers to resolve the conflicting case paradigms of Standard English and another language. Of course, without
specific demographic information about the writers in Shaughnessy's sample, one cannot state with certainty whether any of these students have been exposed extensively to such a second language. However, a useful topic for future research might involve comparing the case assignment paradigm of languages other than English with the case assignment strategies used by basic writers who have been exposed to a second language, or with those used by non-basic writers for whom English is a second language.

The main drawback of the case assignment theory is the uncertain grammatical status of the CAI rule. If, for example, CAI were used by only one group of writers who were clearly definable in social or regional terms, one could feel fairly confident about positing it as a dialectal rule. However, based on the general information provided by Shaughnessy, Smith, and Free, the writers cited in their studies are drawn from a variety of geographical and socioethnic groups. That is, it does not seem feasible to state CAI as part of one and only one dialect of English. A further problem is that there is no evidence of how often CAI is used by any particular writer. Therefore, although CAI should almost certainly be described as an optional rule, the data at hand does not really provide enough information to determine the environments that promote or deter the rule's operations. Again, further research about the extent to which particular writers use CAI might shed some light on the grammatical status of this rule.

Conclusion

Anomalous relative clause structures such as those examined here appear to be a fairly widespread phenomena, having been observed in the writing of geographically and socially diverse groups of students. This study has shown that the reliance on which in this data seems to be predicated on the fact that which has a higher
probability than that of being grammatical in certain relative clause environments, most importantly in those containing prepositions. Three theories that could be put forth to explain the preposition patterns found in this data have been presented and evaluated. None of these theories is completely satisfactory. Neither the stylistic nor the performance theory accounts clearly for all of the data. While positing a rule of CAI does explain all of the data, its grammatical status is unclear.

Given this state of affairs, the most plausible conclusion one can draw is that the anomalous preposition structures reflect the interaction of all three factors: style, performance, and the case assignment paradigm (the latter probably best described as falling into the domain of competence). The writing situation seems to create a tension between two competing stylistic choices: the fronted preposition structure, which is more formal but apparently less well-controlled by student writers, and the stranded preposition structure, which is less formal but more within the writers’ control. Performance factors seem to contribute to the likelihood that an anomalous preposition structure will be produced and then overlooked during editing (if, indeed, editing does occur).

Most interestingly, the preposition errors due to stylistic and/or performance factors are highly constrained by rules of the grammar. That is, preposition errors do not occur randomly but instead reflect a close approximation to the case assignment paradigm in Standard English. This general pattern, which we might refer to as “rule-governed error,” is congruent with that found in other studies of performance errors. For example, slips of the tongue at the phonological level tend to involve similar segments occurring in similar word positions, and rarely violate phonotactic constraints; likewise, word exchanges tend to involve words in the same grammatical category (see Garrett 1980 for a discussion of recent
research on these phenomena). A further conclusion can be drawn: just as slip-of-the-tongue data has been used as evidence for the psychological reality of phonological entities (e.g., segments and distinctive features), so the errors examined in this paper appear to demonstrate the psychological reality of the case assignment paradigm.

In short, the phenomena examined here constitute a "borderline case," one which involves the domain of both competence and performance. Rather than supporting the idea that competence and performance are mutually exclusive (or fictional) constructs, this study indicates that some phenomena can best be explained as resulting from the interaction of these domains.
Notes

1Sentence (15) deviates from the other sentences discussed here in that which originates as the subject of its relative clause. In all other cases, which originates in object position within the relative clause.

2These targets seem to be unacceptable for two reasons. First, get in appears to be a two-word verb rather than a verb followed by a preposition. Consider the sentence The water got in under the door. If in were the head of a prepositional phrase, then the A-over-A condition would prohibit the extraction of another prepositional phrase out from under it. Note, however, that extraction is possible: Under the door was where the water got it. Second, get in is subcategorized for a phrase indicating location, for which the appropriate relative pronoun would be where, not which. Thus, the only grammatical version of (5) would be some creeks where the backwater gets in. The student who produced (5) apparently misanalyzed in some creeks as a prepositional phrase.
Chapter 4
Pragmatics and Technical Communication:
Some General Considerations

In two recent papers in *The Technical Writing Teacher*, Haselkorn (1983, 1984) argues that "The boundaries of technical writing can be defined using concepts from formal linguistics" (1983: 26). More specifically, Haselkorn recommends that the study of syntax and semantics should be limited to the introductory composition course (1983: 29), and that technical writing should focus on "the study and teaching of pragmatic conventions of structure and meaning encountered by people working in technical contexts" (1983: 26).

My purpose here is to discuss several significant problems with Haselkorn's representation of pragmatics, and consequently with the applicability of his claims to technical writing theory and pedagogy. First, Haselkorn represents pragmatics as a domain whose definition is commonly agreed-upon within current linguistic theory. In reality, however, a number of diverse views exist about how pragmatics should be defined. Second, Haselkorn limits pragmatics to "much larger units" than the sentence (although how much larger these units need to be is not specified). However, if we look at some specific cases, we find that quite complex pragmatic phenomena arise at the level of the sentence and even at the level of the word. A third, related problem is that Haselkorn represents pragmatics as a linguistic domain with discrete boundaries separating it from syntax and semantics. Again, however, if we look at some phenomena that are generally considered to be pragmatic, we find that they cannot be neatly separated from syntax and semantics—and, indeed, may be difficult to separate from domains such as psycholinguistics and sociolinguistics.
Let me clarify at the outset that I do not propose to offer a complete definition of pragmatics, since I do not believe that it can be adequately defined in a few pages. Rather, I intend to point out some of the questions about this concept that Haselkorn's discussion either does not raise or does not adequately answer. In addition, I hope to demonstrate that many of the pragmatic phenomena that Haselkorn excludes from his view of pragmatics are of potential interest to the study and teaching of technical writing.

The Diversity of Traditions in Pragmatics

One problem with Haselkorn's discussion is that he writes as if there were a consensus within current linguistic theory about how to define pragmatics. In fact, however, the field of pragmatics has been, and continues to be, influenced by a number of diverse traditions. For example, Dillon et al. (1985) hold that there are at least "three broad schools or approaches to the study of use," which they label as "the Philosophers, the Data Gatherers, and the Close Readers" (446). And they note that "The past decade can be characterized as a time of excited searching for the right conceptual tools and methods to investigate the relation of utterances to contexts and situations, to actions and events, to participants and their relationships" (446).

Both Gazdar (1979) and Levinson (1983), in surveying past and present definitions of pragmatics, cite an even greater number of approaches—for example, those of Morris (1938), Carnap (1938), Bar-Hillel (1954), Kalish (1967), Montague (1968), and Katz (1977). In addition, Levinson himself formulates at least three tentative definitions of pragmatics—each of which, he is quick to point out, has its advantages and disadvantages. The crucial point to note is the diversity of past and present approaches to pragmatics, none of which Haselkorn either acknowledges or aligns himself with.
The Scope of Pragmatics

The most problematic claims that Haselkorn makes are, first, that pragmatics deals only with "much larger units" than the sentence and, second, that discrete boundaries can be drawn between pragmatics and other linguistic domains. In contrast to these claims, pragmatics very often deals with phenomena at the sentence and even the word level. Moreover, pragmatics often interacts in a highly complex way with syntax, semantics, psycholinguistics, sociolinguistics, and cultural considerations. Thus it is misguided to suggest that technical writing theory can somehow isolate pragmatics and study it separately from these other linguistic domains. As an illustration, let us consider several linguistic phenomena that have frequently been considered to fall within the scope of pragmatics: deixis, presupposition, conversational implicature, and speech acts.

Deixis

The study of deictic (or "pointing") expressions is concerned with linguistic elements such as pronouns, tense markers, time and place adverbials, and honorifics (i.e., linguistic signals of social relationships, like the tu/vous distinction in French). One does not have to go to a "much larger unit" than the sentence to encounter such phenomena; in addition, they are not always readily classifiable into one and only one linguistic domain. Consider, for example, expressions of social deixis. Although such phenomena are pragmatic, in that they reflect the relative status of speaker/writer and listener/reader and hence are highly context-dependent, languages such as Japanese and Tamil encode honorifics through syntax, morphology, phonology, and the lexicon. Levinson summarizes the problems in assigning these and other deictic phenomena to either semantics or pragmatics:
If semantics is taken to include all conventional aspects of meaning, then perhaps most deictic phenomena are properly considered semantic. However, one can also argue that deixis belongs within the domain of pragmatics, because it directly concerns the relationship between the structure of languages and the contexts in which they are used. . . . Deixis will probably be found to straddle the semantics/pragmatics border (1983: 55).

The same problem of domain is discussed by Fillmore (1981) and Bach (1981), among others.

In short, then, deictic phenomena do occur at the sentential level, and do not fit neatly into one and only one linguistic domain. By Haselkorn’s criteria, such phenomena would fall outside the purview not only of pragmatics but also of technical writing. However, the fact is that matters of spatial, temporal, and social deixis are directly relevant to technical writing. For example, consider the problems inherent in the following sentence, which might appear in a set of instructions: Attach part B to the right of part A. Ambiguity arises in this sentence if we assume that the reader is facing the object being assembled, and this ambiguity can be explained by reference to principles from the theory of deixis. In this case, the spatial term to the right can refer either to the reader’s right or to part A’s right; if the reader is facing part A, then the term to the right "points" in two conflicting directions.

Similarly, imagine that it is June 1, 1986, and you receive a memo saying Please send me an itemized list of your travel expenditures for this year. In this case, the temporal term this year is ambiguous between several possible readings: the calendar year (January 1, 1986 to June 1, 1986); the entire preceding 365 days (June 1, 1985 to June 1, 1986); and, if you teach at a school, the academic year at your particular institution (say, September 1, 1985
to May 15, 1986). Likewise, a message like We can accept delivery next Friday is potentially ambiguous, depending on what day of the week it is received (see Fillmore, 1981 for discussion). Thus, to the extent that expressions of temporal deixis can result in ambiguity, they are of potential interest to technical writing.

Although social deixis manifests itself more subtly in English than in other languages, here too we encounter a pragmatic phenomenon that can have a crucial bearing on the writer-reader relationship. For example, different forms of address create different degrees of intimacy; compare Dear Mr. Jones, Dear Robert, Dear Bob, or simply Bob as possible salutations on a letter. Similarly, the choice of a particular type of pronoun affects the degree of distance between reader and writer. Compare, for example, the different effects created by the "editorial we," I, and the agentless passive. Compare also the difference in tone between You can report errors in your bill by calling 555-1111 and Customers can report errors in their bills by calling 555-1111.

Presupposition

Presupposition constitutes another case where the boundaries between linguistic domains are sometimes unclear, as well as a case where pragmatic phenomena arise at the sentence level. One semantically based definition of presupposition is that sentence (A) presupposes sentence (B) if, first, in all situations where (A) is true (B) is true and, second, in all situations where (A) is false, (B) is true (Levinson, 1983: 175; Gazdar, 1979: 94). For example, if a sentence like (A) John regrets hitting Martha is true, then (B) John hit Martha is also true; likewise, if the negation of (A), John doesn't regret hitting Martha is true, then (B) is also true. Therefore, under this definition, (A) semantically presupposes (B). However, Gazdar also cites several alternative, pragmatically based
treatments of presupposition: for example, sentence (A) pragmatically
presupposes (B) if (A) is appropriate only when (B) is mutually
assumed by the participants. So, for example, the sentence John
regrets/doesn't regret hitting Martha might be said to presuppose not
only John hit Martha, but also Jul. didn't kill Martha—although this
latter proposition is in no way a semantic by-product of the original
sentence.

We can further note that the presuppositions of a sentence are
often closely bound up with its syntactic and even its phonological
form. For example, a number of linguists (e.g., Karttunen, 1971,
1973; Lakoff, 1971; Kiparsky & Kiparsky, 1971; and Fillmore, 1971)
have compiled a variety of "presupposition triggers." These include
syntactic devices such as clefting (e.g., It wasn't John who got the
job presupposes Someone got the job) and phonological devices such as
contrastive stress (e.g., John called Martha a Republican, and then
SHE insulted HIM presupposes that For John to call Martha a
Republican is an insult, in a way that the version without
contrastive stress does not.) Thus, presupposition again illustrates
that pragmatics cannot always be neatly separated from other
linguistic domains, and that pragmatic issues arise even within the
scope of the sentence.

What bearing might presupposition have on technical
communication? An interesting example comes from the growing body of
research on language and the law. (This field, in turn, encompasses
areas of study such as the language in which laws are written, the
language of the courtroom, and the interpretation of the language
that has passed between parties in a legal case.) O'Barr (1981)
cites an experiment which illustrates how presuppositions may be
triggered or avoided by particular word choices, and how the wording
of a question may affect a witness' response. In this experiment,
subjects viewed films of automobile accidents and later
answered questions about events occurring in the film. The question "About how fast were the cars going when the smashed into each other?" elicited higher estimates of speed than questions using the verbs collided, bumped, contacted, or hit in place of smashed. Questions of the form "Did you see the broken headlight?" as opposed to "Did you see a broken headlight?" encouraged experimental subjects to say "yes" more frequently. (403)

In order to explain these results, we can draw upon the theory of presupposition. Smashed presupposes a state of affairs in which one or both of the objects that made contact were traveling at a relatively high speed. Similarly, the definite article in Did you see the broken headlight? triggers the presupposition The broken headlight exists, whereas the indefinite article a does not.

Such linguistic properties are relevant not only to courtroom interchanges, but also to other types of communication. For example, in constructing a survey of department store customers, including a question like How often do you use Visa? presupposes that the respondent has a Visa card. If the response options are "Less than once a week," "Once a week," or "More than once a week," then a respondent without a Visa card has no choice but to answer "Less than once a week." However, this response is indistinguishable from that of a customer who does own a Visa card but uses it less than once a week. Thus, this question may yield misleading data.

Similarly, compare the following statements:

1. Our customers at the XYZ Corporation reported that 5% of their last order contained defects.
2. Our customers at the XYZ Corporation complained that 5% of their last order contained defects.

Both statements make the same claims about what percentage of the XYZ Corporation's last order contained defects. Beyond this, however, do
these passages report the same state of affairs? No: the use of the verb complained in the second statement indicates that a potential problem in customer relations exists between the supplier and the XYZ Corporation, since complained presupposes a negative attitude toward a state of affairs. (For further discussion, see Fillmore, 1971.)

**Conversational Implicature**

Conversational implicatures also illustrate that complex pragmatic phenomena can occur within small units of discourse. The theory of conversational implicature, which derives largely from Grice (1973), is concerned with how we are able to "read between the lines" of an interchange like the following (modeled after Grice, 1975: 51).

Speaker 1: Jones accepted Smith's bid instead of ours.
Speaker 2: Jones is married to Smith's brother.

In this interchange, Speaker 2 implicates that Jones was favorably disposed toward Smith's bid due to the fact that they're in-laws— even though Speaker 2 does not explicitly mention the subject of bidding. Within Grice's framework of conversational logic, Speaker 1's ability to draw this implicature derives from Speaker 1's assumption that Speaker 2 is adhering to certain hypothetical conversational maxims, among them the maxim of relation: "Be relevant." The implicature in this case consists of the set of assumptions that Speaker 1 must make "in order to preserve the assumption that [Speaker 2] is observing the maxim of relation" (Grice, 1975: 51). Here again we see a case that goes beyond Haselkorn's distinction between pragmatics and other domains.

Haselkorn states that conventions which "determine what is being said" fall strictly within semantics (1983: 28). However, if one accepts Grice's conversational maxims as a set of conventions that "determine what is being said," then we see that "meaning" cannot be
neatly restricted to semantics. Rather, our ability to interpret this interchange depends on the assumption that speakers will cooperate by making their contributions relevant, as well as on certain cultural knowledge—e.g., about the existence and nature of nepotism.

An understanding of conversational implicature can shed light on certain issues that arise in technical communication, such as the degree of explicitness that a writer should strive for. For example, consider the following hypothetical letter:

Your application for summer work at the XYZ Corporation has been received and reviewed. We have filled the opening for which you applied. Thank you for your interest in the XYZ Corporation.

It seems safe to say that it would never occur to the recipient of this letter to call XYZ’s personnel department and ask, "When should I report for work?" Yet note that nowhere in this letter is the recipient directly told that someone else has been hired for the job. (In fact, imagine the effect of a sentence like We have filled the opening for which you applied, but not with you.) The recipient, however, is able to draw the implicature that someone else has been hired, by assuming that the writer is adhering to the Gricean maxim of quantity: (1) "Make your contribution as informative as is required (for the current purposes of the exchange)" and (2) "Do not make your contribution more informative than is required" (Grice, 1975: 45). Thus, in interpreting this letter, the recipient might go through the following unconscious line of reasoning: ‘Someone has been hired for this job. If I were that person, the writer would have stated so directly, since this information would be required if the purpose of the letter were to tell me to report for work. Since, however, it is not stated directly that I have been hired, I must in fact not have been hired.'
Speech Acts

Speech act theory, the final area of pragmatics that will be discussed, also illustrates how pragmatics interacts with syntax (see Austin 1962, Searle 1969, 1979). A case in point is the question of how we are able to interpret what are called indirect speech acts, utterances whose force cannot be derived directly from their syntactic form. Linguists who have investigated indirect speech acts (e.g., Gordon & Lakoff, 1971; Lakoff, 1973, 1981; Green, 1975) have long noted that alternative syntactic forms can be used for a given function. For example, imagine that Jones, a supervisor, wants Smith, a secretary, to type a memo, and that both parties know that Jones needs the memo for a 3 o'clock meeting. Among the various sentences that Jones might utter are the following:

1. Type this memo.
2. Can you type this memo?
3. Could you type this memo?
4. Would you mind typing this memo?
5. This memo needs to be typed.
6. I'm going to be late for my 3 o'clock meeting.

Note that only in sentence (1) does the syntactic form of the utterance (an imperative) match the function of the utterance (issuing an order). Sentences (2-4) are, syntactically, questions; and as such could, strictly speaking, have simply a Yes or No as their response. Likewise, (5-6) are, syntactically, declaratives. As such, Smith could potentially respond to either of them with another declarative, such as Gee, that's too bad or You're absolutely right. The point, of course, is that in our hypothetical situation, (2-6) would not be uttered or responded to in a way that reflects their syntactic form. That is, (2-4) would not function as simply yes-no questions; rather, they would function as orders. Similarly, (5-6) would function not merely as comments on some state of affairs,
but rather as requests for Smith to change that state of affairs. In other words, Smith would be expected to respond to (2-6) as if Jones had uttered (1).

Consider another example, where Jones and Smith are now, respectively, a contractor and a supplier. Suppose that Jones wants to purchase 40 gallons of concrete paint from Smith, at a cost of $32 per gallon. Among the ways that Jones might go about conveying this order in a letter are the following:

(1) Send me 40 gallons of Protecto concrete paint (item #5986) at $32 per gallon. A check for $1280 is enclosed.
(2) Please send me 40 gallons . . .
(3) Can you send me 40 gallons . . .
(4) Could you send me 40 gallons . . .
(5) Would you mind sending me 40 gallon . . .
(6) I would like to order 40 gallons . . .
(7) I need 40 gallons . . .
(8) Enclosed is a check for $1280, for 40 gallons . . .

Again we see that several syntactic forms are available for the same function: (1-2) are imperatives, (3-5) are yes-no questions; and (6-8) are declaratives. Thus, (1-2) count as direct speech acts, since their syntactic form (imperative) matches their function (ordering). On the other hand, (3-8) are indirect speech acts, since none of them has a syntactic form which directly reflects its function.

The nature of indirect speech acts raises a number of questions relevant not only to pragmatic theory but also to a theory of technical communication. First, why do certain functions, such as requesting and ordering, so frequently show up as indirect speech acts—i.e., with the syntactic form of a question or a declarative, rather than an imperative? Second, how is an addressee able to interpret indirect speech acts such as those illustrated above as having the force of an imperative? Third, why is it that the
sentence. Can you type this memo? would function indirectly (as an order) in the context described above, but directly (as a request for information) in other contexts—e.g., when spoken to a receptionist whose typing skills are unknown, or to a typist whose wrist is broken? Fourth, why does the sentence Would you mind typing this memo? seem more appropriate in the supervisor-typist context than does the syntactically identical sentence Would you mind sending me 40 gallons . . . in the contractor-supplier context? Fifth, what determines the effects that a particular syntactic form is likely to have? For example, why might the typist or supplier find objectionable the continued use of unmitigated imperatives (Type this memo, Send me 40 gallons) from a supervisor or contractor, yet fail to take offense when such forms are used in, say, an instruction manual (e.g., Do not use this product without adequate ventilation)?

Conclusion

This discussion has examined several problems in Haselkorn’s treatment of pragmatics, problems which affect the utility of his advice for researchers in technical communication. Haselkorn represents pragmatics as a domain whose definition is commonly agreed-upon by linguists. In reality, however, a number of traditions lie behind current treatments of pragmatics, and have led not to an easy resolution of diversity but rather to its persistence. Indeed, Cole (1981) raises the question of "whether there is in fact a single field of pragmatics" (xiv).

More importantly, Haselkorn limits pragmatics to phenomena that occur at "much larger units" than the sentence. However, we have seen that pragmatic phenomena occur at the sentence level and even at the word level. Haselkorn further represents pragmatics as a linguistic domain that can be discretely separated from syntax, semantics, psycholinguistics, and sociolinguistics. However, we have
seen instead that pragmatics is complexly intertwined with other parts of the grammar, as well as with the social and cultural contexts of language.

The pragmatic phenomena discussed here—deixis, presupposition, conversational implicature, and speech acts—are by no means the only subjects of pragmatics. However, they are certainly among the central issues in current theories of pragmatics, and they illustrate why pragmatics may be of interest in the study of technical communication. In contrast to Haselkorn's somewhat limiting view of those aspects of linguistics that are of potential interest to technical communication, a more fruitful approach would be for researchers in this field to draw upon the wealth and diversity of phenomena that have been studied not only in pragmatics but in other fields of linguistics. In other words, researchers in technical communication can benefit most not by trying to limit the range of linguistic phenomena that they study, but rather by acknowledging and investigating the systematic interaction of linguistic domains and sociocultural concerns.
Chapter 9
Speech Act Theory and Indirectness in Letter Writing Style

This chapter continues a line of research set forth in Chapter 4, concerning the relation between pragmatics and professional communication. The previous chapter surveyed four areas of pragmatics that are potentially relevant to business and technical writing: deixis, presupposition, conversational implicature, and speech act theory. The following discussion focuses in more detail on the fourth area, speech act theory, and its applicability to one type of professional writing, correspondence (especially letters of request). More specifically, this chapter examines concepts and principles from speech act theory that can be applied to the study of indirectness in professional writing styles; among them, the distinction between direct and indirect speech acts; the sociolinguistic variables that determine whether direct or indirect style is appropriate in a given context; and specific linguistic strategies for achieving different degrees of indirectness. As discussed in the first section, researchers in professional communication have called for additional studies to test the validity of "received opinion" in their field, to confirm, modify, or refute commonly accepted advice. The central argument here, then, is that speech act theory, as developed within pragmatics and sociolinguistics, can increase our understanding of indirect style in business and technical writing.

Likewise, I hope to demonstrate that teachers can use speech act theory to offer their students more constructive, systematic advice about the types of letters examined in this chapter. For example, suppose a student includes a sentence like "Please answer the following three questions" in a non-routine request for
information. The student's teacher might make a comment like "This is too abrupt," and suggest using a sentence like "I would appreciate it if you could answer the following three questions." Although there is nothing inaccurate about the teacher's advice, it does not point the student to any principles or general strategies that might be applied to writing similar letters in the future. As an analogy, consider an ESL student who writes "I will be taking physics next semester." The teacher who suggests a revision like "I will take" or "I will be taking" is providing accurate information, but only about this particular sentence. What the student needs is a more general principle that is both accurate and revealing: for example, "In an active sentence, the verb form following a modal (e.g., will) is always uninflected (e.g., take); the verb form following auxiliary be is always a present participle (e.g., taking)." In the same way, the student writing a non-routine request needs a set of clear criteria for deciding when indirectness is appropriate, as well as an understanding of the linguistic forms that signal indirectness.

The first section offers a rationale for analyzing letter writing style from the perspective of speech act theory. The second section examines the problem of direct versus indirect style as it is typically approached in textbooks on technical and business writing. The third section presents findings from speech act theory, in particular on two types of variables related to the form and use of direct and indirect structures: linguistic (i.e., variables in syntactic form) and extralinguistic (i.e., variables pertaining to the discourse participants and the context of their discourse. The fourth section uses these findings to analyze the texts of some representative letters of request. Finally, suggestions are made about ways that traditional advice about direct and indirect style might be refined or modified in light of speech act theory.
Speech Act Theory and Research on Professional Correspondence

The pervasive need for letter writing in most professional fields demands that students learn the formal and rhetorical conventions associated with this task. Consequently, numerous textbooks in professional communication include sections on writing letters, with some entire textbooks devoted to this subject. In general, the authors of these discussions have proposed a fairly consistent set of strategies for composing letters.

However, despite the importance of professional correspondence, and despite the number of authors who have set down their advice for writing letters, relatively little substantive evidence exists that would validate this advice. Instead, the state of the art is assessed by Moran & Moran (1985) as follows:

A surprising small amount of serious research has been done on business correspondence. Most of the work published during the last 25 years has been redundant and derivative. Instead of designing innovative research projects, writers in this field have tended either to rely on a kind of folk wisdom handed down from generation to generation of writers or to depend on rather limited personal experience. (313)

This situation is problematic for several reasons. First, it is ironic that a field which values precise and objective communication would rely on the "folk wisdom" and "rather limited personal experience" that Moran & Moran found in their extensive survey of letter writing materials. Second, a failure to critically examine traditional advice may lead us to perpetuate conventions that do not actually hold up to empirical analysis. For example, Haselkorn (1984) cites an experimental study which failed to support "the widely accepted communication principle that two-sided communication (with both supportive and refutational defense) is superior to one-sided communication (with just supportive evidence)"
(123). He concludes that we should "start testing empirically every structural and rhetorical convention claimed to be effective by authors of technical writing books" (123). Similarly, Gieselman (1983) laments "the dearth of information [from business writing research] on how writers make choices—linguistic, stylistic, or substantive" (177). Ewing (1983) also calls for continued research on "specific connections between a writer's decisions about style and tone and the effects that these decisions have on the intended readers of letters, memos, and reports" (195).

Such research problems can be addressed, in part, by using concepts and principles from speech act theory. One general line of research within this field includes the study of how extralinguistic factors affect our use and understanding of "indirect" forms: for example, how the context of a discourse and the roles of the participants affect its form and interpretation. Because of such emphases, speech act theory can provide a coherent framework for investigating some of the questions that business and technical writing are concerned with: for example, what specific linguistic properties make a writer's style "direct" or "indirect"? And how can a writer decide what degree of indirectness is appropriate for a particular rhetorical situation?

Although much research on speech acts has addressed such questions by focusing on spoken discourse (e.g., telephone conversations and face-to-face dyadic or small group discourse), this research is potentially applicable to some written forms, especially letters. Whereas forms such as technical reports may be addressed to a large and heterogeneous readership, letters are typically used for communication between two individuals (who, in turn, are serving in specified roles). In this respect, then, letters reflect more of the properties of one-to-one spoken discourse than do other types of professional writing. Also, as the word "correspondence" suggests,
letters often constitute part of a dialogue or interchange. Because much research on speech act theory has to do with initiation-response sequences within dialogues, the principles governing these spoken sequences can be transferred profitably to letter writing.

Another link between speech act theory and the analysis of letter writing style is the emphasis that both fields have placed on the forms used to make requests. As will be discussed more fully in the third section, speech act theorists have attempted to account for the wide variety of linguistic forms used to make requests, as well as for the sensitivity of request strategies to the participants and the context. From the perspective of professional writing, requests are an integral part of the business that is transacted through letters. In addition to obvious examples such as requests for information, order letters constitute a request for goods, credit letters request new terms for doing business, claim and adjustment letters request compensation for a loss, and job application letters request interviews. In short, while making a request is not the sole or primary purpose of every letter, it is one underlying purpose in many common professional situations. Consequently, insights from speech act theory into request forms are potentially useful for refining a theory of letter writing style.

The Problem of Direct versus Indirect Style in Letters

Two seemingly contradictory sorts of advice can be found in textbook discussions of letter writing style. On the one hand, directness and conciseness—conveying the maximum amount of information in the most efficient way—are repeatedly cited as desirable qualities. The advice offered by Menning & Wilkinson (1972: 35) is representative of that found in many textbooks:

1. Write about people in action. Make the people the subject or object of many sentences.
2. Use active rather than passive voice most of the time.
3. Use concrete rather than abstract language.
4. Use specific rather than general words.
5. Give enough details to make the point clear.

Similarly, Houpt & Pearsall advise the letter writer to "Use short paragraphs, lists, clear sentence structure, and specific words. Above all, avoid pomposity and the passive voice" (1984: 277).

Conciseness is sometimes discussed as if absolute limits can be set on sentence, paragraph, and letter length. For example, Sherman & Johnson claim that "Sentences in business letters tend to be shorter than sentences in most writing" (1983: 352). Mills & Walter recommend that "a letter should be held to a single page if at all possible" (1978: 336).

These authors and others, however, usually temper such advice with admonitions against abruptness. Mills & Walter warn the writer not to assume "that brevity alone is a virtue in letters. Too much brevity makes for an unsatisfactory tone. When carried too far, it results in a curtness and bluntness that can be irritating" (1978: 338). Houpt & Pearsall offer similar advice: "certainly it is a good thing to be concise. But . . . . Too brief a letter gives an impression of brusqueness, even rudeness" (1984: 278). Menning & Wilkinson distinguish brevity from conciseness: "Brevity is mere shortness—which is often overstressed . . . . Conciseness . . . comes not from omitting necessary information or details that contribute to clearness, persuasiveness, or interest but from writing all you should say in as few words as possible" (1972: 31-32).

As these passages suggest, striking a balance between directness, on the one hand, and a satisfactory tone, on the other, presents a potential problem for the letter writer. Directness and brevity—which, as we will see later, typically operate in tandem—are advocated for the sake of efficiency. At the same time,
indirectness is advocated for the purposes of tact and politeness. Not surprisingly, this apparent dilemma reflects the dual function often attributed to professional letters: they must convey a message (through indirectness) while maintaining good will (often achievable only through indirectness).

This dilemma also suggests the need for a precise vocabulary for talking about degrees of indirectness, as well as coherent strategies for deciding what degree of indirectness is appropriate for a given letter. The next section examines these issues from the perspective of research in pragmatics and sociolinguistics, the two main areas that have contributed to speech act theory.

Speech Act Theory: Principles Governing Direct and Indirect Style

We have established that letter writers often face a stylistic dilemma: Be direct, but be indirect. A similar tension between two opposing aims of discourse has been observed in speech act theory. For example, Lakoff (1973) defines the two basic "rules of pragmatic competence" as follows: (1) Be clear; (2) Be polite. Elaborating further, Lakoff notes the potential conflict between these two rules:

If one seeks to communicate a message directly, if one's principal aim in speaking is communication, one will attempt to be clear, so that there is no mistaking one's intention. If the speaker's principal aim is to navigate somehow or other among the respective statuses of the participants in the discourse indicating where each stands in the speaker's estimate, his aim will be less the achievement of clarity than an expression of politeness, as its opposite. Sometimes, ... clarity is politeness: but often, one must choose between Scylla and Charybdis. (296-97)

As this passage suggests, speech act theory is largely concerned with how discourse participants resolve this dilemma.
Central to this question is the binary distinction between direct and indirect speech acts, as explored by Austin (1962), Searle (1969), and others.

**Direct and Indirect Speech Acts: Form and Force**

In classifying a speech act as direct or indirect, it is necessary to consider both the syntactic form of a sentence and its illocutionary force. Terms from traditional grammar can be used to talk about syntactic form; we can speak of imperatives, declaratives, and interrogatives. Interrogatives, in turn, can further be classified as either wh-interrogatives (those whose first element is a wh-word such as who, what, when, where, or how) and yes/no-interrogatives (those where a question is signaled by subject-verb inversion rather than by a wh-word). The following sentences illustrate these syntactic types.

1. Get me that report on the fourth quarter. (imperative)
2. I need that report on the fourth quarter. (declarative)
3. Where's that report on the fourth quarter? (wh-interrogative)
4. Do you have that report on the fourth quarter? (yes/no-interrogative)

Defining the illocutionary force, or intended effect, of a sentence is less straightforward than defining its syntactic form, since illocutionary force must typically be inferred. Although each of the sentences just cited has a clearly definable syntactic form, the illocutionary force of sentences (2-4) cannot be determined without considering the discourse participants and the context. As an illustration, consider a hypothetical case in which the discourse participants are (A) a supervisor and (B) a file clerk who reports to the supervisor. Given this situation, A could use any of the sentences (1-4) to request that B find the missing report. Another
A way to put this is that sentences (1-4), in this context, all have the illocutionary force (or intended effect) of a request.

At the same time, note that only sentence (1) has the imperative syntactic form canonically associated with issuing directives. The syntactic structures of (2-4), in contrast, are canonically associated with other basic functions: that is, the basic function of declaratives is to assert, and that of interrogatives is to ask for information. Therefore, only sentence (1) constitutes a direct speech act, since there is a direct match between syntactic form and illocutionary force. Sentences (2-4), on the other hand, constitute indirect speech acts, since in these cases syntactic form does not directly match illocutionary force: these sentences are being used not to assert or question, but to request.

The relation between syntactic form and illocutionary force is summarized below for sentences (1-4).

<table>
<thead>
<tr>
<th>Syntactic form</th>
<th>Typical function</th>
<th>Illocutionary force (function in this context)</th>
<th>Type of speech act</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) imperative</td>
<td>requesting</td>
<td>requesting</td>
<td>direct</td>
</tr>
<tr>
<td>(2) declarative</td>
<td>asserting</td>
<td>requesting</td>
<td>indirect</td>
</tr>
<tr>
<td>(3) wh-interrogative</td>
<td>questioning</td>
<td>requesting</td>
<td>indirect</td>
</tr>
<tr>
<td>(4) yes/no-interrogative</td>
<td>questioning</td>
<td>requesting</td>
<td>indirect</td>
</tr>
</tbody>
</table>

Thus, we can make the following generalizations about sentences (2-4). First, none of these sentences has the syntactic form (imperative) typically associated with issuing directives. Second, however, in the appropriate context, each of these sentences can be interpreted as a request—that is, as if it had the syntactic form of an imperative.
Some linguists have further proposed that, in order to successfully interpret sentences like (2-4) as directives, the addressee must have pragmatic knowledge about the types of propositional content that indirect requests are likely to have. Consider these additional sentences, all of which could also have the illocutionary force of a request in the hypothetical situation just described.

(5) I'd really appreciate it if you'd get me that report on the fourth quarter.
(6) I would like to have that report on the fourth quarter.
(7) Have you seen that report on the fourth quarter?
(8) Can/could you find that report on the fourth quarter?
(9) Will/would you get me that report on the fourth quarter?
(10) Could/May I ask you to get me that report on the fourth quarter?

The question, again, is how an addressee is able to recognize all of these diverse forms as indirect requests, rather than as assertions or questions.

Although seemingly unrelated at first, these sentences actually correspond to the sincerity conditions for requesting, those conditions that must hold in order for a request to be sincere or valid. These are summarized by Gordon & Lakoff (1971) as follows:

--- The speaker must genuinely want the request to be performed.
--- The speaker must believe that the addressee is capable of performing the request.
--- The speaker must believe that the addressee is willing to perform the request.

Based on these conditions, Gordon & Lakoff propose that "One can [indirectly] convey a request by (a) asserting a speaker-based sincerity condition or (b) questioning a hearer-based sincerity condition" (1971: 86).
From this perspective, sentences (5-10) can be reanalyzed as falling into three general categories. Sentences (5-6) reflect the speaker-based sincerity condition; they use declarative structure to assert the speaker’s desire to have the request performed. Sentences (7-8) reflect a hearer-based sincerity condition; they question the addressee’s ability to perform the request. Sentences (9-10) also reflect a hearer-based sincerity condition; they question the addressee’s willingness to perform the request. Gordon & Lakoff’s taxonomy, then, provides a principled classification of the propositional content that indirect requests are likely to have, and also accounts partially for an addressee’s ability to interpret sentences (5-10) as requests.  

**Contextual Variables: The Roles of the Discourse Participants**

In deciding whether a non-imperative form is meant as a request, the addressee must be sensitive not only to its syntax and propositional content but also to certain extralinguistic or contextual variables. One aspect of context that addressees use to infer allocutionary force has to do with the roles of the discourse participants. For example, we have discussed a hypothetical case in which A (a supervisor) and B (a file clerk) occupy roles of unequal status. We can argue that B’s interpretation of a sentence like “I need that report on the fourth quarter” as a “disguised” request derives partly from B’s knowledge of A’s superior status, of B’s own job duties (filing and retrieving information for superiors), and so on. In short, B’s interpretation of this sentence as an indirect speech act (a request), rather than as a direct speech act (an assertion) is congruent with the roles of A and B.

As a further illustration of the context-dependency of indirect speech acts, consider a different scenario in which A and B are, instead, two supervisors of equal corporate status. Given this
context, the following exchange would be entirely appropriate.

A: I need that report on the fourth quarter.

B: I do, too; if you find it, could you send me a copy?

Note that the change in A and B's identities leads to a different interpretation of A's speech act. B has interpreted A's contribution as a direct speech act (an assertion), rather than as an indirect speech act (a request for B to locate the missing report). While B's response would be inappropriate coming from a file clerk, it is entirely appropriate coming from a peer whose job is not to retrieve information from the corporate files.

To summarize thus far, then, the appropriate interpretation of a speech act demands an awareness of the forms conventionally used for indirect speech acts as well as sensitivity to the participants' roles and the context of the discourse. Because many speech acts are potentially ambiguous between a direct and an indirect reading, the addressee must draw upon contextual knowledge in order to resolve this ambiguity.

**Sociological Forces: Saving Face**

We have still not addressed in any detail the sociological function of indirect speech acts. The implicit assumption thus far has been that indirect requests are motivated primarily by a desire to show politeness or deference toward the addressee. However, this assumption does not fully explain the use of indirect speech acts to subordinates: for example, why a supervisor might use an indirect speech act to make a request of a file clerk. Studies of naturally occurring discourse have provided one explanation for this phenomenon by showing that indirect speech acts benefit not just the addressee but also the person making a request.

Of particular importance in understanding this dual function is the concept of *saving face*, a sociolinguistic force explored at
length by Brown & Levinson (1978). Based on extensive evidence from a variety of cultures, these researchers postulate a universal principle governing cooperative social interaction. In essence, this principle states that all participants will attempt to maintain two components of their public image: negative face, the desire to be unimpeded by others, and positive face, the desire to be approved of and admired by others (1978: 67). Stated in other terms, negative face reflects a desire for individual autonomy, while positive face reflects a desire for group acceptance.

At the same time, normal social interaction introduces a number of potentially face-threatening situations, in which either negative or positive face must be sacrificed in order for a transaction to take place. Brown & Levinson postulate that, because of "the mutual vulnerability of face, any rational agent will seek to avoid these face-threatening acts, or will employ certain strategies to minimize the threat" (1978: 73). In terms of discourse, the goal of saving face means that indirectness will often take precedence over efficiency, unless the situation is one where urgency overrides the desire to save face. Brown & Levinson argue that indirect strategies provide participants with a way of addressing face-threatening acts such as requests. If A makes a request of B, then A is threatening B's negative face by attempting to affect B's future actions and autonomy. If B refuses to comply with A's request, then B is threatening A's positive face, by failing to show acceptance of A's wants. Brown & Levinson's theory predicts that the discourse participants in a request exchange will use indirectness to minimize its potentially face-threatening nature.

Assessing the Need for Indirectness

Up to now, we have assumed that a situation is either face-threatening or not, and that a speech act is either direct or
indirect; in other words, that a simply binary distinction will suffice to characterize situations and speech acts. We can now begin to expand these binary distinctions, with an eye toward developing a continuum for each of these concepts. This section presents Brown & Levinson's formula for evaluating the degree to which a particular situation is face-threatening, and will show how this formula can be used to gauge the amount of indirectness needed for that situation. The next section then looks at linguistic forms that signal different degrees of indirectness.

The central claim to be examined first, then, is that face-threatening acts (such as requests) may vary in their seriousness. The logical question that arises is, what variables make one request more serious than another? In answering this question, it may be useful to start with a hypothetical case that illustrates the relevant variables. Assume that Smith is an associate professor of English who wants to propose a concentration in technical writing for graduate students in the department. One of Smith's initial tasks might be to gather information about similar programs at other universities. Some of these programs are run by colleagues familiar to Smith, while others are run by total strangers. Smith will probably use different strategies when writing to these two groups of colleagues.

Suppose further that Smith needs help in gathering background information for the proposal, and identifies two other faculty in the department who might be approached for this help. One faculty member, Jones, is an assistant professor and hence junior to Smith (who will be voting on Jones for tenure and promotion in a few years). The other faculty member, Brown, is a full professor and hence senior to Smith. Smith will probably use different strategies in requesting help from Jones and Brown.

Now suppose that Smith has identified certain tasks for Jones
to perform. First, Smith wants Jones to college syllabi from the other technical writing teachers in the department; this can be accomplished by some quick phone calls or a short memo. Second, Smith wants Jones to go to the library, examine the catalogues for a list of 20 universities, and compile information about their technical writing programs; this task will require several days of rather tedious work. Smith will probably use different strategies in requesting that Jones perform these two tasks.

This case illustrates the three variables which, according to Brown & Levinson, determine the seriousness or "weight" of a particular face-threatening situation such as a request. First we considered the question of social distance (D): how well does A (the requesting party) know B (the addressee)? Second, we considered the question of relative power (P): how much power, if any, does B have over A? And third, we considered the degree of imposition (I): how much of a burden does A's request place upon B? Following Brown & Levinson (1978: 81), we can use these three dimensions to determine the weight of a particular request (W) based upon the following formula:

$$W = D(A,B) + P(B,A) + I$$

This formula reflects the fact that D, P, and I can vary independently. Turning back to our hypothetical case, in the instance where Smith is writing to colleagues at other universities, D(A,B) (the social distance between A and B) increases as Smith moves from known to unknown colleagues; P and I may remain constant. In the instance where Smith is requesting help from other faculty in the English department, P(B,A) (the power of B over A) increases as Smith moves from junior to senior colleagues; D and I may remain constant. And, in the instance where Smith is asking Jones to perform two
different tasks, \( I^- \) (the degree of imposition) increases with more difficult or time-consuming tasks; \( D \) and \( P \) remain constant.

Brown & Levinson's formula yields several insights into the complex nature of requests. First, it allows us to expand the binary distinction between face-threatening and non-face-threatening situations; instead, \( W^- \) can view requests as varying in the degree to which they are face-threatening, depending on the values for \( D \), \( F \), and \( I^- \). Second, it motivates expanding the binary distinction between direct and indirect speech acts. That is, it suggests that A must choose not only between directness and indirectness, but also from among varying degrees of indirectness. We can state as a working hypothesis that the degree of indirectness appropriate for a particular request will vary directly in proportion to the value for \( W^- \) (or, more concisely, indirectness \( W^- \)). And, if we assume that degrees of indirectness exist, then we have an explanation for the diversity of forms that indirect requests take: apparently, different linguistic features can be used to signal different degrees of indirectness, a point that will be taken up in the next section.

To summarize, the formula for \( W^- \), together with its corollary (indirectness \( W^- \)) allows us to evaluate the appropriateness of a particular degree of indirectness for a particular situation. For example, assume that the values for \( D(A,B) \), \( P(B,A) \), and \( I^- \) can each range from 1 (low) to 3 (high). Substituting these values into the formula for \( W^- \) yields the continuum shown in Figure 4.
<table>
<thead>
<tr>
<th>Appropriate degree of indirectness</th>
<th>$W_-$</th>
<th>$D(A,B)$</th>
<th>$P(B,A)$</th>
<th>$I_-$</th>
</tr>
</thead>
<tbody>
<tr>
<td>low</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(addressee familiar to requesting party)</td>
<td>(addressee not familiar to requesting party)</td>
<td>(request does not greatly impose on addressee)</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4 or 1</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or 2</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>(three possible combinations)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>(seven possible combinations)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>(six possible combinations)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>(three possible combinations)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>low</td>
<td>9</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(addressee not familiar to requesting party)</td>
<td>(addressee superior to requesting party)</td>
<td>(request greatly imposes on addressee)</td>
</tr>
</tbody>
</table>

Figure 4. Indirectness continuum, showing the correlation between degree of indirectness and $W_-$.
We can think of Figure 4 as an "indirectness continuum," a
gauge of how much indirectness is appropriate, given a particular set
of values for D, P, and I. This continuum captures a number of
generalizations about requests. For example, a high degree of
indirectness is needed for a high value, as when the writer is
addressing an unfamiliar reader in a position of relative power, and
the requested action is an imposition on the reader. Analyzing
requests according to these variables explains our intuitions about
the inappropriateness of relatively direct speech acts for, say,
letters of application (e.g., "Please interview me for the junior
engineer position in your company"). Conversely, the continuum also
predicts that highly indirect speech acts are not appropriate for all
situations. For instance, asking one's officemate to close the door
on the way out has a low value; the addressee is familiar to the
speaker, there is no imbalance of power in the addressee's favor, and
the requested act is not a great imposition. As a result, a highly
indirect request form like "I wonder if I could possibly ask you to
close the door on your way out, if it's not too much trouble" is
likely to be perceived (at best) as an attempt at humor or (at worst)
as sarcasm.

Additional Strategies for Achieving Indirectness

The indirectness continuum outlined in the previous section
presupposes that there are certain linguistic strategies available
for signaling varying degrees of indirectness. That is, the binary
distinction between direct and indirect speech acts, as assumed
earlier, is necessary but not sufficient for understanding the range
of forms that requests may take. This section examines, first, some
general principles for redressing face-threatening situations (such
as requests) and, second, the specific linguistic strategies through
which these principles can be implemented.
Brown & Levinson (1978: 149-216) discuss four principles that follow from the meta-principle of trying to redress threats to B's negative face:

- **Principle I:** Don't presume or assume.
- **Principle II:** Don't coerce.
- **Principle III:** Convey a desire not to impinge on the addressee.
- **Principle IV:** Redress other wants of the addressee.

Under Principle I, A presents the request in a way that avoids presumptions about B. "his wants, what is relevant or interesting or worthy of his attention" (1978: 149). Under Principle II, A avoids coercing B to perform the request, for example by giving B an "out": or by attempting to reduce the \( I_B \) value, thereby implying that the coercion is minimal; or by attempting to raise the \( F(B,A) \) value, thereby implying that A is powerless to coerce B (1978: 177). Under Principle III, A conveys a reluctance to impinge on B, either by explicitly acknowledging the impingement or by trying to dissociate A or B from it. Finally, Principle IV involves compensating B for the impingement, for example by fulfilling B's desire for respect from or power over A.

According to Brown & Levinson, nine strategies are available for implementing these principles, with each strategy signaled by different linguistic elements. **Strategy 1** is to question or hedge the request. Indirect speech acts like "Can/Will you do X?" are one obvious example of this strategy. Such forms, as we saw earlier, typically question B's willingness or ability to perform the request, and thus reflect Principle I: rather than assuming B's cooperation, they offer B the option of declining the request. The related strategy of hedging involves using a word or phrase "that modifies the degree of membership of a predicate or noun phrase in a set" (1978: 150). Such "weakening" hedges usually occur as qualifiers modifying the entire speech act—e.g., "I wonder if you could do X"—
or the verb phrase that refers to the requested act—e.g., "Can you possibly do X?" Hedging also reflects Principle I, since it avoids assumptions about B's cooperation.

Strategy 2, being pessimistic, involves expressing doubts about preconditions that must obtain in order for B to perform the request; in broad terms, B must be willing and able to do X. One common manifestation of this strategy is the use of conditional forms such as could and would (rather than indicative can or will); these may appear in either interrogatives (e.g., "Could you do X?") or declaratives (as in "I would appreciate your doing X"). Brown & Levinson postulate that the relative politeness of the conditional mood derives from the fact that it predicates a hypothetical case, rather than an assumed one. In addition, Ervin-Tripp (1975: 59-60) discusses some experimental evidence that conditionals are perceived as more polite than their indicative counterparts. Signals of pessimism minimize the threat of coercion (Principle II), since they suggest that the coercive act might not occur.

Strategy 3, minimizing the imposition, typically manifests itself in modifiers that attempt to reduce the value for I_. Such modifiers are common in non-routine requests; for example, a questionnaire might include instructions like "Please take a moment to answer a few questions" and "Just return your answers in the enclosed self-addressed, stamped envelope." This strategy also reflects Principle II, in that it attempts to reduce the degree to which A is coercing B.

Another way to avoid the impression of coercion is through Strategy 4, giving deference. Whereas Strategy 3 attempts to reduce the value for I_, Strategy 4 can be viewed as an attempt to increase the value for P(B,A), i.e., B's sense of power over A. The rationale for this approach is that deference implies that B has "rights to relative immunity from imposition," and also that A "is certainly not
in a position to coerce ... compliance in any way" (1978: 183).

Defersence can be signaled either by diminishing A's status or augmenting B's. When requesting information, for example, A might mention his or her own subordinate status (e.g., as a student or novice). Defersence can also be encoded through addressee honorifics (elevated terms of address such as Professor, The Honorable, or even Mr./Mrs./Miss/Ms.), as well as through referent honorifics (terms that elevate B's possessions or accomplishments: "your learned treatise," "your expert opinion," and so forth).

If A wishes to implement Principle III, conveying a desire not to impinge on B, several strategies are available. Most obviously, A may employ Strategy 5, that of apologizing to B. This involves a straightforward acknowledgment of the impingement, something like "I hesitate to trouble you" or "I realize that you are busy." More subtly, A may use a different tactic and attempt to dissociate A and B from the face-threatening situation. By doing so, A implicitly conveys an awareness of the imposition, since A shows reluctance to be the agent of the request or to single out B as its recipient. At least three strategies for dissociation are available. Strategy 6 involves impersonalizing A or B, by avoiding references such as personal pronouns and names. Expletive it and the passive voice are useful strategies for impersonalization; for example, "It will be necessary for all new faculty to work at registration"; "Can this order be shipped ahead of schedule?"; "This book must be returned in three days." Strategy 7, stating the request as a general rule, also helps to impersonalize a request; for example, "All students must register their cars." And, under Strategy 8, nominalizing is used in the subject or object slot, as in "University regulations prohibit smoking in the classroom."

Strategy 9, going on record as incurring a debt, reflects Principle IV, in that it offers B compensation for performing the
request. Here, A balances the imposition by going into B's debt, either through empowering B or else promising B a future favor. Expressions of gratitude, for example, may be incorporated into the request, as in "I would be extremely grateful if you would do X." Such expressions implicitly acknowledge that B may "call in the favor" at some future date, and hence they offer B a type of power over A (a more informal counterpart would be "I owe you one"). Similarly, A may invite B to share in the benefits of the request; for example, one researcher writing to another for information might mention that "I will certainly acknowledge your help."

Figure 5 summarizes the main points of this section so far, and shows the relation between Principles I-IV and Strategies 1-9, along with an example of each strategy in use.
Meta-principle: Redress threats to B’s negative face.

Principle I. Don’t assume/presume.
   Strategy 1. Question; hedge. ("Can you possibly do X?")

Principle II. Don’t coerce B.
   Strategy 2. Be pessimistic. ("Could you possibly do X?")
   Strategy 3. Minimize the imposition. ("I’d appreciate a small favor.")
   Strategy 4. Give deference. ("Could you give me your expert opinion?")

Principle III. Convey a desire not to impinge on B.
   Strategy 5. Apologize. ("I’m sorry to bother you, but...")
   Strategy 6. Impersonalize A/B. ("Proposals must be submitted in triplicate.")
   Strategy 7. State the requested act as a general rule. ("All textbook orders must be in by Friday.")
   Strategy 8. Nominalize. ("Your cooperation will be appreciated.")

Principle IV. Redress other wants of B’s.
   Strategy 9. Go on record as incurring a debt. ("I would appreciate your doing X.")

Figure 5. Summary of principles and strategies for redressing face-threatening acts such as requests.
The reader may have noticed that there is some "cross-fertilization" between certain principles and strategies. For example, Strategy 4 may be viewed as reflecting not only Principle II but also Principle IV, since deference from others may be viewed as a want of some (if not all) addressees. Similarly, a request may be phrased as a question (by Strategy 1), thereby reflecting Principle I; but it may also contain a conditional modal (by Strategy 7), thereby also reflecting Principle II.

More importantly, the fact that a speaker or writer can use several strategies within one speech act is the source for differing degrees of indirectness in requests. Brown & Levinson state as a general rule that "The more effort [A] spends in face-preserving work, the more he will be seen as trying to satisfy [B's] wants" and "the more he may be judged as trying to at least appear polite" (1978: 149). Increased "effort" here translates roughly into increased use of linguistic elements that signal redressive strategies. So, for example, A may "embellish" a request using some combination of Strategies 1-9, each of which contributes to a greater degree of indirectness, as follows:
Degree of indirectness

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>low</td>
<td>Example</td>
</tr>
<tr>
<td>None (unembellished direct speech act)</td>
<td>(1) Give me your opinion.</td>
</tr>
<tr>
<td>Question</td>
<td>(2) Can you give me your opinion?</td>
</tr>
<tr>
<td>Question + hedge</td>
<td>(3) Can you possibly give me your opinion?</td>
</tr>
<tr>
<td>Question + hedge + pessimism marker</td>
<td>(4) Could you possibly give me your opinion?</td>
</tr>
<tr>
<td>Question + hedge + pessimism marker + deference marker</td>
<td>(5) Could you possibly give me your expert opinion, Professor Brown?</td>
</tr>
</tbody>
</table>

There are several points to note with respect to sentences (1-5). First, increasing the number of strategies used has a cumulative effect; hence (5), which uses four strategies, is more indirect than (4), which uses three strategies, and so forth. Second, however, the fact that the linguistic elements have been added in a specific order does not imply that the individual elements added later are necessarily more indirect. That is, the fact that a pessimism marker (in (4)) was added after a hedge marker (in (3)) does not mean that pessimism is an intrinsically stronger sign of indirectness than hedging. Instead, (2) could have been embellished by adding these markers in the opposite order:

Question                      (2) Can you give me your opinion?
Question + pessimism marker    (3') Could you give me your opinion?
Question + pessimism marker + hedge    (4') Could you possibly give me your opinion?
Comparing (3) and (3'), each of which contains two indirectness markers, raises the question of whether they are equally direct: i.e., is adding a hedge to a question equivalent to adding a pessimism marker to a question? This remains, for the time, an unresolved issue, and perhaps a relevant subject for researchers in professional communication to investigate. Research in speech act theory has not, to my knowledge, constructed a clear picture of how (or if) these various individual strategies should be ranked on some scale of intrinsic politeness. It is clear, however, that combining several strategies has a cumulative effect on the degree of indirectness.

Perhaps the most important point for our purposes here concerns the relation between indirectness and appropriateness. The relative indirectness of forms such as (1-5) can be judged fairly clearly, even in isolation. But the appropriateness of any of these forms cannot be judged in isolation—i.e., in the absence of a context, some sense of the values for D, P, and I_. As an illustration, in order for (5) to be appropriate, W would have to be fairly high, as it would be if A were making a time-consuming request of a socially distant, highly esteemed addressee. In contrast, (5) would be rendered inappropriate if spoken, say, by a freshman English teacher to a student named Brown. In this case, (5) would be perceived as sarcastic. The point is that appropriateness cannot be judged apart from context.

Using Speech Act Theory to Analyze Letters of Request

We are now in a position to apply speech act theory to some samples of professional correspondence. The principles discussed so far include the following:

Persons making requests and their addressees are both sensitive to the addressee's negative face (desire for autonomy).
Indirect speech acts provide a general way to save negative face.

The degree of indirectness appropriate for a given request depends on the "weight" of that request ($W_-$), which in turn depends on the distance ($D$) between $A$ and $B$, their relative power ($P$), and the degree of imposition associated with the request ($I_-$).

Different degrees of indirectness can be achieved through specific linguistic elements that reflect Strategies 1-9. These principles will now be applied in stylistic analyses of letters making different types of requests. In presenting these different types, I will follow two traditional taxonomies assumed by textbook authors: one based on the purpose of the request (to place an order, to make a routine request for information, or to make a non-routine request), the other based on the reader's anticipated attitude (positive, neutral, or negative). Along the way, however, I will integrate the $W_-$ continuum as a third possible way of classifying letters of request.

Let us first consider some examples of letters written to place orders; these are typically assumed to elicit a positive attitude from the reader. In terms of speech act theory, such letters can be assigned a relatively low $W_-$ value. First, $F(B,A)$ is low: there is typically a balance of power between $A$ (the writer) and $B$ (the reader), rather than an imbalance of power in $B$'s favor. This follows from the fact that $A$ and $B$ each have mutually desired holdings: $A$ wants $B$'s goods, while $B$ wants $A$'s remuneration for the goods. Second, $I_-$ is low: $A$ can assume that the request does not impose on $B$, since $B$ has offered the goods for sale. For these reasons, then, order letters fall low on the indirectness continuum.

The structure of speech acts in order letters reflects the low $W_-$ value for this type of request. The following openings illustrate
the relatively direct approach typically associated with order letters:

--Please ship immediately by American Express the following supplies . . . . (Fear 1977: 167)

--Please send me the following items listed in your current spring and summer catalog . . . . (Menning & Wilkinson 1972: 140)

As we can see, these opening sentences constitute direct speech acts; they are requests with imperative structures (ship immediately, send me). The use of please somewhat mitigates the directness of the imperative, and reflects A's awareness of the P(B,A) variable: to omit please (the only marker of indirectness in these examples) would imply that A regards B as a subordinate rather than an equally powerful peer.

A second type of request commonly encountered in professional correspondence is termed the routine request. This describes a request for information which may or may not lead to further business between A and B; for example, A may be asking B for more information about a product, preliminary to making a decision about whether or not to buy. A neutral, rather than positive, reader attitude is typically predicted for this kind of letter, since it suggests future business but does not promise it. From the perspective of speech act theory, the routine request has a higher W− value than the order letter. First, there is a higher value for P(B,A), since the writer is not offering any definite compensation to the reader: A wants information from B, but has less "bargaining power" than a writer who is placing an order from B. Second, letters of inquiry may well have a higher value for I−, to the extent that A is asking for information that B is not necessarily obliged to supply as part of his or her regular duties.

Because of this greater W− value, a greater degree of
indirectness is appropriate for routine letters of inquiry. The following example illustrates a fairly straightforward request for information, a case in which \( W^c \) is only slightly greater than that for an order letter.

Letter (A) (Menning & Wilkinson 1972: 110)

(1) Please send me descriptive materials about your accommodations, recreational facilities, and rates.

(2) My wife, 16-year-old daughter, and I are planning a two- or three-weeks’ stay in the South this fall and are considering the Edgewater Gulf.

The writer of letter (A) begins with a direct speech act, the modified imperative "Please send me." This directness is appropriate in view of the rather low value for \( W^c \): the reader probably has pre-printed materials on hand and so is not being asked to prepare a highly individualized response from scratch. On the other hand, this directness is ameliorated by sentence (2), which suggests that the reader’s wants (a reservation from the writer) may be fulfilled in the future. The writer’s approach thus balances directness and indirectness.

The next example would also be classified as a routine request for information, but illustrates a higher \( W^c \) and hence a more indirect approach than letter (A):

Letter (B) (Houp & Pearsall 1984: 289)

(1) Your advertisement on page 89 of the January 1984 Scientific American invited inquiries about your new Film-X developing process.

(2) I am a college student and president of a 20-member campus photography club. (3) The members of this club and I
would appreciate any information about this new process that you could send us.

(4) We are specifically interested in modernizing the film-development facilities of the club.

The context for this letter reflects a higher W_ than that for letter (A), because here the possibility of a future sale is even more remote. The writer of letter (A) has made definite plans to vacation in the South, and furthermore can be assumed to have at least a 50 percent vote (along with his wife) about whether or not to choose the Edgewater Gulf. In contrast, the writer of letter (B) can point to no definite plans to adopt a new developing process, and further does not appear empowered to make such a decision for the entire campus photography club. Accordingly, the writer of letter (B) uses a greater degree of indirectness. The request for information appears as an indirect speech act, the declarative sentence (3). Within this sentence, the writer further employs Strategy 2, pessimism, by using conditional modals ("would appreciate," "could send us"). In addition, the writer uses Strategy 9, going on record as incurring a debt, by expressing appreciation in sentence (3). In this example, then, the greater use of indirectness is appropriate for the greater W_ value.

Turning to a third routine request, we find an even greater value for W_ and, consequently, a greater cumulative use of indirect strategies.

Letter (C) (Mills & Walter 1978: 341)

(1) A newcomer to the hobby of gem-making, I was attracted to your advertisement, in the current issue of the Journal of Jewelry Making, of a trim saw, especially in view of the reasonable price given. (2) I wonder if you would be so
kind as to answer a few questions that came to my mind about the saw? (3) Specifically, I would like to know . . . . [a list of three questions follows].

(4) I would be most appreciative if you could find the time to answer my questions. (5) I expect that I shall be sending you an order soon.

In analyzing the \( W \) value for this request, we may note immediately that \( W \) has a higher value than it did for either letter (A) or (B). In those examples, the writers were requesting information that the reader could be expected to have ready at hand (e.g., brochures). The writer of letter (C), in contrast, is asking the reader to construct a more personalized response, and consequently is imposing more on the reader. In turn, this higher value for \( W \) justifies the number of indirectness strategies used in this letter. Beginning with sentence (1), for example, the reader employs deference by referring to himself as "a newcomer to the reader's area of expertise. Sentence (2) employs several additional strategies: the request itself is framed as an indirect speech act, in a declarative structure, which in turn contains signals of hedging ("I wonder if"), pessimism (the conditional would), and minimization ("a few questions"). Conditional verbs are again employed in sentences (3) and (4), further conveying a lack of coercion on the reader's part. Finally, sentences (4) and (5) redress the reader's other needs: in (4), the writer incurs a debt with the phrase "I would be most appreciative," and in sentence (5) the writer suggests the strong possibility of future business.

A third type of letter common in professional communication is often termed the non-routine request. Unlike the former two types, the non-routine request implies no obligation or material gain (immediate or future) on the reader's part. Instead, the non-routine
request places the writer in a maximally subordinate relation to the reader, since the reader is empowered to decline the request. In addition, the non-routine request generally entails a higher value for both P(B,A) (the reader's power over the writer) and I (the degree of imposition), leading to an overall higher value for W.

Given the theory outlined earlier, we would expect non-routine requests to employ a greater number of indirectness strategies than order letters or routine requests, and this pattern is confirmed in letters (D), (E), and (F), the final three examples that will be analyzed in this section.

Letter (D) (Houp & Fearsall 1984: 293)

(1) At the joint meeting of the STC Board and the Phoenix Chapter, Mary Schaeffer mentioned that you were preparing a survey of technical communication programs. (2) We are interested in developing a technical communication degree at our university. (3) But, before we prepare a proposal, we want to study the programs at other schools.

(4) Briefly, we would like to answer two questions. [A list of two questions follows.]

(5) Of course, we are not asking you to answer these questions for us, but we would like to have your personal opinion and any information on proposed and existing technical communication programs that you can send us.

(6) This is a particularly crucial moment for us because the next catalog will cover two years. (7) As you can see, we must move rapidly and surely. (8) We will greatly appreciate any assistance you can give us.

The writer of this letter begins with Strategy 4, showing deference, by alluding to a professional meeting at which the reader was
mentioned. The request itself is stated indirectly, in the declarative sentence (4); additionally, both there and in sentence (5), the conditional modal would reflects Strategy 2, pessimism. The writer also uses Strategy 3, minimizing the imposition; sentence (5) acknowledges that the reader is not expected to make the writer's decisions, and sentence (8) suggests the writer's willingness to settle for "any assistance" from the reader. All of these strategies reveal the writer's sensitivity to W

Examples (E) and (F) illustrate cases in which I

consequently W

is even higher than in example (D), since these letters ask their readers for more extensive or open-ended responses.

Letter (E) (Houp & Fearsall 1984: 292)

(1) I am a second-year student at Florida Technological Institute. (2) For a course in technical writing that I am currently taking, I am writing a paper on the proper way to educate Americans in the use of the metric system. (3) The paper is due on 3 March.

(4) The specific question that concerns me is whether metric measurements should be taught in relation to present standard measurements, such as the foot and the pound, or whether they should be taught independently of other measures.

(5) I see both methods in use.

(6) In the journals where I have been researching the subject, you are frequently mentioned as a major authority in the field. (7) Would you be kind enough to give me your opinion about how metrics should be taught?

(8) Any help you can give me will be greatly appreciated, and I will, of course, cite you in my paper.

Again, the numerous indirectness strategies in letter (E) reveal the
writer's awareness of its high W^ value. Sentence (1) reflects Strategy 4, giving deference; it points out the writer's position as a student and thus suggests that the writer is powerless to coerce the reader, who holds a higher professional position. Likewise, sentence (6) mentions the reader's status as a "major authority in the field." In sentence (7), the point at which the writer poses the request, an indirect speech act is used (an interrogative rather than imperative structure). This sentence also reflects Strategy 1, questioning, and the conditional modal would reflects Strategy 2, pessimism. In sentence (8), the writer uses Strategy 3, minimizing the imposition, by offering to accept "any help." Sentence (8) also uses Strategy 9, incurring a debt, when the writer expresses appreciation and offers to cite the reader.

The final letter employs similar strategies.

Letter (F) (Sherman & Johnson 1983: 375)

(1) I have heard about your system of teaching students in your technical writing classes how to write reports by having them help faculty members in the professional schools produce reports on their research projects. (2) Since I teach technical writing, I am very much interested. (3) I would be really grateful if you would help me by supplying answers, based on your experience, to the following questions. [A list of eight questions follows.]

(4) As I have indicated above, I can see that the system might solve some of the problems of teaching the course, but I am uncertain about some of its aspects. (5) If you will give me the benefit of your experience by answering my questions, I will really appreciate your assistance. (6) I shall of course be pleased if you could add any further comments that you think would be of interest.
As did the previous example, this letter defers to the reader at several points: in sentence (1), the writer suggests that the reader’s teaching expertise is widely known, and sentences (3) and (5) reinforce this strategy by alluding to the reader’s extensive experience. The writer also incurs a debt (Strategy 9) at several points, in sentences (3), (5), and (6). The request itself is stated indirectly, as a declarative, in sentence (3), and this indirectness is further reinforced by the conditional modal would (Strategy 2) and the if-clause, which functions as a hedge (Strategy 1). Hedging is further reflected in the if-clauses in sentences (5) and (6).

In summary, order letters, routine requests, and non-routine requests fall at different points along the indirectness continuum, since they correspond to different values for \( W_- \). Consequently, a writer sensitive to \( W_- \) will employ more linguistic signals for indirectness, by making use of some combination of Strategies 1-9. Again, these strategies and the principles that they follow from ultimately reflect the meta-principle of redressing threats to the reader’s negative face.

**Using Speech Act Theory to Augment Textbook Advice**

This section focuses on how speech act theory might be used to evaluate and refine traditional advice about writing the types of letters discussed in the previous section. More specifically, this section considers three areas:

-- advice about style that is explicitly consistent with speech act theory;

-- advice that is implicitly consistent with speech act theory, but that might be made more precise by greater explicitness; and

-- advice that is inconsistent with speech act theory.

The major area in which textbook advice explicitly coincides
with speech act theory is in the discussion of order letters. For example, Menning & Wilkinson advise writers to "Make them orders, not just hints... The usual beginning for an order is 'Please send me'" (1972: 139). Similarly, Fear recommends, "State your order in the first sentence, without any preliminary small talk" (1977: 166). Fearsall & Cunningham also advise the writer to "Be courteous. Your order will probably be filled, regardless of how it's placed, but saying 'please send' is more polite and businesslike" (1982: 40). Such advice is consistent with speech act theory, in that a minimal use of indirectness is recommended for a request situation with a low \( W_r \); as discussed earlier, order letters distribute power equally between reader and writer, and the requested action does not impose upon the reader. Consequently, the modified imperative structure is appropriate; there are really no pragmatically motivated reasons for a greater degree of indirectness.

Advice about routine requests is also generally consistent with speech act theory. Although the syntax of these letters is not discussed extensively by most authors, the sample letters that accompany their discussions typically use a modified imperative structure for the actual request. Writers are also advised to give the reader a framework for their request. This excerpt from Sherman & Johnson illustrates representative advice about this strategy:

Open your letter by making it clear that your purpose is to obtain information, and identify the subject that the information concerns... Tell your reader why the information is needed. Though your explanation should not be long-winded, it is neither courteous nor reasonable to ask your reader to use time for your benefit unless you show that your purpose is neither trivial nor contrary to your reader's own interests. (1983: 373)

In summary, routine requests are treated as falling midway between
orders and non-routine requests: the writer can use a relatively
direct style (e.g., "Please send me information about X"), so long as
the directness is counterbalanced with explanatory material.

When we come to non-routine requests, textbook advice tends to
be vaguer than that for more routine letters. Most authors recognize
that greater indirectness is appropriate for non-routine requests,
and thus their approach is implicitly consistent with speech act
theory. One central problem that arises, however, is that textbooks
tend to focus on ends (or effects) rather than on means (or causes):
i.e., they discuss the tone that the writer should strive for, but
offer little explicit advice about specific linguistic strategies for
achieving this tone. The following discussions of non-routine
requests illustrate this tendency.

--Since there is no self-evident benefit to the reader, try to
find one. The very least you can do is to show that you
have a definite need for the information, that you will
put it to productive use.

Keep your tone courteous and respectful; remember
you are asking a favor . . . . (Fear 1977: 155)

--When [the Letter of request] goes to a recipient who is under
no obligation to answer and who does not profit by doing
so except in good will, it must be written with more
care. (Sherman & Johnson 1983: 373)

--In an unsolicited letter [of inquiry] you are asking a
favor, and you must avoid the risk of appearing brusque
or discourteous. (Houp & Fearsall 1984: 290)

--To put the question directly [in non-routine requests] . . .
is to get a negative answer. . . . Like the simple
inquiry, the special request is specific and concise, but
it is not direct . . . . (Menning & Wilkinson 1972: 317).

In such passages, writers are advised to keep "a courteous and
respectful tone," to write "with more care," to avoid appearing "brusque or discourteous," and to use an approach that is "not direct." Too often, though, the unanswered question is how to achieve these goals.

Some authors do mention some specific linguistic strategies that are appropriate for non-routine requests. For example, Houpt & Pearsall advise the writer to "Tell the recipient of the letter why you have chosen him or her . . . . Obviously, this section is a good place to pay the recipient a sincere compliment" (1984: 292). Likewise, Sherman & Johnson recommend explaining "why you chose the recipient as a source of information. As you do this, you will often be able to say something complimentary" (1983: 374). Both of these suggestions reflect Strategy 4, deference toward the addressee. Both Houpt & Pearsall and Sherman & Johnson also discuss tactics that reflect Strategy 9, redressing other needs of the reader; these include offering to return the favor and expressing appreciation for the reader's help.

In many cases, nevertheless, a number of potentially useful strategies for non-routine requests are either not mentioned by textbook authors or, at best, must be inferred from model letters or sample sentences included in the discussion. For example, Sherman & Johnson write that "It is best to avoid saying 'Thanks in advance' either directly or by implication . . . . There is a real though subtle difference between saying 'I shall appreciate whatever information you send me' and saying 'Thank you in advance for answering these questions' or 'Thank you for this information'" (1983: 374). Sherman & Johnson are right--these sentences do create different effects--but they offer no principled account of why this is so. Speech act theory, on the other hand, does explain the difference in tone. The first variation ("I shall appreciate . . .") incorporates strategies for indirectness: it incurs a debt (Strategy
9) and hedges the request by using the qualifier whatever (Strategy 1). The second two variations, in contrast, violate Principle I by presupposing the reader's cooperation in the request; this violation cancels out the redressive function of Thank you.

In short, textbook writers could do more in the way of elucidating explicit principles for redressing non-routine requests (e.g., Principles I-IV) and discussing specific strategies for implementing these principles (e.g., Strategies 1-9). Minimally, students can be made aware of the binary distinction between direct (imperative) and indirect (non-imperative) requests. A somewhat more ambitious, but by no means impossible, goal is to point out that indirectness varies with the use of certain linguistic elements. Such a discussion might, for example, compare the relative indirectness of declaratives and questions, and of indicative and conditional modals; point out the function of "minimizers" such as "Could you take a few moments to do X?"; comment on the forms by which writers can show deference; and not the roles that "impersonal" forms (e.g., passives and nominalizations) can play in achieving indirectness. As demonstrated in the previous section, the model letters included in textbooks often use a number of these strategies; students might benefit further if they were made aware of the pragmatic principles that make these letters effective.

Along more general lines, the taxonomies assumed in most discussions of letters of request represent another area that is implicitly consistent with speech act theory, but that might be strengthened by more explicit connections with pragmatics and sociolinguistics. The traditional tripartite divisions reflect either the writer's purpose (placing an order, making a routine inquiry, or making a non-routine request) or the reader's anticipated attitude (positive, neutral, or negative). Both of these general divisions are congruent with speech act theory, since both associate
an increased value for $W_c$ with an increased need for indirectness.

However, this taxonomy could be further refined by treating different instances of requesting as falling along a continuum, rather than into discrete categories. Non-routine requests, especially, may differ in the degree to which they are face-threatening. More specifically, the variables discussed earlier—$D(A, B)$, $P(B, A)$, and $I_2$—can change independently to vary the value for $W_c$. As argued earlier, the appropriate degree of indirectness for a particular non-routine request depends on whether or not the writer knows the reader, what positions the reader and writer occupy on a power hierarchy, and the extent to which the writer is imposing on the reader. The point is that not all non-routine requests are equally face-threatening; and, consequently, not all degrees of indirectness are equally appropriate.

Finally, there are several points at which traditional advice about style comes into conflict with speech act theory, as it has been developed by researchers in pragmatics and sociolinguistics. This conflict suggests that these are areas in which traditional advice may need to be tested further by researchers in professional communication.

One source of potential conflict arises from differing opinions about the relative merits of "personal" and "impersonal" style. Under this general heading I would include decisions about whether or not to use the reader’s name (or the pronoun you), whether or not to use the passive voice, and whether or not to nominalize. Traditional discussions of letter writing style tend to answer "yes," "no," and "no" to these questions. For example, the "you attitude" endorsed by so many authors relies, in part, on frequent use of the reader’s name or the personal pronoun you (see, e.g., Fear 1977: 35; Mills & Walter 1978: 338; Houp & Pearsall 1984: 277). Admonitions to avoid the passive voice and nominalizations, in favor of more "direct"
treatment. n of agents, actions, and objects, are likewise ubiquitous; consider, for example, this passage from Blicq: "Passive verbs are weak, whereas active verbs are strong. Expressions such as . . . 'is an indication of' (indicates), . . . 'it is recommended that' (I recommend), should be replaced by the much more direct expressions shown in parenthesis [sic]" (1983: 43). (The astute reader will have noticed, by the way, that the medium of the second sentence does not reflect its message.)

At the same time, however, researchers in professional communication should take into account the potential usefulness of "impersonal" discourse strategies in face-threatening situations such as non-routine requests. Otherwise, the "you attitude" may result in an overly direct or familiar tone in a case where the writer should, instead, maintain greater distance and deference. Similarly, as discussed earlier, the passive voice and nominalization are useful linguistic devices for the writer who wants to avoid singling out the reader as the recipient of a directive. In short, strategies that "impersonalize" discourse cannot be judged, a priori, as ineffective; rather, they may be entirely appropriate if they help the writer redress a face-threatening act.

A related issue concerns brevity, which has traditionally been considered a virtue in technical and business writing. Focusing only on the request forms discussed here, however, we may state as a general rule that greater degrees of indirectness correlate with greater syntactic length. This principle holds true whether we consider just the binary distinction between direct and indirect speech acts, or the continuum of indirectness. As an illustration, note that moving from a direct request (an imperative) to an indirect request (an interrogative or declarative) always results in a longer sentence: compare "Give me your opinion" with "Can you give me your opinion?" Furthermore, strategies for increasing indirectness
generally call for adding linguistic elements. This may involve adding morphemes to words (for example, can is made conditional by adding a past tense morpheme, resulting in could) or words to sentences. As we have seen, a highly indirect request may contain a number of markers, reflecting several different strategies—so, for example, "I wonder if you could possibly take a few moments to give me your expert opinion" contains markers of hedging, pessimism, minimization, and deference.

It is always dangerous to infer cause and effect from correlation, but there is evidence that the correspondence between indirectness and length is neither coincidental nor idiosyncratic to English. Rather, Haiman (1983) posits a universal tendency for greater indirectness and formality to coincide with greater linguistic length. What Haiman concludes is that lengthier constructions function iconically, to signal an "epistemic distance" between the discourse participants, or between the participants and the referent of the discourse. Under this view, the increased length of indirect forms is an icon of increased respect for the addressee; as Haiman puts it, "the more respectful the register, the more syllables in the same message" (1983: 800). This general rule holds true not only for English but for languages as diverse as French, Javanese, Madurese, Nahuatl, and Japanese (among those mentioned by Haiman). For our purposes, of course, the point in looking at other languages is to confirm that this pattern is not merely coincidental in, or peculiar to, English.

I do not mean to suggest, by these criticisms, that all textbook authors take an unconditional stance against passive voice and nominalization, or in favor of the "you attitude" and brevity. Based on the textbooks I have sampled, however, I believe it is a fair generalization to say that active voice, direct and personal structures, and brevity are treated as rules to which there are few
legitimate exceptions. Fortunately, as Broadhead (1985) reports, researchers in technical and business writing are beginning to challenge such assumptions, and are discovering more and more cases in which the briefest, most direct style is not always the most rhetorically effective.

Conclusion

This discussion has considered the application of speech act theory to questions about indirectness in letter writing style, especially letters of request. Among the concepts and principles from speech act theory that have been examined here are the distinction between direct and indirect speech acts, the extralinguistic variables that determine how much indirectness is appropriate, and specific linguistic strategies for achieving different degrees of indirectness. In turn, these concepts and principles can provide insight into the appropriateness of different stylistic options for different types of letters. Further, as argued in the preceding section, speech act theory can be used to refine and modify current views of letter writing style.

From a practical standpoint, speech act theory can also provide teachers with more precise ways to analyze problems in student writing. The introductory section mentioned the hypothetical case of a student who uses a sentence like "Please answer the following three questions" in a non-routine request. Rather than offering only a comment such as "This sentence is too abrupt," the teacher can use speech act theory to make a more concrete suggestion (for example, "Frame your request as a declarative or an interrogative"). In other words, the teacher can explain the effect of the student's sentence as part of a predictable system, rather than as an idiosyncratic fact about a particular letter.

This discussion points toward several more general conclusions
concerning the relation between linguistic theory and professional communication. The latter field is, by the admission of its own practitioners, in need of empirically verifiable principles that would substantiate the advice commonly offered to teachers and students. Linguistic theory, especially those aspects of it that draw upon a rich database about the social nature of language, can contribute to the search for such principles. For example, Brown & Levinson's theory is based on extensive analysis of the speech acts used in a variety of cultures, both western and nonwestern. Indirectness strategies in letter writing can be viewed as one manifestation of an apparently universal phenomenon.

In closing, concepts and principles from linguistics, as exemplified by speech act theory, can provide insight into both research and teaching issues in professional communication. These findings suggest that linguistic theory should continue to be investigated as a source of information about the structure and use of business and technical writing.
Notes

'Sentences (2-10) illustrate only some of the conventional forms used to make indirect requests (see also Merritt 1976 and Ervin-Tripp 1976). In theory, however, there is a potentially infinite range of utterances that A could successfully employ, if we assume certain shared knowledge between A and B. For example, suppose that A and B both know that A needs the report for a three o'clock meeting. Given this context, A could convey an indirect request by saying something like "I've got to get ready for that meeting" or, even more obliquely, "It's two-thirty." Neither sentence mentions the missing report, but either would be interpretable as a request if B had the relevant background knowledge. As a rule, then, the more knowledge shared between two discourse participants, the less information that needs to be mentioned in an indirect speech act. Although it is beyond the scope of this paper, it can certainly be argued that many "communication breakdowns" arise from errors in judgment about the amount and type of extralinguistic knowledge shared by the discourse participants.

"Given the complexity of discourse, however, it is also possible to construct an interchange between A and B (in their "equal status" roles) in which A's contribution reflects more of a hidden agenda. For example:

A1: I need that report on the fourth quarter.
B1: I'm sure I've got it in my files.
A2: Could I get a copy?
B2: Sure. Come on over to my office.

Here we can interpret (A1) as a pre-request, a contribution designed either to allow A to "test the waters" before making a request, or to elicit an offer from B (note that (B2) might also read "I'll send you a copy of it").

'The most obvious exception is that conveying information about
life-threatening situations takes precedence over saving face. Consequently, addressees are not offended when warnings are posed as direct speech acts. For example, from a can of spray starch: "Do not place in hot water or near radiators, stoves, or other sources of heat. Do not puncture or incinerate container."

Face-saving strategies can also be ignored with impunity by those in no danger of losing face; for example, military officers, who have absolute authority over their subordinates, can use direct speech acts like "Bring me more coffee cups" and "Get your eyes off me, puke" (cited in Ervin-Tripp 1976: 35). Somewhat paradoxically, direct speech acts are also common between peers and intimates.

Ervin-Tripp reports that office workers often address each other with direct requests like "Get me a cup of coffee while you're there at the coffee machine" (1976: 40). Here, directness seems to serve as a "solidarity marker." Since one function of indirect speech acts is to maintain social distance, direct forms may serve to indicate closeness and compatibility.

"Seen from the addressee's point of view, Strategy 9 explains, in part, why persons granting requests are usually sensitive to having their contributions acknowledged. The conventions of scholarship, for example, require us to "go on record" by citing the contributions of others; and granting agencies typically require authors to acknowledge the grant when publishing resultant research.

"In the same way, familiar names tend to be shorter than their formal counterparts, thereby closing the social distance between discourse participants (cf. Bob/Robert, Pat/Patricia, Mom/Mother). Haiman also points out that "The near-universal contrast, implicit in the terms themselves, between four-letter words and euphemisms is that the latter are invariably longer" (1983: 800). This increased length also functions iconically, to distance the discourse participants from the referent of the discourse."
Chapter 6
Conversational Implicature and Unstated Meaning
in Technical Writing

Specialists in technical and business communication have recently called for additional research into the validity of traditionally accepted rhetorical strategies (see, for example, Ewing 1983, Gieselman 1983, Haselkorn 1984, and Moran & Moran 1985). Toward this end, this paper discusses how the theory of conversational implicature, as developed by Grice (1975) and other linguists working within pragmatics, provides insight into the way that readers interpret implied messages. Understanding how readers infer unstated meaning can be useful in evaluating commonly recommended strategies for negative messages, especially the use of an implied, rather than explicit, statement of the negative message.

The first section, after reviewing the properties that distinguish a negative message from a positive or persuasive one, summarizes the advice commonly offered for conveying negative messages. The second section outlines the main tenets of Grice's theory of conversational implicature, and also briefly discusses sociolinguistic explanations for the use of indirectness in negative messages. The third section analyzes the texts of several letters, showing how the reader's interpretation of implied messages is explained by Grice's theory.

Strategies for Negative Messages

One standard taxonomy distinguishes among positive (or "good news") messages (e.g., letters placing orders), persuasive messages (e.g., sales letters), and negative (or "bad news") messages (e.g., letters that deny requests) (see, for example, Menning & Wilkinson 1972, Godfrey 1983, Sherman & Johnson 1983, and Houp & Fearsall 1983).
In general, a message's characterization as positive, persuasive, or negative can be viewed as a function of two variables: whether or not an imbalance exists in a distribution of goods between writer and reader; and, if so, in whose favor the imbalance lies. The relation between these variables and different types of messages is shown below.

<table>
<thead>
<tr>
<th>Positive</th>
<th>Persuasive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goods offered by writer</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Goods desired by reader</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

"Goods" are defined broadly here to include both material wants (such as money, products, and services) as well as less tangible but equally negotiable commodities (such as job interviews, jobs themselves, and privileged information).

Under this view, a positive message is one in which the writer is offering goods that are desired by the reader. There may be a mutual exchange of goods (e.g., money for a product) or a unilateral transfer (e.g., of information that the reader desires). In a persuasive message, the writer is offering goods that are not desired by the reader; hence the writer aims to change the reader's perception of the goods so that they become desirable. Finally, a negative message is one in which the reader desires goods (e.g., a job interview) that are not being offered by the writer. Therefore, the writer's primary aim is to explain to the reader why the goods are not being offered.

The three-way taxonomy between positive, persuasive, and negative messages is used in many discussions to justify the need for different organizational and stylistic strategies, especially for positive and negative messages. For positive messages, textbook authors typically advise using an organization characterized as
"direct" or "deductive," accompanied by an equally direct style. For example, Sherman & Johnson advise that "when you intend to say 'yes,' you should say it at once and say it graciously, then offer any explanations that are necessary, and finally, bring the reader's attention back to the fact that the request has been granted" (1983: 56). Menning & Wilkinson recommend that positive ideas "should be phrased specifically," using "independent instead of dependent construction" (1972: 31). Godfrey concurs that positive messages should be conveyed in a "plain and direct" style (1983: 59).

According to such authors, negative messages call for more complex strategies, such as the type of organization known as "indirect" or inductive." Sherman & Johnson advise that "When saying 'no,' . . . you should not blurt out your refusal at the beginning, but should hold it back until you have given the reasons for the decision. . . . The proper method is to try to make the reader see that a negative answer is indicated by giving evidence and leading to that answer gradually" (1983: 356). Houpt & Pearsall recommend a similar organization: "Begin with a friendly opener"; "explain the reason for the refusal"; "state your refusal"; and "close your letter in a friendly way" (1984: 29).

A related piece of advice often found in discussions of negative messages is to either deemphasize the negative news or convey it through implication if possible. For example, Menning & Wilkinson suggest downplaying the negative by "giving it minimum space, and by positive statement when you have to state it; but better, when possible, you may be able to make the refusal clear by implication" (1972: 57). Likewise, Godfrey advises that "it may be possible to make a general statement that clearly applies to the recipient without the writer hammering home" the refusal (1983: 59). Houpt & Pearsall offer similar advice: "Sometimes . . . your explanation can be so complete that your refusal is obvious and does
not need to be stated. If so, the best strategy is probably not to state the refusal directly" (1984: 297).

To summarize, textbook discussions frequently recommend indirect strategies for negative messages. These include using an inductive organization in which the negative message is prefaced by explanatory material, as well as conveying the negative message when possible through implication, rather than through explicit statement.

Conversational Implicature and Indirect Strategies

This section shows how Grice's theory of conversational implicature can be used to analyze the rhetorical strategies typically recommended for negative letters, in particular to explain how readers interpret implied messages. In addition, this section briefly discusses Brown & Levinson's research on indirectness (1978), which provides insight into why negative messages are often conveyed indirectly.

Grice's theory of conversational implicature rests on two main premises. First, Grice proposes that discourse is, ideally, characterized by cooperative efforts among the participants (as is, it can be argued, all rational behavior; see Grice 1975: 47-48). He formulates a general Cooperative Principle as follows: "Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged" (1975: 45). This principle, in turn, subsumes certain maxims that govern cooperative conversation (Grice 1975: 45-56):

**THE MAXIM OF QUANTITY**

1. Make your contribution as informative as is required (for the current purposes of the exchange).
2. Do not make your contribution more informative than required.

THE MAXIM OF QUALITY
1. Do not say what you believe to be false.
2. Do not say that for which you lack adequate evidence.

THE MAXIM OF RELATION
1. Be relevant.

THE MAXIM OF MANNER
1. Avoid obscurity of expression.
2. Avoid ambiguity.
3. Be brief (avoid unnecessary prolixity).
4. Be orderly.

Grice offers these maxims as a set of principles which, if followed, will result in "a maximally effective exchange of information" (1975: 47).

The second central premise of Grice's theory is that discourse participants very often appear to violate one or more of these conversational maxims. For example, consider the following exchange (Levinson 1983: 102):

A: Where's Bill?
B: There's a yellow VW outside Sue's house.

If semantic meaning alone is considered, clearly B has not answered A's question. Yet both introspection and the observation of naturally occurring discourse will confirm that such interchanges are unremarkable and occur quite frequently; B's contribution, rather than bringing the conversation to a halt (as a true non-sequitur might), is well within the realm of interpretable discourse. Grice's
central question, then, might be posed as follows: How are discourse participants able to make sense of contributions such as B's?

Part of the answer that Grice proposes is that an addressee will proceed as if the conversational maxims were being adhered to. So, for example, A will attempt to interpret B's remark as if B were respecting the Cooperative Principle and its attendant maxims. Further, addressees will use contextual knowledge to construct conversational implicatures: those inferences that must be made in order to preserve the assumption that the Cooperative Principle is being observed. Thus we may define conversational implicatures as those inferences that transform a seemingly uncooperative response into a cooperative one—-one that is informative, truthful, relevant, and clear.

Let us return to the exchange between A and B and see how a conversational implicature is raised in this case. Levinson's analysis is as follows:

Here B's contribution, taken literally, fails to answer A's question, and thus seems to violate at least the maxims of Quantity and Relevance. Yet . . . we try to interpret B's utterance as nevertheless co-operative at some deeper (non-superficial) level. We do this by assuming that it is in fact co-operative, and then asking ourselves what possible connection there could be between the location of Bill and the location of a yellow VW, and thus arrive at the suggestion (which B effectively conveys) that, if Bill has a yellow VW, he may be in Sue's house). (1983: 102)

In other words, A interprets B's remark as if B were adhering to the Cooperative Principle and speaking informatively, truthfully, relevantly, and clearly. A then proceeds (unconsciously) to construct a set of inferences that maintain this assumption: for example, that Bill owns the yellow VW and knows Sue. One of the most
appealing properties of Grice's theory, then, is that it explains how discourse participants are able to endow an interchange with meaning that goes beyond semantic content—"read between the lines," so to speak, and derive messages that are implied rather than explicitly stated.

However, this still leaves open the question of why discourse participants often resort to indirectness rather than to more direct and explicit statements. One explanation for this tendency is advanced by Brown & Levinson (1978). After examining discourse conventions in a variety of cultures, Brown & Levinson conclude that the desire to be informative (by means of direct, explicit communication) coexists with the desire to "save face." Their main finding is that indirectness is an apparently universal strategy for achieving this goal.

According to Brown & Levinson, saving face may entail maintaining either positive face (an individual's desire for approval, admiration, acceptance, and so forth) or negative face (an individual's desire for autonomy) (1978: 67). For example, if A refuses to interview B for a job, this constitutes a threat to B's positive face, since A is failing to comply with B's wishes. In order to mitigate this face-threatening act, A can convey the refusal in an implied and indirect manner rather than an explicit and direct one. A might plead an inability (rather than an unwillingness) to interview B, for instance through an explanation like "The large number of applicants makes it impossible for us to interview all qualified candidates." By structuring the refusal in this indirect manner, A allows B to save positive face. (For a more detailed discussion of Brown and Levinson's research as it applies to technical communication, see Riley 1987).

Taken together, Grice's and Brown & Levinson's analyses of discourse provide support for, and insight into, several of the
strategies commonly recommended for writing negative letters. For example, the convention of offering explanations for refusals can be seen as a way of allowing the reader to save face; that is, of lessening the face-threatening act of refusal. Grice’s theory, as the next section demonstrates in more detail, provides an account of how a writer can use explanations and other related information to convey a refusal without ever stating it directly.

Conversational Implicature and Strategies for Negative Messages

As stated earlier, one commonly recommended strategy for conveying negative messages is to avoid stating the negative news directly. At the same time, it is necessary to avoid misleading the reader; in refusing a request, the writer does not want to be so indirect as to convey the impression that the request is being granted. Since Grice’s theory is concerned with how an addressee is able to draw implicatures (i.e., inferences) that are not overtly stated, it can help explain how a writer can achieve both politeness (by using indirectness) and clarity (by insuring that the reader will draw the correct inferences).

By way of illustration, consider the following two letters, which were received by a job applicant who had interviewed for several teaching positions during a professional convention; these letters were received approximately one month after the interviews. The writer in each case is the chair of the department advertising the position (some minor changes have been made in order to preserve anonymity).

LETTER FROM UNIVERSITY X

(1) Our Search Committee enjoyed meeting with you to discuss the position at University X, and I’m writing now to update you on the status of our search. (2) We received
approximately 40 applications of which almost all were of very high quality. (3) The candidates we met with in December were the very best of these—all outstanding candidates. (4) Unfortunately, there is only one available position, and after considering the specific needs of our department and the strengths of the different candidates, we have narrowed the field to a list of four. (5) I regret to tell you that your application is not one of the four finalists.

(6) Let me thank you for considering University X and wish you success in your career.

LETTER FROM UNIVERSITY Y

(1) I wanted to write you and let you know that we have chosen finalists for the position in our department.

(2) As you already know, we were very much interested in you and your work. (3) We enjoyed talking with you in December, and I’m grateful to you for sending me copies of your articles. (4) I’m returning them to you under separate cover.

(5) Though I’m sure you don’t need them, this brings my personal best wishes for success in your job search.

Each of these letters was designed, presumably, to accomplish two purposes: first, to convey the information that the addressee is no longer under consideration; and second, to preserve good will between the writer and the addressee by conveying this information as tactfully as possible. Both letters accomplish the first purpose; it is clear, after reading each one, that the addressee is not a finalist at either school. However, different degrees of directness are used by each writer to convey this message.

First consider the letter from University X. This letter employs the inductive strategy recommended by so many textbooks: It
begins with a neutral message in sentence (1), offers explanations for the upcoming refusal in sentences (2-4), and then states the refusal in sentence (5). However, several readers who were asked to comment on this letter indicated that they were startled or amused by sentence (5). As one reader put it, "By the time you get to [Sentence (5)], you already know it's a rejection letter; that sentence seems to hit you over the head with it." Comments such as these suggest that sentence (5) creates a problem in tone, despite its placement at the prescribed point (after explanations). The problem seems to arise from an explicit statement of a message that the reader has already inferred.

On the other hand, the letter from University Y conveys its refusal without explicitly stating it. The theory of conversational implicature can help to explain how this goal is accomplished in the absence of a direct statement analogous to sentence (5) in the letter from University X—or, in pragmatic terms, how the writer (A) is able to implicate the refusal to the addressee (B).

First, in order for A's letter to raise the intended implicature, A and B must share some general background knowledge about the procedures followed by a university when it is making an academic appointment. Consequently, A must assume that B is aware of the following:

1. Some subset of applicants interviewed at the convention will be later be invited for on-campus interviews. These selected applicants constitute the "finalists."
2. Both the hiring committees and the applicants are trying to bring the hiring process to a close within a relatively short time. Consequently, urgent news is often conveyed by phone, rather than by letter, even though a phrase like "We'll be in touch" is ambiguous as to the medium of communication.
In examining the actual text of the letter from University Y in light of this context, what we want to determine is how the reader is able to draw the implicature, 'You are not a finalist for this job.' Recall that, under Grice's theory, the reader will try to maintain the assumption that the writer is being cooperative: informative, truthful, relevant, and clear. In this case, the implicature appears to arise from an apparent violation of the Maxim of Quantity: "Make your contribution just as informative as is required for the current purposes of the exchange." Assume that the reader, B, starts with the hypothesis that the purpose of this letter is to arrange an on-campus interview. If this were the case, certain information would be forthcoming: when the interview is to take place, what B is expected to do at the interview, and so on. However, such information is absent, and B has no reason to believe that A is intentionally omitting necessary information. Therefore, B must conclude that A's purpose is, in fact, not to arrange an on-campus interview.

The Maxim of Manner also plays a role in this reading. Of particular significance here are the past participle in sentence (1) ("we have chosen finalists") and the past tense verb in sentence (2) ("we were very much interested"), both of which indicate that the selection of finalists has been completed (compare the effect of "We are choosing the finalists"). The writer would be violating the Maxim of Manner by using the past aspect to discuss a current state of mind. Again, then, since B has no reason to believe that A is violating this maxim, B must conclude that A is not currently interested.

A similar analysis can be applied to other texts that convey negative messages through implicature. For example, Menning & Wilkinson discuss a situation in which an author has asked a mail-order house for permission to reprint some sales letters. The
following reply is offered as an example of a tactful refusal (1972: 250):

(1) You can count on a large, interested readership for the article you are writing on the importance of sales letters in business.

(2) In our company, as you know, we depend upon letters exclusively for sales. (3) Of necessity, then, we have tested extensively to find out the most effective procedures. (4) Our highly paid writers are continually revising, sending expensive test mailings, and comparing the results. (5) The best letters represent a considerable investment.

(6) In the past we have had some of our standard letters used without consent by rival companies; so we now copyright all our sales forms and confine them to company use. (7) Should we release them for publication, we would have to incur the same expense again, for their effectiveness for us would be materially decreased.

(8) I'm sending you some bulletins and a bibliography which may help you with your article. (9) Will you let me know the issue of the magazine your article appears in?

The effectiveness of this letter comes in part from the fact that the refusal is implied rather than directly stated. As in the previous example, Grice's theory of implicature can explain how the reader is led to infer the refusal.

The implicature raised by this letter arises partly from the Maxim of Relation. The second paragraph repeatedly mentions the time and money that the company has invested in sales letters: in sentence (7), we find the phrase "we have tested extensively"; in sentence (4), references to "our highly paid writers" who are "continually
revising" and sending "expensive test mailings"; in sentence (5), the phrase "a considerable investment." If the purpose of the letter were to grant the reader's request, these references would not be relevant and, thus, would violate the Maxim of Relation. Under Grice's theory, however, the reader maintains the assumption that the reader is adhering to the conversational maxims. Consequently, the reader might reason (unconsciously) as follows: 'Repeated references to time and money would not be relevant if the writer's purpose were to grant my request. I have no reason to believe that the writer is intentionally being irrelevant. Therefore, the purpose of this letter must in fact be to refuse my request.'

As in the letter from University V, the Maxim of Manner can also be used to explain how the writer implicates refusal. The conditional verb forms in sentence (7) support the interpretation that the request is being denied, since these structures indicate a hypothetical situation rather than one that will actually occur: "Should we release them"; "we would have to incur"; "their effectiveness for us would be materially decreased." In contrast, if the request were being granted, we would expect the writer to use a different set of constructions: for example, "When we release the letters for publication, we will retain full copyright."

Letters refusing requests are not the only ones in which indirectness can be used to convey negative information. Houp & Fearsall discuss a case in which an amateur photographer has complained to a camera company about some problems encountered in using their product. The company representative must inform the photographer that the camera was not loaded properly--i.e., that the customer failed to follow instructions. Obviously, this message is a "face-threatening" one that could embarrass the addressee if delivered directly. In order to illustrate alternative approaches to this situation, Houp & Fearsall offer both a "do" and a "don't"
letter. The "don't" letter follows (1984: 282):

(1) The type of film failure you wrote us about stems from faulty loading of the Film-X. (2) Your method and not the camera is defective.

(3) Review the instructions that came with the camera.

(4) Pay particular attention to Instruction 5.

The best that can be said about this letter is that it tells the reader how to avoid the same problem in the future. Any informative qualities that the letter might have, however, are overshadowed by the explicit negative message in sentence (2).

The following letter is offered by Houp & Fearsall as a more tactful alternative (1984: 281):

(1) We are sending you a roll of film to replace the one overexposed when you used your Film-X Camera for the first time. (2) And we’ll certainly replace the camera if it proves to be defective.

(3) Trouble such as you have experienced is often caused by the photographer’s inadvertently forgetting to set the proper film speed while loading the camera. (4) The ASA dial on the front of the camera must be set to match the ASA film speed number of the film you are working with. (5) Failure to do so will result in either under- or overexposed film such as you experienced.

(6) If you’ll check Instruction 5 on page 3 of your Film-X Manual, you’ll find complete information on how to set the ASA dial.

(7) We hope that your problem was nothing more than an improperly set ASA. (B) If not, however, follow the warranty
instructions that came with the camera, and we'll replace your Film-X.

Unlike the previous alternative, this letter explains the source of the problem in an inoffensive way. This improvement in tone results at least partially from the implied, rather than direct, statement that the reader forgot to adjust the ASA dial.

In order to explain how this implicature is raised, we can again call on Grice's theory. The reader starts with a general assumption that the purpose of the letter will be to suggest a solution to the problem. Sentence (2), which uses the conditional form if, raises the implicature that the camera is in fact not defective; otherwise, the writer would be violating the Maxim of Manner. (This implicature is later reinforced by sentence (8).)

Having inferred that the camera itself is not defective, the reader will continue to search for information about an alternative source of the problem. Sentences (3-6) all refer to adjusting the ASA dial. Note, however, that these sentences make no direct reference to the reader's particular failure to follow instructions; the writer instead simply offers information about problems that other photographers have experienced. For example, sentence (3) refers to "the photographer's" forgetfulness rather than to the reader's in particular. In order to maintain the assumption that the writer is adhering to the Maxim of Relation, the reader will draw the implicature that the ASA dial is relevant to his or her own particular case.

To summarize this section, principles from conversational implicature can be used to explain how readers are able to interpret unstated messages. Under Grice's theory, the reader expects the writer to adhere to the Cooperative Principle and its attendant maxims (Quantity, Quality, Relation, and Manner). This theory suggests that the following principles govern the reader's
interpretation of implied negative messages:

a) The reader begins with the default assumption that the message will be positive.

b) The writer appears to violate a maxim, i.e., presents (or omits) information in a way that contradicts the reader's expectations of a positive message.

c) The reader readjusts his or her expectations about the message from positive to negative, by drawing an implicature that is congruent with the assumption that the writer is being cooperative.

Thus, because readers interpret unstated messages by drawing such implicatures, it is possible for writers to convey information without explicitly stating it.

Conclusion

Pragmatics and sociolinguistics have dealt extensively with questions that are potentially relevant to professional communication. This paper has demonstrated that Grice's theory of conversational implicature can be used to explain how readers are able to interpret implied messages. Additionally, Brown & Levinson's theory helps to explain why implicature is appropriate for conveying negative messages. These areas of linguistics provide evidence for and insight into several rhetorical strategies commonly recommended for negative messages, and may constitute a basis for future research on related subjects.
In some cases, one can argue further that an addressee can begin to "read" a letter even before opening it. In the hiring process, for example, job offers or invitations for follow-up interviews are typically conveyed by phone, in the interest of expediency. Therefore, a letter arriving one month after an interview can reasonably be assumed to contain either a noncommittal message (e.g., "Please fill out the enclosed EEOC form") or a negative one. In a situation like this, the choice of the written medium itself may play some part the reader's ability to infer unstated meaning.

One possible explanation for the tendency to convey negative messages through writing is that letters maintain a greater communicative distance between the discourse participants, and hence are considered more comfortable for both the bearer of bad news and its recipient. If one thinks of a letter as a more indirect medium than a telephone conversation or a face-to-face meeting, then a written refusal can be viewed as a face-saving device, as defined by Brown & Levinson (1978).
Chapter 7

Linguistic Theory and Research in Writing:
Prospects for the Future

The preceding chapters have examined several specific cases of what Newmeyer (1983) has called the "limits and possibilities" of linguistic theory, with attention primarily to the use of this theory to explain phenomena that are of interest to writing specialists. Chapters 1 and 2 enumerated several causes for the dissatisfaction of writing specialists with TG theory, some of these resulting from the different emphases and interests of the two fields, others from unrealistic expectations about the relevance of TG theory to the study of writing. Chapter 3, in its analysis of relative clause structures, showed that TG theory can be used to explain syntactic anomalies in student writing. However, because writing (like speaking) reflects performance as well as competence, psycholinguistic principles may also be relevant to analyzing such anomalies.

In sum, these chapters are based on the assumption that contemporary syntactic theory is pertinent to research in writing. At the same time, these studies demonstrate that it is counterproductive for applied researchers to judge the relevance of syntactic theory on pedagogical grounds alone, and without first gaining a thorough understanding of that theory's concepts, principles, and goals. Attempting to apply a theory to phenomena that it was never intended to explain will, logically, result in disappointment. In addition, researchers who reject a theory that they have misinterpreted may deprive themselves of any benefits that the theory might, under its proper interpretation, hold for them.

A second point demonstrated by the studies in this dissertation is that writing specialists might benefit from investigating current
research in areas of linguistics other than formal syntax. More specifically, Chapters 4, 5, and 6 illustrated the usefulness of pragmatic theory for analyzing texts traditionally dealt with in the field of technical writing. Because pragmatics is concerned with the effects of nonlinguistic context on the use and interpretation of linguistic forms, it can continue to be of use not only in the study of technical writing but also in the analysis of other contextually determined variations in content and style: for example, pragmatic theory might shed light on successful and unsuccessful attempts at audience adaptation by freshman writers. Again, however, the same caveat applies for the use of pragmatics as for the use of syntactic theory: without a proper understanding of the principles and goals underlying a theory, writing specialists cannot hope to apply it to their own field in an accurate or revealing way; witness the numerous conceptual problems with Haselkorn's studies, which were examined in Chapter 4.

In this concluding chapter I would like, first, to suggest some additional areas for future research by writing specialists which might profitably draw upon recent linguistic theory; second, to outline several more general ways in which linguistics might serve as a model for theory development in the field of writing; and third, to examine the possibility that linguists might benefit from attending to phenomena traditionally studied by writing specialists.

**Future Applications of Linguistics to Research in Writing**

A number of lines of research in linguistics have emerged recently (i.e., within the past 15 years) that are of potential interest to researchers in writing. As suggested by the discussion above, much of this research lies outside syntactic theory per se, although it should be emphasized that concepts and principles originally developed within TG theory have been incorporated
regularly into other "hybrid" areas of linguistics. This section discusses representative instances of linguistic research relevant to specialists in composition and technical writing. The lines of research dealt with here derive mainly from psycholinguistics, sociolinguistics, and pragmatics, three areas that share a concern with investigating the way that linguistic competence is manifested in actual performance. Because much research in writing reflects this same concern, specialists in composition, technical writing, and related fields such as ESL and basic writing may find these areas of linguistic research of especial interest.

Given that the following suggestions are directed toward applied researchers, I would again like to clarify how I am using terms such as "applications," "applied linguistics," and so on. As emphasized in Chapter 1, applied linguistics is the use of linguistic theory to investigate the language of a particular population, or to investigate linguistic behavior under particular conditions. Ideally, the conclusions reached by the applied linguist should ultimately be incorporated by practitioners in the field (for example, research on language pathology should underlie therapy administered to persons with language pathologies, research on first-language acquisition and second-language learning should underlie pedagogical strategies employed with native and nonnative speakers, and so on). However, a field such as writing should not expect applied research to suggest immediate pedagogical techniques; these typically arise as a later step.

Psycholinguistics and Functional Linguistics

Both psycholinguistics and functional linguistics are concerned, in general, with investigating relationships between properties of formal grammar (e.g., autonomous syntax) and grammar-external tendencies or constraints. For psycholinguists, the objects
of study are primarily the perceptual processes that enter into language comprehension: for example, the effects of memory limitations, the listener's ability to "restore" missing information from the speech signal, and so on. Functional linguistics, at least among its more conservative proponents such as Kuno, proposes to investigate cases in which particular linguistic forms correspond systematically to particular discourse functions. For example, the unacceptability of dative structures ending with pronominal direct objects (e.g., "I sold Bill it") appears to reflect a discourse principle, namely that old information (which pronominals typically signify) should precede new information.

Research in composition has already begun to incorporate principles from psycholinguistics and functional linguistics. For example, Vande Kamp (1982) and Thompson (1985) discuss the given-new principle in composition and technical writing, respectively, and point out the adverse effects that the violation of this principle may have on the cohesion of prose. Kies (1985) analyzes passive voice and nominalization from a functional perspective, arguing that these linguistic forms have legitimate purposes in business and technical writing. Studies such as these are useful because they enable more precise definitions of concepts such as cohesion, as well as moving beyond simplistic advice about style (e.g., "Use active voice instead of passive voice"). Consequently, researchers in composition and technical writing will undoubtedly benefit from continuing to adapt findings from psycholinguistics and discourse analysis.

Sociolinguistics

Sociolinguistics is concerned, in general, with discovering correspondences between linguistic patterns and social variables (including socioeconomic status, ethnicity, gender, and age).
Research in sociolinguistics has already contributed a great deal to the understanding of nonstandard language varieties and their systematic differences from standard written English. Although some controversy remains over the place of nonstandard varieties in academic settings, sociolinguistics has at least dispelled some of the "cognitive deficit" myths surrounding nonstandard dialects. Because teachers of writing are faced with an increasingly diverse body of students, from a sociocultural perspective, research on the properties of nonstandard dialects should continue to be incorporated into research about writing.

In addition to sustaining research into the sociolinguistic features of student writing, researchers in composition and technical writing might consider investigating problems that students who speak standard dialects may eventually encounter in communicating with speakers of nonstandard dialects, or with less educated persons. For example, a growing body of research in linguistics is concerned with detecting communication problems between professionals in fields with highly specialized language—medicine and law are two prime examples—and their clients (see, e.g., O'Barr 1981 and Cicourel 1981). Obviously, humanitarian and ethical considerations mandate continued research into such areas. In addition, practical benefits might emerge from improved communication between specialists and laypeople. For example, Labov (1985) cites several cases in which seemingly "neutral" insurance documents were judged, on the basis of expert testimony from linguists, to be biased or misleading toward their readers—resulting in sizable court settlements against their writers.

**Pragmatics**

As discussed in Chapters 4 through 6, pragmatics involves, in part, the study of how context affects language use. As such, it overlaps somewhat with psycholinguistics, since both fields share an
interest in the ability of participants to draw inferences during discourse; likewise, pragmatics and sociolinguistics also share mutual interests, for example in how language reflects the relative social status of discourse participants. These issues also relate to areas of concern to writing specialists. As the pragmatically based studies in this dissertation have shown, research from this field can shed light on certain aspects of audience analysis and text interpretation.

Writing specialists can continue to draw upon research in pragmatics to investigate these topics further. One potential area of interest to researchers in technical writing concerns the varying degrees of politeness considered appropriate by different cultures. For example, Tannen (1984) observes that "Now that commerce with Japan is widespread, there are frequent reports of frustration by Americans because polite Japanese never say no. One must understand from how they say yes whether or not they mean it" (194). In other words, for a given discourse situation, some cultures may consider a fairly high degree of directness appropriate, while others may consider a more indirect approach appropriate. On a related issue, Keenan (1976) argues that certain non-western cultures do not adhere to western norms regarding informativeness. Obviously, certain economic benefits may arise for writers who know how to adapt their communication style to that of another culture.

To summarize, many of the areas that linguists are studying are directly relevant to questions being asked by researchers in writing, in particular to questions about how readers process and interpret discourse and how writers might go about adapting rhetorical strategies to different audiences and contexts.

Additionally, as argued by Parker (1986), writing specialists might draw upon linguistics for more general guidelines regarding theory construction. Parker outlines several criteria that models
within linguistics strive to meet; these include the following.

(1) The theory must be comprised of precise, explicit claims rather than vague, inexplicit ones. The rationale here is that other researchers must be able to test a claim; and vague, inexplicit claims are impossible to confirm or reject.

(2) The theory should be revealing, meaning in part that it should explain the interaction of phenomena rather than simply describing them separately.

(3) The theory should characterize systematic phenomena; i.e., it should characterize a sufficiently abstract level so that the analyst is able to draw generalizations about the phenomena being investigated.

While it is beyond the scope of this discussion to evaluate current research in writing in terms of these criteria, they are worth keeping in mind as guidelines that have proven useful for evaluating linguistic theories (as well as theories within more mature sciences), and that might constitute suitable criteria for research in writing as well.

The Use of Research in Writing by Linguists

The preceding section outlined some specific and general ways in which writing specialists might benefit from research in linguistics. By the same token, linguists could also benefit by giving greater attention to the phenomena that writing specialists study. In particular, written forms may provide linguists with additional data upon which to base conclusions about the relation between competence and performance. The relative clause structures examined in Chapter 3 illustrate one example of forms that most linguists would label as ungrammatical or as performance errors, based solely on introspective judgment. However, the fact that these occur fairly regularly in student writing indicate that they have
a different grammatical status for some writers; more research is needed to determine the precise nature of this grammatical status.

Similarly, the data discussed by Parker & Riley (1986) suggest that pronoun case in coordinate constructions varies systematically from the standard dialect in certain discourse environments; i.e., that there are pragmatic constraints on the use of both nonstandard forms (e.g., "John and me went") and hypercorrect forms (e.g., "John and myself went"). Further study of written texts might clarify these constraints, especially for the hypercorrect case, since written discourse is often associated with greater formality.

The study of written forms may also provide linguists with additional insights into discourse structure. For example, the letter writing conventions discussed in Chapters 5 and 6 are of interest to researchers who wish to model discourse routines (i.e., systematic interchanges associated with certain types of discourse). Based on research such as that presented in this dissertation, the common properties of spoken and written interchanges appear to justify the application of spoken-discourse models to written data. At the same time, the fact that writing typically addresses a removed audience necessitates changes in how the writer negotiates elements such as pre-sequences and adjacency pairs, since in spoken discourse these normally cannot be completed unless there is an immediate listener response.

In short, both linguistics and research in writing can benefit from each other's findings. Writing specialists should not allow their disillusionment with T&G theory to extend to all domains of linguistics. Instead, they should at least investigate those areas that deal with other aspects of language, especially those related to language processing and discourse structure. Linguists, too, can gain insight into language by considering the data studied by researchers in writing.
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2. Reviews


3. Articles: forthcoming

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PROFESSIONAL ORGANIZATIONS

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American Dialect Society
South Atlantic Modern Language Association
Southeastern Conference on Linguistics
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