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**EVOLUTION OF THE THEORY OF CASE GRAMMAR: CONCEPTS AND
APPLICATIONS**

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**Evolution of the Theory of Case Grammar:
Concepts and Applications**

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Evolution of the Theory of Case Grammar:
Concepts and Applications


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Abstract

Evolution of the Theory of Case Grammar: Concepts and Applications

by Timothy J. Quain

Charles Fillmore has proposed the theory of case grammar as a substantive modification to the Revised Standard Theory of transformational-generative grammar. There is, however, much debate in the literature concerning both the viability and the form of the theory. This work traces the evolution of the theory of case grammar over a sixteen-year period from the 1968 publication of "The Case for Case" to the literature published through 1984 and proposes some theoretical applications of the theory to the teaching of composition.

Chapter one presents relevant aspects of the development of grammatical theory preceding case grammar, specifically, traditional Latinate and transformational-generative grammars. Chapter two serves as an introduction to the theory of case grammar by discussing the works of early proponents of the theory, especially Fillmore's "Case for Case."

Chapter three discusses the works of later proponents of case grammar, emphasizing those which focus on the semantic specification of deep case features. The author's own postulations concerning the nature of deep case relations are also presented.

Chapter four delineates aspects of the theory which need further exploration, including the relationship of the theory of case grammar to the Revised Standard Theory of transformational-generative grammar. Chapter five discusses the relationship of Ray S. Jackendoff's Extended Lexical Hypothesis and his Uniform Three-Level Hypothesis to the theory of case grammar.

Chapter six demonstrates applications of the theory of case grammar to the teaching of composition. Case grammar is shown to be useful in developing and reinforcing critical thinking skills and in demonstrating the nature of support in formal written discourse. In addition, case grammar is shown to have the potential for contributing significantly to the development of a generative theory of rhetoric.

Dedication

This work is lovingly dedicated to my parents, J. Patrick and the late Suzanna E. Quain. Throughout their lives they have exemplified the quest for knowledge and truth, which is the goal of all education, and they have demonstrated adaptation to changing times, which is, ideally, the result of the quest for knowledge and truth. But more than this, they have loved me with a love that has both allowed and inspired me to strive to reach my potential as a student, as an educator, and as a human being.

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Introduction

Noam Chomsky's generative theory of grammar postulates the innateness of language and proposes a framework for describing universal language structures. The transformational-generative theory has proposed a universal set of phrase structure rules and an accompanying set of transformational rules, some universal and some language-specific, which will generate an infinite set of acceptable sentences in a given language. The theory, while far from complete, has been substantially demonstrated, such that it provides the framework for virtually all contemporary linguistic inquiry, both for opponents and for proponents of the theory.

The Revised Standard Theory of transformational-generative grammar, like the original standard theory, insists on the centrality of the syntactic component in grammatical theory. As a result, the syntactic deep structure component of the grammar can generate such unacceptable structures as Chomsky's now classic Colorless green ideas sleep furiously. Such structures are, however, constrained by the semantic interpretation rules of the grammar and, consequently, are never realized as surface structures by normal users of the language. The semantic-generative theory, on the other hand, insists on

the centrality of the semantic component in grammatical theory; as a result, the deep structure component is described, for example, by Lakoff, Bach, and others, as consisting of numerous superordinate and subordinate propositions which are semantically related by conjunction and disjunction in the method of predicate calculus.

About midway between the transformational-generative theory and the semantic-generative theory is the case grammar theory. Like the other two theories, case grammar is a generative theory. Like the transformational-generative theory, it assumes "the centrality of syntax," and like the semantic-generative theory, it assumes "the importance of covert categories . . . lacking obvious 'morphemic' realization but having a reality that can be observed on the basis of selectional constraints and transformational possibilities" (Fillmore, "Case" 3). The case grammar theory is allied more closely with the transformational-generative theory, however, precisely because of its insistence on the centrality of syntax. In fact, Charles Fillmore, in his publication introducing the case grammar theory, considers case grammar to be a "substantive modification to the theory of transformational grammar which . . . amounts to a reintroduction of the 'conceptual framework' interpretation of case systems" ("Case" 21).

Since the introduction of the case grammar theory in Fillmore's 1968 publication of "The Case for Case," the

theory itself has undergone its own substantive modifications. Indeed, there is still much debate in the literature concerning both the viability and the form of the theory. To date, however, no attempt has been made to formulate a complete statement of the theory as, for example, linguists attempted for the transformational-generative theory at its various stages of evolution. While the present study does not attempt to formulate such a complete statement of the theory, it does trace the evolution of the theory of case grammar over a period of sixteen years, from Fillmore's 1968 publication of "The Case for Case" to the literature published through 1984. In addition, the study proposes some theoretical applications of the theory of case grammar to the teaching of college composition.

The study assumes the transformational-generative theory of grammar and its presupposition, the innate, creative nature of human language. The procedures of the study include the analysis, evaluation, comparison, and synthesis of the available literature, as well as the researcher's own postulations regarding the theory of case grammar. Relevant aspects of the development of grammatical theory which preceded the development of case grammar theory, specifically, the applicable components of traditional Latinate grammars and of transformational-generative grammar, are discussed as background in the first chapter.

Chapter I

Background for the Theory of Case Grammar:

Traditional and Transformational- Generative Grammars

This chapter presents aspects of the development of grammatical theory which preceded the development of the case grammar theory. Specifically, the chapter discusses applicable components of the traditional, Latinate grammars and of the transformational-generative grammars. The chapter assumes the reader's familiarity with these grammatical theories and presents only those aspects of the theories which are pertinent to the subsequent discussion of the case grammar theory.

Traditional Grammar

Traditional English grammars have tended to be prescriptive in nature. Based upon the late medieval tenet that the classical languages were superior to the vernacular, prescriptive grammarians strove to model the grammar of English after the Greek and Latin models. Karl Dykema has pointed out, "Grammar began as a philosophical inquiry into the nature of language" (273). He adds:

Language has its own logic, which it is the function of the descriptive grammarian to discover if he can. Whatever it may be, it is not Aristotelian logic. But for two millennia our attitudes toward language have been colored by the assumption that the system of a language can be analyzed and prescribed by an intellectual tool that is inapplicable. (275)

Since Latin dominated Western Europe during the Middle Ages and continued through the Renaissance as the dominant language of academe, traditional English grammarians have relied heavily upon the Latin models. While the traditional grammars have drawn from the Latin models in describing grammatical gender, number, case, and tense in Modern English and have relied heavily upon these models in prescribing modern usage, it is necessary for the purposes of this study to look only at the traditional treatment of grammatical case.

John Lyons, in his description of the treatment of case in traditional grammars, notes that even in highly inflected languages there is not always a neat correspondence between case ending and a noun's use in a sentence (289+). Nonetheless, grammatical case is a phenomenon of language that has been oversimplified by traditional English grammars, partially because various definitions and descriptions of case

abound in the literature. In traditional terms, case refers to an inflection (affix, suffix, infix) of a noun or pronoun to indicate its relation to a surface structure verb or preposition or to another noun or pronoun. It is noted, for example, the following passage from a text used in the public schools of Nashville, Tennessee, at the turn of the century:

Case is the form or use of a noun or pronoun to express its relation to other words in the sentence.

The nominative case usually expresses the relation of subject; the objective case usually expresses the relation of the object; and the possessive case expresses the relation of possession, source, ownership, etc. (Baskervill and Sewell 33-34)

The following definition of case is given in the glossary of a college text published in 1937:

A characteristic of substantives, indicating the relations existing between a substantive and the other words in the sentence. This relation may be shown by an inflectional form of the word or by its position. In English there are three cases, nominative, possessive (or genitive), objective (or accusative). In

nouns the nominative and objective cases are identical, but in pronouns they are, with the exception of the nominative and objective singular of it, distinct. . . . The subject of a finite verb is in the nominative case. A substantive that shows ownership or origin or a similar relation is in the possessive case. The object of a verb or of a preposition is in the objective case. (Woolley and Scott 402)

The use of the nominative case as prescribed in the passage above is identical to the rule cited in a high school Latin grammar of the same period: "The subject of a finite verb is in the nominative case" (Ullman and Henry 517).

Latin inflections are commonly used as illustrations of grammatical case in traditional English grammars. Albert Marckwardt, in his 1942 text, Introduction to the English Language, uses sentence 1.1 as an illustration of case:

1.1 Nautae stella viam monstrat.¹

Marckwardt presents the paradigm for first declension Latin nouns and points out:

¹ Some of the example sentences used throughout this work have been borrowed from other sources. References for these sources are provided within the text. The numbers for these sentences, however, have been supplied by this author in order to maintain consistency throughout the text.

. . . stella has the nominative inflection: one of the functions of the nominative case is that of subject of the verb; therefore, star, in the absence of other words with such an inflection, may be assumed to be the subject. Viam has the accusative inflection; one of the accusative functions is that of direct object. . . . The third noun nautae has an inflection which might, from our table, be either genitive or dative. The principle genitive function is possession; the chief dative function is that of indirect object. By the trial and error method we decide that the indirect object function, to the sailor, is a more likely translation than one which would place either the way or the star in the possession of the sailor. (100-101)

While Marckwardt's explanation might very well serve as a narrative description of strategies for Latin-English translation, it is grossly inadequate as an explanation of case in Modern English, for contemporary English has, of course, dropped surface structure case endings in favor of a more rigid surface structure word order. Vestiges of Old and Middle English surface case endings remain in the personal pronoun and in the interrogative/relative pronoun who, as illustrated in table 1.

Table 1

Surface Case Endings for English Pronouns

Nominative	Accusative	Genitive
I	me	my
you	you	your
he	him	his
she	her	her
we	us	our
they	them	their
who	whom	whose

Despite the lack of inflectional case endings for nouns in Modern English, traditional grammarians persist in utilizing classical terminology in the description of Modern English and in their prescriptive grammars, often interchanging the terms subject and nominative case, the terms direct object and accusative case, and in some instances the terms indirect object and dative case. This persistence illustrates the traditional notion that case endings are a direct function of a noun's use in a sentence.

As noted above, Lyons has pointed out the lack of correlation between case ending and a noun's use in a sentence even in highly inflected languages. In Latin, for example,

the dative of possession is used with the verb esse, to be, instead of the genitive; and there exist the accusative of the extent of space and time and the use of the accusative with the preposition in to show movement within a space instead of the ablative; in addition, certain verbs are followed by two accusatives, one of which functions as an indirect object in English (Henle 162, 169, 172). Furthermore, Latin and contemporary inflected languages have verbs which govern a specific case, that is, verbs which are accompanied by a direct object in a case other than the accusative. Henle, for example, notes that the Latin verbs utor, fruo, fungor, potior, and vescor are accompanied by a direct object in the ablative case. This occurrence is illustrated in sentences 1.2 and 1.3:

1.2 Eodem consilio usi sunt.

1.3 They used the same plan. (Henle 179)

The basic misunderstanding, then, results because the notion of case is inconsistently defined both as a surface marker analogous to sentence position in contemporary English and as a vague semantic marker indicating meaning relationships. Pei and Gaylor, for example, define case as follows:

In the flexional languages, a morphological variant of a noun, adjective, pronoun, numeral, or participle distinguished from other such

variants of the same word by a specific declensional ending, by a zero-ending, by an internal vowel change, etc., indicating the grammatical function or syntactical relationship of the word. As applied to non-flexional languages, case means in general the grammatical function or syntactical relationship of a word, indicated by a preposition, postposition, suffix or a particle, or even by word order alone. (35)

Marckwardt, following his description of case in English, offers sentences 1.4 and 1.5 as illustrations:

1.4 The Indian killed the bear.

1.5 The bear killed the Indian.

Marckwardt's explanation correlates the syntactic role of subject with the semantic role of agent and the syntactic role of direct object with the semantic role of goal:

In addition to the interplay of inflectional suffixes and prepositional constructions in English, there is also the operation of word order. For the present it is sufficient to say that we derive meaning from such a succession of words as The Indian killed the bear by referring it to an established word order pattern which may be summarized as Actor--Action--Goal. In terms of this we conclude

that it was the Indian who did the killing (actor) and the bear who was killed (goal). Furthermore, we would derive precisely the opposite meaning from the sequence The bear killed the Indian. (102)

Sentences 1.6-1.9, when compared with sentences 1.4 and 1.5, illustrate the weaknesses inherent in Marckwardt's explanation:

1.6 The bear was killed by the Indian.

1.7 The bear was killed by the Indian's well aimed arrow.

1.8 The bear was killed.

1.9 The bear died.

In sentence 1.6, the goal is stated as the subject of the sentence, with the actor, or agent, expressed as the object of a preposition. In sentence 1.7, the goal is also stated as the subject of the sentence, but the actor is expressed within a possessive construction. Moreover, in sentence 1.8, what Marckwardt refers to as the goal is stated as the subject of the sentence, and the actor is not expressed at all. Finally, in sentence 1.9, the subject of the sentence, bear, cannot be adequately described as an actor or agent.

Attempts to describe case within traditional grammar have resulted in bifurcation. Marckwardt, for example, in the commentary cited above, has equated the syntactic role

of subject with the semantic role of actor, an equation which is clearly not valid for English sentences. This confusion is evident in the treatment of case by traditional grammar. Mary Hall Leonard, in her 1907 publication Grammar and Its Reasons, subtitled "For Students and Teachers of the English Tongue," points out:

Many grammarians, following the analogy of English pronouns, have fixed upon three cases for nouns, not as the necessary fact, but as the most convenient number. . . .

The relations which a noun can hold must be fully studied. But this is another subject. These relations are many, but since they are not distinguished by differences in form the attempt to define the case idea in connection with these noun relations can only lead to confusion. The illustrations of case in English must be drawn mostly from the pronouns.

Personal pronouns have, as a rule, three grammatical case-forms. . . . This gives a certain amount of "syntax of case" which, however, belongs to the pronouns rather than to English nouns.

The question whether there can be any "property" of case which does not show itself in the

form of the word is too subtle to be discussed abstractly with young students. (88)

Leonard also states:

But while the study of logical [semantic] relationship and grammatical form must proceed side by side, each illustrating and aiding the other, great care should be taken never to confound the two points of view. In the treatment of Case, for instance, a grammatical writer must never permit a confusion to arise in his own thought or in that of his readers, as to whether the inflectional form or the logical [semantic] relationship of the substantive is the point on which the mind is to be centered. So closely are the relations of thought and of expression intermingled that it is a matter of no small difficulty, sometimes, to avoid confounding the one with the other. That they have often been confounded is the cause of many of the disputes that have arisen among grammarians. (23)

As it will be shown later, the grammar itself does not "permit a confusion to arise" about the relationship between what traditional grammarians have referred to as syntactic case-form and what case grammarians refer to as case frames. For example, in sentences 1.4-1.9, the case frame of the

verb kill and the applicable transformations in the grammar permit no confusion about what noun in the sentence represents the actor/agent, i.e. who it is who does the killing, and what noun in the sentence represents the goal/patient, i.e. who or what it is that is killed.

Despite the recognition that semantic role cannot be equated with syntactic form or word order, traditional grammarians have persisted with the perpetuation of Latinate descriptions of syntactic case. Leonard, for example, while she notes, "It is only by the study of English itself that a true knowledge of English can be acquired," also asserts, "Every one must agree that a knowledge of Latin grammar throws great illumination upon the structural study of English" (26). The Prentice-Hall Handbook for Writers, widely used in college composition courses in American colleges, universities, and community colleges, states, "Case shows the function of nouns and pronouns in sentences" (Leggett, Mead, and Charvat 28). The Handbook does, however, define case thus:

The inflectional form of pronouns or the possessive form of nouns to indicate their function in a group of words. Pronouns have three cases: (1) nominative or subjective . . . (2) the possessive . . . and (3) the objective Nouns have only two cases: (1) a common case (woman, leopard)

and (2) a possessive case (woman's, leopard's).

(Leggett, Mead, and Charvat 514-15)

While the Prentice-Hall Handbook may, on first reading, seem to be avoiding the confusion pointed out above, the Handbook's definition of uninflected noun forms as being in the "common case" in effect perpetuates the Latin model of traditional English grammar. In addition, the description of the possessive form of nouns and pronouns as a grammatical case further perpetuates the overlaying of classical Latinate grammar on modern English grammar. As noted earlier, in sentence 1.7, The bear was killed by the Indian's well aimed arrow, the possessive construction Indian's contains what will later be described as the agentive case in the case grammar model.

Linguists have long recognized the fact that the Latinate model of traditional grammar is inadequate for linguistic purposes. Indeed, traditional grammar has served primarily as a prescriptive tool for those who would fancy themselves language purists. Even before the publication of Chomsky's work on transformational-generative grammar, W. Nelson Francis noted:

It is now as unrealistic to teach "traditional" grammar of English as it is to teach "traditional" (i.e. pre-Darwinian) biology or "traditional" (i.e. four-element) chemistry. Yet

nearly all certified teachers of English on all levels are doing so. Here is a cultural lag of major proportions. (290)

More than twenty years later, the cultural lag to which Francis refers still afflicts the teaching of English in American schools as evidenced by the content of college handbooks and by the plethora of tradition-based elementary and secondary textbooks.

Transformational-Generative Grammar

The first serious attempt to reformulate grammatical inquiry as a response to the inadequacy of traditional grammar came from the descriptive, or structural, linguists of the early twentieth century, Leonard Bloomfield, C. C. Fries, and others. As the term "descriptive linguistics" implies, the proponents of this "new" grammar attempted to describe language and language structures on the basis of language use. Given the traditional bias of American and British grammars and grammarians, it is no wonder that these linguists chose to validate the structural approach to language by studying and describing American Indian and African languages, as well as other languages which had, for the most part, been ignored by the mainstream of linguistic study. Nonetheless, the structural school of linguistics rapidly became the predominant framework for

academic linguistic inquiry, while traditional grammar continued to hold sway for elementary and secondary school language arts instruction as well as for college composition instruction.

Probably because of traditional grammarians' assumption that Latin formed the basis of universal grammar, structuralists were unwilling to assume a universal grammar or universal grammatical structures, and they divorced themselves from any philosophical approach to language study, ignoring traditional grammar's reliance on classical Greek and Roman philosophy. Indeed, the structuralists considered themselves scientists, and they considered their method of inquiry, linguistics, a science.

Along with the structuralist theory of grammar, there developed the finite-state, or Markovian, theory of grammar. Recognizing the recursive nature of language, finite-state theorists proposed a phrase-structure grammar, the rules of which were capable of producing an infinite set of sentences. The phrase structure rules, however, were incapable of producing all English sentences, for the grammar itself did not account for sentential embedding, as Chomsky later pointed out (Syntactic Structures 22+).

Recognizing that language universals do exist and admitting that language study must be highly philosophical in nature, Noam Chomsky diverged from the structuralist

school of linguistics, proposing the transformational-generative model of grammar. Certainly, Chomsky drew heavily upon his own structuralist background in constructing the transformational-generative model; he was especially indebted to phrase structure and immediate constituency grammars.

Chomsky predicated the transformational-generative theory upon the concept that language is an innate human ability. He recognized that studies on language acquisition had revealed that young children acquire language according to a very predictable pattern, regardless of the language being acquired. The transformational-generative theory does not, however, propose to replicate the neurological or psychological production of language; rather, the theory proposes to capture significant generalizations about the universal structure of human language as well as to describe the structure of specific languages. Consequently, in contrast to the structural approach, the transformational-generative approach relies heavily upon the intuitions of language users about their own language. Transformational-generative grammar, then, is not a model of speech production; instead, it is an attempt to explain the phenomenon that human beings are capable of generating and understanding an infinite set of utterances, i.e. sentences, utilizing a finite set of rules.

The transformational-generative theory has, of course, undergone numerous revisions since Chomsky first formulated the Standard Theory in his Syntactic Structures. Chomsky himself presented the Revised Standard Theory in his Aspects of the Theory of Syntax. Ray Jackendoff, in response to Chomsky's revisions, formulated the Extended Lexical Hypothesis, which will be discussed in chapter five of the present work. These and other modifications of the theory have differed primarily in the way they distinguish the five components of a transformational-generative grammar:

1. The phrase structure (base) component
2. The transformational component
3. The lexical component
4. The phonological component
5. The semantic component

The various formulations of the theory differ most notably in the way in which they relate the syntactic component, that is, the phrase structure and transformational components combined, to the semantic component and in the point at which they allow lexical insertion. It is unnecessary to explicate the differences among the various formulations of the transformational-generative theory within the scope of the present work. It is useful to the present work, however, to describe the five components of a transformational-generative grammar.

The phrase structure component of the grammar includes a set of basic rules which generate the deep structure sentences of a language. The rules are formulated as a set of rewrite rules which must be applied in a specific sequence. The rules take the following form:

1.10 $S \longrightarrow NP - Aux - VP$

This rule may be read as, "Sentence is rewritten, noun phrase, auxiliary, and verb phrase." Subsequent phrase structure rules rewrite NP, and then VP, in decreasing levels of generality.

The transformational component includes a set of rewrite rules which transform deep structures generated by the phrase structure component into surface structures. These rewrite rules utilize a double-bar arrow (\Longrightarrow) in their statements. Some transformations are obligatory, such as T-affix, which joins an inflectional ending to the appropriate lexical item or lexical category. Some transformations are optional, such as T-pass, which transforms an active deep structure into a passive surface structure:

1.11 John broke the window \Longrightarrow

1.12 The window was broken (by John).

One issue confronting transformationalists is whether or not transformations can change or affect meaning. Initially, Chomsky had said that they could not (Syntactic Structures 88-91), but he subsequently modified his position

to say that some transformations do change meaning (Aspects 143). Jackendoff, on the other hand, has insisted that transformations do not change meaning (Semantic Interpretation xi, 4-5). The position the linguist takes on this issue is, of course, a function of his position regarding the relationship between syntax and semantics.

The lexical component of the grammar includes those items which are inserted into a generated sentence. These lexical items correspond loosely to "words" but also include prefixes, suffixes, and infixes. Whether lexical insertion occurs after the phrase structure component or after the transformational component has been a matter of discussion among theorists. Generally, however, theorists have agreed that lexical insertion must take place prior to the transformational component, that is, after the phrase structure component (Jackendoff, "Regularities" 640-41), for some transformations seem to be governed by the semantic properties of lexical items. Furthermore, some transformations, such as T-affix, are directly related to lexical items (Wardhaugh 112-13), although, admittedly, the operation of T-affix could be interpreted as simply providing a placeholder for later lexical insertion.

The phonological component of the grammar consists of a set of rules applied to transformed sentences into which lexical items have been inserted. The result of the

application of phonological rules is a surface structure which is realized in vocal or written language. In addition to the realization of morphemes and the addition of affixed phonemes, this component includes the suprasegmental phonemes, such as pitch, juncture, and contour. Some theorists describe a graphemic component, which provides the rules for "translating" spoken surface structures into written structures (Gaeng 151-64). However, since writing is not a feature of all languages and since it is a highly artificial feature of those languages in which it does occur, that is, since writing is not a feature of natural language, it is not appropriate to include the graphemic component in a linguistic formulation of the theory of transformational grammar. Ultimately, the graphemic component is highly prescriptive; thus, it is also highly dependent upon the preferences of teachers, editors, publishers, printers, and others who deal primarily with written expression and publication.

The semantic component of the grammar is that component which accounts for the "meaning" of an utterance. It is, perhaps, the most complex component of the grammar; at least, it has presented theorists with more complex issues than have the other components of the grammar. While it is clear that syntax and semantics must be closely related in the grammar, it is the attempt to define or describe

the nature of that relationship which has been the biggest source of disagreement among linguists. As a matter of fact, it is precisely this issue which distinguishes the theory of case grammar from the Revised Standard Theory of transformational-generative grammar and from the Extended Lexical Hypothesis.

The operation of the phrase structure, or base, component of transformational-generative grammar can be illustrated by means of the sentences 1.13 and 1.14, to which transformational-generative grammar would assign separate deep structures:

1.13 The door opened.

1.14 John opened the door with a key.

For sentence 1.13, the phrase structure rules would apply as illustrated in figure 1. The corresponding tree diagram for the deep structure of sentence 1.13 is illustrated in figure 2. The only applicable transformation for sentence 1.13 is the obligatory T-affix, which transposes the past tense affix (-ed) and the verb:

	Af	+	v	\Longrightarrow	v	+	Af
T-affix:	-ed	+	open	\Longrightarrow	open	+	-ed

The tree diagram for sentence 1.14 appears in figure 3.

Sentences 1.13 and 1.14 are derived from distinct deep structures within transformational-generative grammar despite whatever semantic similarities there may be between

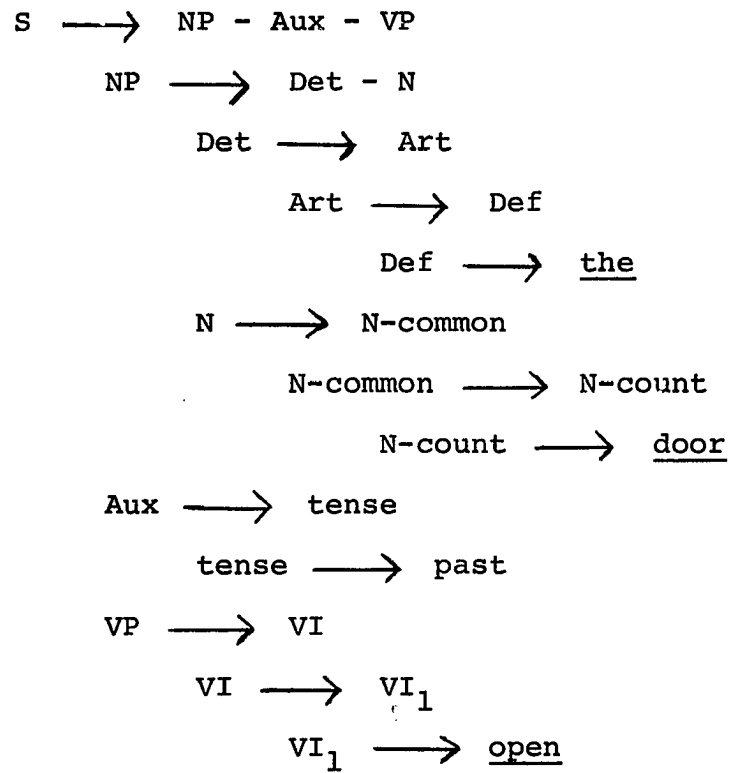


Fig. 1. Phrase structure rules as applied to sentence 1.13

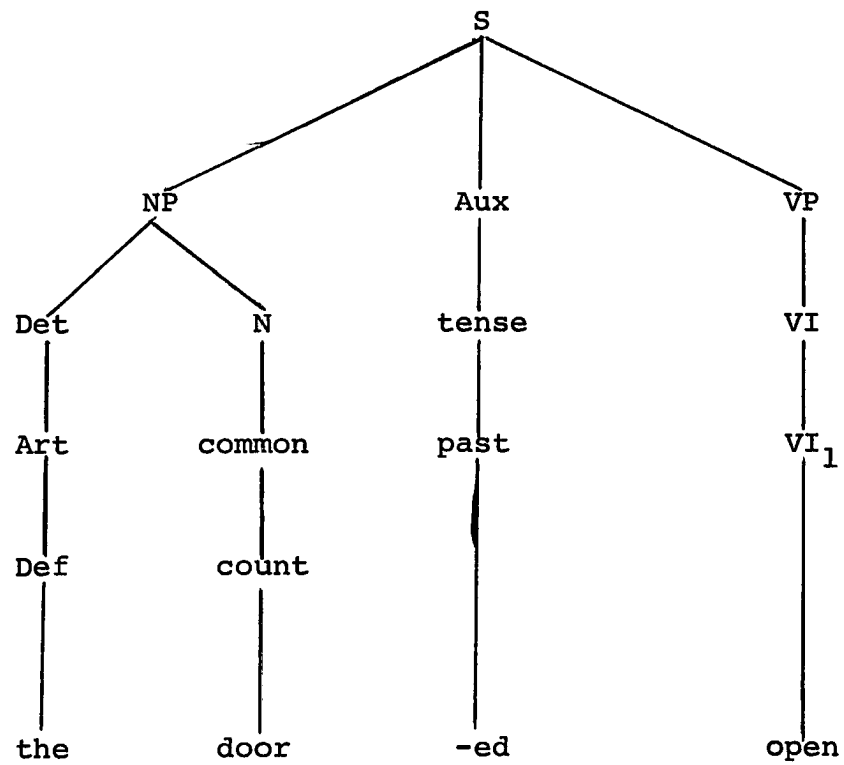
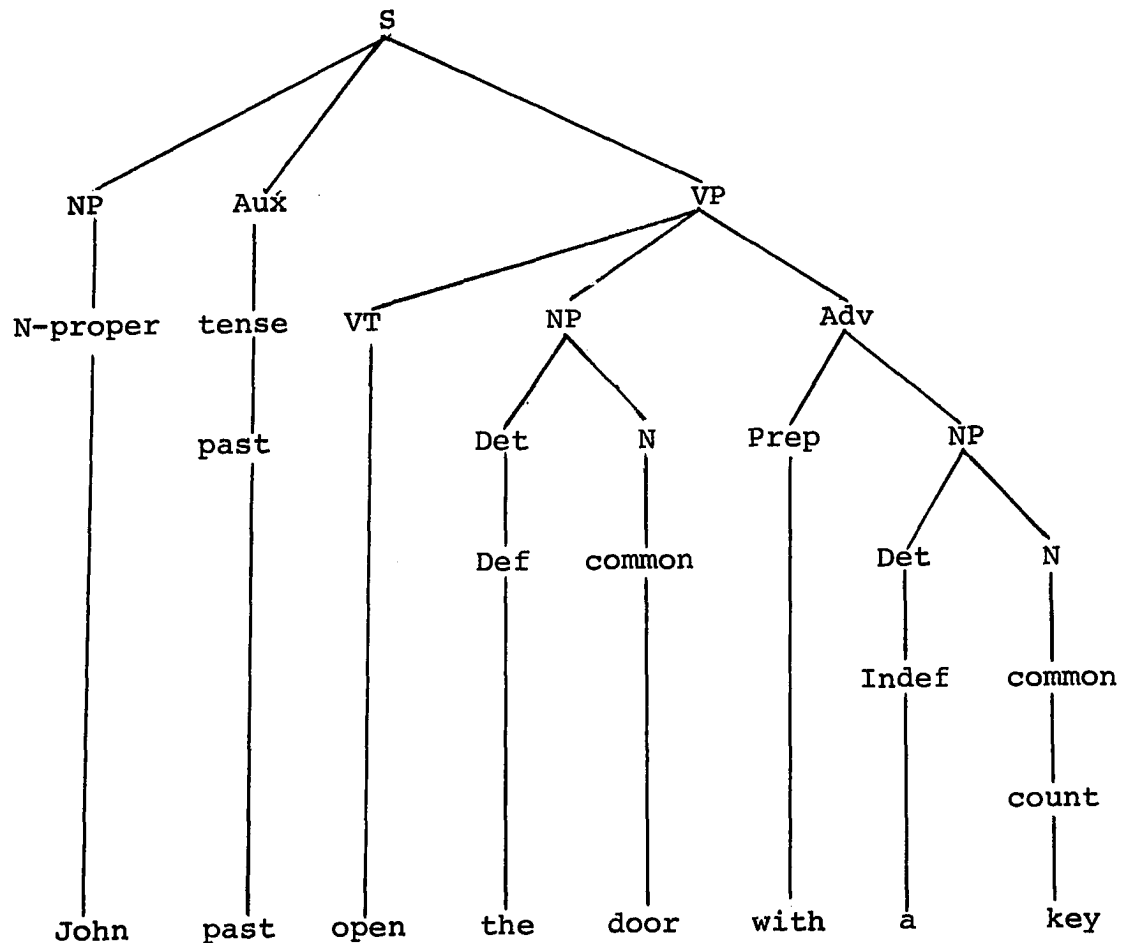


Fig. 2. Tree diagram for sentence 1.13



T-affix:

John opened the door with a key

Fig. 3. Tree diagram for sentence 1.14

the two surface structures. Furthermore, sentences 1.15-1.18 are derived from sentence 1.14 and bear no deep structure relationship to sentence 1.13.

1.15 The door was opened by John with a key.

1.16 The door was opened with a key.

1.17 The door was opened by John.

1.18 The door was opened.

In many ways, transformational-generative grammar is more similar to traditional grammar than appearances may at first reveal. For example, although the transformational-generative analyses of sentences 1.13 and 1.14 do not employ the traditional labels of subject, direct object, or object of a preposition in the deep structure, the ordering of noun phrases in the deep structure assumes that these syntactic categories are central to deep structure analysis. Even the categorization of verbs in the phrase structure rules as VT and VI (transitive and intransitive) assumes the centrality of these surface structure phenomena to deep structure analysis. If these phenomena were not seen as essential to deep structure analysis in transformational-generative grammar, surely they would be dealt with in the semantic component of the grammar, perhaps as semantic constraints governing lexical insertion. It is, of course, no small matter that even the traditional terminology, transitive and intransitive, has been retained.

Transformationalists, of course, differ among themselves about the nature of the phrase structure rules and about the operation of transformations, but, generally, there is widespread agreement about these components of the grammar. There is, however, a diversity of opinions about the semantic component of the grammar, and this diversity occasionally manifests itself within the literature dealing with these syntactic components. Specifically, there is disagreement about the interrelatedness of syntax and semantics. In general, however, transformationalists explain that meaning can be analyzed by semantic projection rules (Fodor, Semantics 64); they disagree, however, about whether these projection rules operate in conjunction with deep structures, in conjunction with surface structures, or, in some cases, in conjunction with intermediate structures. They also differ about whether the projection rules are cumulative or whether they operate only with the semantic data retained in the previous node of a tree diagram (Fodor, Semantics 107+).

F. R. Palmer has noted that semantic study must address issues both of word meaning and of sentence meaning:

The problem of semantics is not, . . . nor can it be, the search for an elusive entity called "meaning." It is rather an attempt to understand how it is that words and sentences can

"mean" at all, or better perhaps, how they can be meaningful. (29)

Nonetheless, Janet Dean Fodor, typical of transformationalists, insists there is a significant distinction between the semantics of the sentence and those of the word:

. . . since there is no principled limit to the number of sentences in a natural language, the mechanisms that effect the form-meaning correlation must be quite general and capable of pairing form and meaning for an infinite range of sentences. . . . Like the assignment of syntactic structures to sentences, the assignment of meanings to sentences cannot be effected by a mere list. For even if a list were illuminating, which it is not, it could never be complete. (3)

Transformationalists, of course, contend that the study of semantics must be sentence-based; this is a major distinction between transformational-generative grammar and structural grammar. Transformationalists, however, further contend that a grammar should be syntax-based; they hold that the grammar should be able to generate sentences which are syntactically well-formed even if they are not semantically meaningful. Semantic projection rules and related filtering devices in the grammar will, normally, prevent

the generation of meaningless utterances. This process explains why Chomsky's example, Colorless green ideas sleep furiously, seems grammatical and why an utterance such as Colorless furiously green sleep ideas does not seem grammatical.

One question which transformationalists have not asked, however, is where the greatest deviation actually occurs in language use. A related question is whether speakers of the language are more likely to employ and understand utterances which are syntactically well-formed but semantically meaningless, or whether they are more likely to employ and understand utterances which are syntactically ill-formed but semantically meaningful. In informal interviews conducted by this writer, native speakers of American English were able to understand, i.e. assign meaning to, sentence 1.20 but not to sentence 1.19:

1.19 Colorless green ideas sleep furiously.

1.20 John the door with a key opened.

Transformationalists might explain that sentence 1.20 is the result of stylistic transformations having been applied to sentence 1.14, John opened the door with a key. However, it can also be explained that sentence 1.20 is the result of a deep structure in the case grammar model to which ordering transformations have not been applied, for, as it will be demonstrated in chapters three and four

of the present work, noun phrases are unordered in the deep structure within the case grammar model.

Even in literary works, there is a greater variation in syntax than there is in semantics, where syntactic manipulation is supported by conventions of the print media. It is, in part, because this writer perceives greater syntactic variation in the language, especially in normal use of the language by native speakers, than he perceives semantic variation that he holds that the semantic component of the grammar must be inseparable from the deep structure. Likewise, because gross variation in syntax will render an utterance meaningless, despite whatever semantic relationships may occur in deep structure, this writer also contends that, at the deep structure level, syntax and semantics are themselves inseparable. As it will be demonstrated in subsequent chapters, the theory of case grammar is capable of reflecting the inseparability of syntax and semantics at the deep structure level.

Chapter II

The Beginnings of a Theory:

Fillmore's "Case for Case"

In assuming the centrality of syntax in grammatical theory, transformational-generative grammarians have, perhaps unintentionally, assumed a direct relationship between deep syntactic structure and surface structure. The ordering of deep structure noun phrases in Chomsky's grammar of English, for example, corresponds with the surface order of noun phrases in English sentences. There is little difference between the transformational-generative expression in 2.1 and the traditional notation in 2.2.

2.1 NP - Aux - V - NP

2.2 S - V - DO

Langendoen has noted:

One serious difficulty with the linguistic theory of Aspects is that the semantic component is obliged to work with the traditional grammatical notions--subject, direct and indirect object, oblique object, and so forth--whereas the semantic relationship of a predicate to the nominal expressions that go with it is largely independent of these grammatical notions. (61-62)

McCawley has observed:

There is an uncomfortable similarity between the way that semantics has generally been treated in transformational grammar and the way that syntax was treated in the "phonological grammar" of Trager and Smith. In either case the subject is a nebulous area which cannot be dealt with on its own ground but is accessible only through the more manageable field of syntax or phonology. . . . Both phonology and syntax have progressed immeasurably as a result of the realization by linguists that phonology and syntax are two interrelated areas, each of which leads its own kind of existence and neither of which can be defined in terms of the other with a minus sign in front of it. . . . The corresponding realization regarding the roles of syntax and semantics may have an equally great effect on the progress of both of these areas of linguistics. ("Role of Semantics" 125)

McCawley has further noted:

. . . there is no natural breaking point between a "syntactic component" and a "semantic component" of a grammar such as the level of "deep structure" was envisioned to be in Chomsky (1965) and . . .

setting up a level of "deep structure" makes it impossible to treat as unitary processes certain phenomena which in fact are unitary processes.

("Noun Phrases" 171-72)

Similarly, Lees comments:

. . . what we have been calling "deep structure" may well actually be some intermediate level of representation, in fact perhaps not even a definable level of linguistic structure at all. . . . Secondly, there is a strong implication that the deepest syntactic level of representation which functions in a linguistic description is so close to what we might call the meaning of a sentence that there may be no validity to maintaining a distinction between these. (138)

Thus, the nature of deep structure in transformational-generative grammar has been challenged not only by those who would replace the representation of deep syntactic structure with a representation of deep semantic structure but even by those who would maintain the deep syntactic structure or consolidate, to the extent possible, deep syntactic structure and deep semantic structure. Charles Fillmore, in his introduction of the theory of case grammar, has proposed a formal means of representing a semantic-based deep syntactic structure in the grammar.

Fillmore, in his landmark publication introducing the theory of case grammar, "The Case for Case," notes that Chomsky's proposal of a universal grammar in the form of transformational-generative grammar assumes that "the universal base specifies the needed syntactic relations but [that] the assignment of sequential order to the constituents of base structures is language specific" (1). This assumption and two other assumptions which are inherent in the transformational-generative model are essential to the case grammar theory. The other two assumptions which are shared by the theories include "the centrality of syntax" and "the importance of covert categories" (Fillmore, "Case" 3). Concerning the importance of covert categories in grammatical theory, Fillmore writes:

Many recent and not-so-recent studies have convinced us of the relevance of grammatical properties lacking obvious "morphemic" realizations but having a reality that can be observed on the basis of selectional constraints and transformational possibilities. We are constantly finding that grammatical features found in one language show up in some form or other in other languages as well, if we have the subtlety it takes to discover covert categories.

("Case" 3)

Fillmore, then, suggests the following features of case relationships:

1. "there are many semantically relevant syntactic relationships involving nouns and the structures that contain them,"
2. "these relationships . . . are in large part covert but are nevertheless empirically discoverable,"
3. "they form a specific finite set," and
4. "observations made about them will turn out to have considerable cross-linguistic validity" ("Case 5).

The case theory, like the transformational theory, is a generative theory of grammar which admits the centrality of syntax and which postulates a finite set of innate language universals. Case grammar, however, specifies the syntactic deep structure as illustrated in 2.3.

2.3. Sentence \longrightarrow Modality + Proposition

Fillmore describes the modality component of the deep structure as including such sentence modifiers as negation, tense, mood, and aspect. The proposition is described as a verb accompanied by a number of nominals and/or embedded sentences related to the verb by means of semantically specified deep cases, which are in no way related to the traditional notions of such surface case forms as nominative and accusative. Each of the deep cases is capable of filling a number of different surface positions, such as subject,

direct object, and adverbial. Deep cases are moved into surface structure positions by means of transformations which can be constrained either by general rules of the grammar or by the semantically specified case frame of the verb in the proposition.

In the deep structure, each case is represented as a case marker (K) and a noun phrase (NP). In English, case markers typically appear on the surface as prepositions, except for specific cases which may have a null case marker (\emptyset), or case markers may be deleted in the process of applying the subject-raising transformation. Table 2 illustrates the six cases which Fillmore identifies in his original work and the prepositions which correspond to the deep structure case markers ("Case" 24-25, 32). Fillmore notes, "Specific verbs may have associated with them certain requirements for preposition choice that are exceptions to the . . . generalization [illustrated in table 2]" ("Case" 33).

The tree diagram which Fillmore provides for sentence 1.13, The door opened, is given in figure 4 ("Case" 33). Fillmore notes, "Since the sentence contains only one case category, it is obligatorily moved to the front," yielding the structure illustrated in figure 5. With the application of the subject-preposition deletion rule, both the preposition and the case marker are deleted, yielding the structure

Table 2

Deep Cases and Their Surface Prepositions as Described in
Fillmore's "Case for Case"

Case and Symbol	Definition	Preposition(s)
Agentive (A)	The case of the typically animate perceived instigator of the action identified by the verb.	<u>by</u>
Instrumental (I)	The case of the inanimate force or object causally involved in the action or state identified by the verb.	<u>by</u> (if there is no A) <u>with</u>
Dative (D)	The case of the animate being affected by the state or action identified by the verb.	<u>to</u>
Factitive (F)	The case of the object or being resulting from the action or state identified by the verb, or understood as part of the meaning of the verb.	∅
Locative (L)	The case which identifies the location or spatial orientation of the state or action identified by the verb.	either semantically nonempty or selected by the asso- ciated noun
Objective (O)	The semantically most neutral case, the case of anything representable by a noun whose role in the action or state identified by the verb is identified by the semantic interpretation of the verb itself; conceivably the concept should be limited to things which are affected by the action or state identified by the verb.	∅

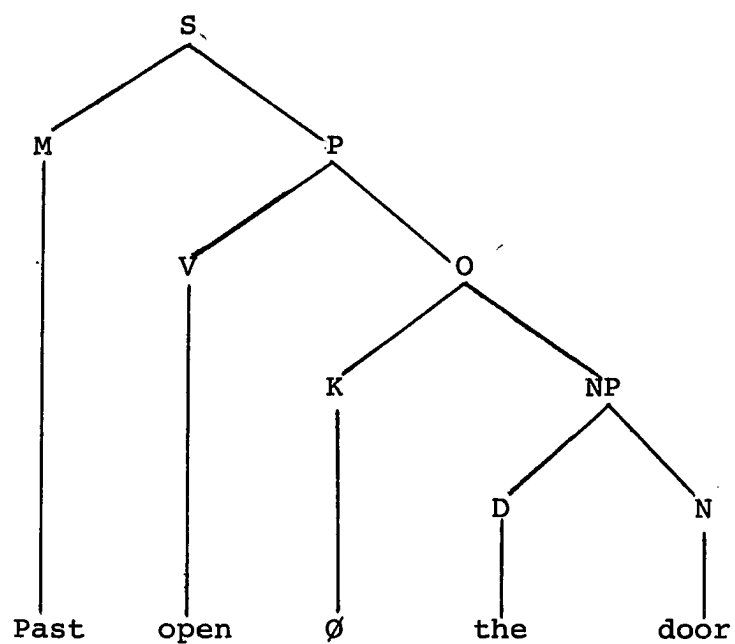


Fig. 4. A case grammar tree diagram for sentence 1.13

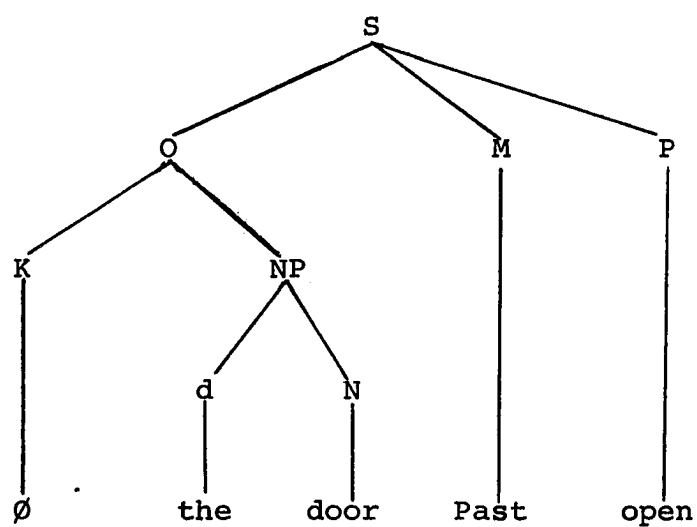


Fig. 5. Subject raising

illustrated in figure 6. Finally, conjoining tense and verb yields the surface structure illustrated in figure 7.

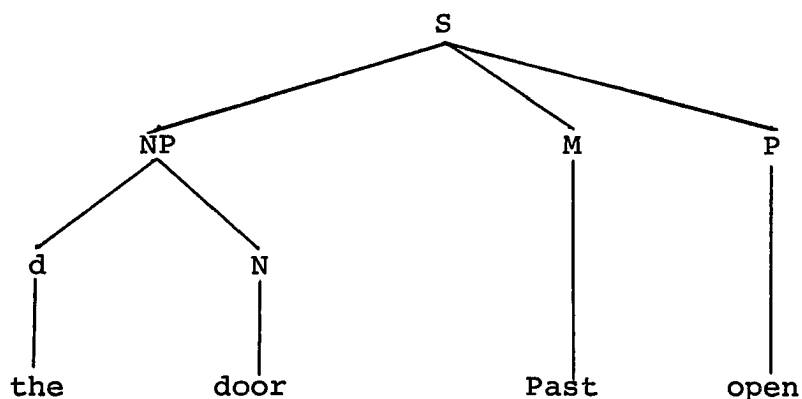


Fig. 6. Subject-preposition and case marker deletion

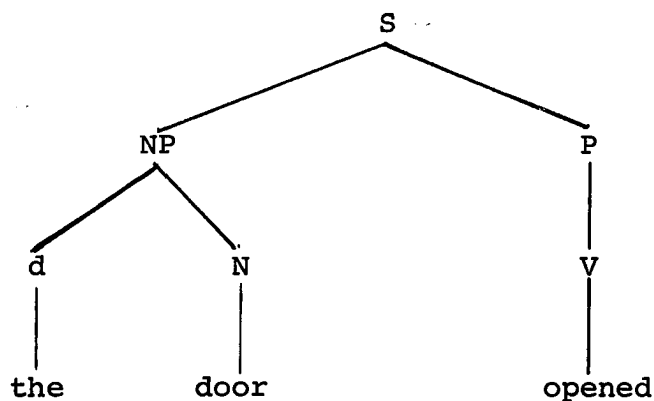


Fig. 7. Surface structure

Subject-raising in a sentence which contains only one case category, as in sentence 1.13, is, of course, uncomplicated. A similar sentence which contains the agentive, instrumental, and objective case categories,

however, illustrates the constraints on subject-raising, as demonstrated in figure 8 and the subsequent discussion.

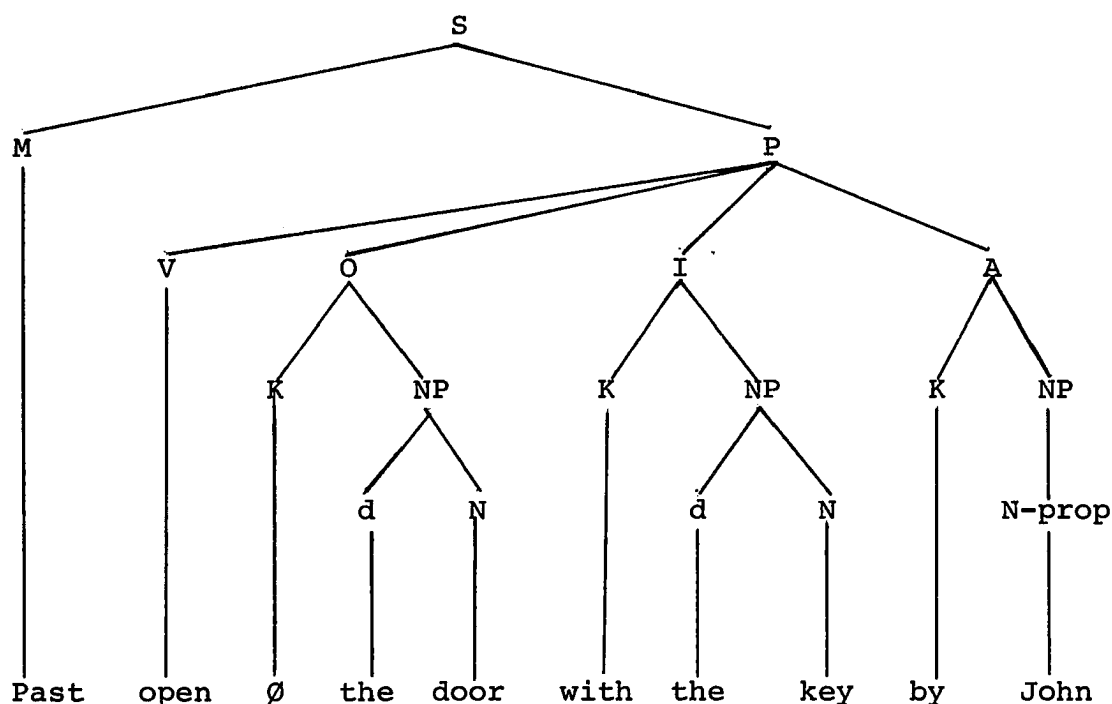


Fig. 8. Tree diagram for a sentence with multiple deep case categories

Observing regularity in the normal choice of surface subject when the deep structure contains multiple case categories, Fillmore constructs the following rule: "If there is an A, it becomes the subject; otherwise, if there is an I, it becomes subject; otherwise, the subject is the O" ("Case" 33). Thus, for the deep structure illustrated in figure 8,

raising A to the subject position and applying the subject-preposition and case marker deletion rule yields surface structure 2.4.

2.4 John opened the door with the key.

However, exercising the option to raise O to subject position and applying the subject-preposition and case marker deletion rule yields surface structure 2.5 or 2.6, which the Revised Standard Theory of transformational-generative grammar generates by means of T-pass.

2.5 The door (was) opened with the key by John.

2.6 The door (was) opened by John with the key.

Concerning the choice of O as surface subject when A is present in the deep structure, Fillmore notes:

This "registering" of a "nonnormal" subject takes place via the association of the feature [+passive] with the V. This feature has three effects: the V loses its object-preposition deletion property, it loses its ability to absorb the tense (requiring the automatic insertion of a be in the M constituent), and it must now be filled by a special "passive" form [i.e. the past participle]. ("Case" 37)

Constraints on subject-raising must, however, specify that when both A and I are present, I may not be raised to

subject position. Thus, surface structure 2.7 is not generated (shown by *).

*2.7 The key opened the door by John.

When only I and O are present, however, either I or O may be raised to subject position, generating either surface structure 2.8 or 2.9.

2.8 The door opened with the key.

2.9 The key opened the door.

Similarly, only like cases may be conjoined as subjects; thus, surface structure 2.10 is not generated.

*2.10 John and the key opened the door.

Langendoen has specified the following constraints on subject-raising:

- (a) If an agent is expressed . . . , it must become the subject.
- (b) If an agent is not expressed, and an instrument is, instrument must become the subject.
- (c) If neither agent nor instrument is expressed, then patient/location must become the subject.
- (d) If instrument is not the subject, it becomes an oblique object introduced by the preposition with.
- (e) If patient/location is not the subject, it becomes the direct object.

- (f) If a set of two patients is chosen, one of these becomes the subject and the other the direct object (or, as in the case of collide, the other patient becomes an oblique object introduced by the preposition with).
- (g) If a set of two or more patients is expressed, they may all become the subject, being connected by a coordinate conjunction and; or a plural nominal expression may be used. (70)

Langendoen illustrates rules (f) and (g) by means of the verb collide. He notes the grammaticality of sentence 2.11 and the ungrammaticality of 2.12. He also notes the acceptability of 2.13, 2.14, and 2.15:

- 2.11 The trains collided.
- *2.12 The train collided.
- 2.13 The car, the bus, and the truck collided.
- 2.14 The car and the bus collided with the truck.
- 2.15 The car collided with the bus and the truck. (71)

In addition to constraint rules on subject-raising, the theory of case grammar requires an alteration in the lexical entry of verbs to indicate which case categories a specific verb requires and which case categories it will tolerate. From the examples cited earlier for the verb open, for

example, it is clear that open requires O but also tolerates A and I. Fillmore observes:

In lexical entries for verbs, abbreviated statements called "frame features" will indicate the set of case frames into which the given verbs may be inserted. These frame features have the effect of imposing a classification of the verbs in the language. Such a classification is complex not only because of the variety of case environments possible within P, but also because many verbs are capable of occurring in more than one distinct case environment. This last fact can be represented most directly by allowing facultative representation of cases in the frame-feature expressions. ("Case" 27)

To illustrate frame-feature expressions, Fillmore suggests the use of a bracketed expression with optional case categories stated in parentheses. Thus, the following statement for the frame-feature of the verb open shows that the verb open must be accompanied by the Objective case and may be accompanied by either the Agentive case or the Instrumental case or both in addition to the Objective case.

2.16 +[____ O (I) (A)]

He further suggests the use of linked parentheses to indicate that at least one of the parenthetical elements must

be chosen. The frame feature for the verb kill illustrates that the verb kill must be accompanied by the Dative case and must also be accompanied either by the Instrumental case or the Agentive case or both ("Case" 28).

2.17 +[____ D (I\A)]

Surface structures 2.18 through 2.22 demonstrate the various case features illustrated by the frame-feature expression for the verb kill as expressed in 2.17.

2.18 [____ D + I] John was killed with a knife.

2.19 [____ D + A] John was killed by Tom.

2.20 [____ D + A] Tom killed John.

2.21 [____ D + I + A] John was killed by Tom with
a knife.

2.22 [____ D + I + A] Tom killed John with a knife.

Fillmore notes that while the use of frame-feature expressions and other characteristics of the case grammar theory may change the nature of the lexicon, the case theory will, nonetheless, simplify the semantic power of the lexicon:

The use of parentheses in expressing the frame features, together with the transformational introduction of subjects, makes it possible to reduce the number of semantic descriptions in the lexicon. The semantic interpretation of a P will introduce all information provided by

specific case relationships represented in the P, allowing such information to be omitted from the semantic descriptions of verbs. ("Case" 29)

He observes, for example, the relationship between case-feature expression and the transitive/intransitive nature of English sentences:

If we ignore whatever complications may exist in "passive" constructions, and if we ignore all deep-structure cases except A and O, we can imagine sentences of the following three types given in the underlying propositional form:

- (a) V + A intransitive sentences with
 active "subjects"
- (b) V + O + A transitive sentences with
 Agents
- (c) V + O intransitive sentences with
 inactive "subjects."

("Case" 52)

In his publication introducing the theory of case grammar, "The Case for Case," Fillmore notes a variety of issues which must be addressed in the development of the theory. These issues, he points out, fall into two categories: those which are empirical in nature and those which are formal in nature. The empirical issues include the relationship between deep cases and surface constructions,

the occurrence of definiteness and its relation to deep case, and the deep structure relationship of varied surface constructions with apparently the same meaning ("Case" 86). At the heart of the formal issues which must be addressed is whether or not case grammar should employ a set of phrase structure rules for generating deep cases in the Proposition ("Case" 86-87).

As it will be demonstrated in the following chapter, some of these issues have been addressed by Fillmore and other case grammarians in the development of the theory. However, as it will be demonstrated in chapter four of the present work, some of these issues remain unaddressed.

Concerning the role of case grammar in the development of universal linguistic theory, Fillmore concludes "The Case for Case" with the following observation:

If it is possible to discover a semantically justified universal syntactic theory along the lines I have been suggesting, if it is possible by rules (beginning, perhaps, with those which assign sequential order to the underlying order-free representations) to make these "semantic deep structures" into the surface forms of sentences, then it is likely that the syntactic deep structure of the type that has been made familiar from the work of Chomsky and his

students is going to go the way of the phoneme. It is an artificial intermediate level between the empirically discoverable "semantic deep structure" and the observationally accessible surface structure, a level the properties of which have more to do with the methodological commitments of grammarians than with the nature of human languages. (88)

Chapter III

The Growth of a Theory: "Toward a Modern Theory of Case"

Following Fillmore's publication of "The Case for Case," the theory of case grammar has, surprisingly, received relatively little attention in the literature. The professional literature is scarce and frequently unindexed. Textbooks intended for use in undergraduate and graduate courses both in general linguistics and in transformational-generative linguistics generally include only a passing reference to the theory or, at most, a portion of a chapter which discusses the deep structure or the semantic component of the grammar. (See, for example, Southworth and Daswani 221-22; Wardhaugh 150-52; Liles, Linguistics 38-51; and Broderick 208-16.) However, textbook references are, frequently, the most useful references since they are usually the only sources which attempt to synthesize the available professional literature.

The professional literature that is available generally falls into three categories: (1) the occurrence and operation of specific cases, (2) the semantic specification of case categories, and (3) the operation and classification

of verbs within the theory. The bulk of literature falls into the first category, although, to this writer at least, the second and third categories seem to be the most significant aspects in the development of the theory. Indeed, an adequate description of the occurrence and operation of specific cases is contingent upon a thorough understanding of the semantic specification of case categories, while the operation and classification of verbs within the theory emanates from an understanding of the occurrence and operation of specific case categories.

Occurrence and Operation of Specific Cases

The primary focus of the literature has been to redefine, consolidate, or eliminate specific case categories presented in Fillmore's "Case for Case" and in the subsequent literature, as well as to propose additional case categories. Of the six case categories presented in Fillmore's original work, only two, the Agentive and the Instrumental cases, remain relatively intact; a third, the Locative case, persists in the literature but has adopted a much narrower perspective. The Objective case, the most unsatisfactorily defined of Fillmore's original cases, appears in the literature immediately following "The Case for Case" and in most textbook discussions of case grammar, but subsequent professional literature has eliminated the

Objective case, at least in terminology. The following is a discussion of specific case categories referenced in the literature.

Agent. Almost without alteration, Fillmore's original definition of the Agentive case persists in the literature: "the case of the typically animate perceived instigator of the action identified by the verb" ("Case" 24). Liles adds, "An agent . . . performs an action by means of its own energy" (Introduction 147). He further notes, "Agents are not associated with non-action verbs such as resemble, appear, know, and the like" (147). As reiterated by Langendoen, the English preposition which serves as the case marker (K) for the Agentive case is almost always by (86). In sentence 3.1, John is the Agent.

3.1 John closed the door.

Instrument. Fillmore defines the Instrumental case as "the case of the inanimate force or object causally involved in the action or state identified by the verb" ("Case" 24). Huddleston, however, has challenged Fillmore's definition as being too inclusive. He notes the following sentences:

3.2 The key opened the door.

3.3 The wind opened the door (503).

Huddleston points out that, according to Fillmore's definition, both key and wind are Instruments. He notes, however, that sentence 3.2 "presupposes some unexpressed Agentive

participant, whereas [sentence 3.3] does not" (8). He proposes a definition of Instrument which presupposes an Agent in the deep structure and introduces an additional case, Force. Huddleston, then, suggests that Instrument be defined as "the case of the inanimate . . . object causally involved in the action or state identified by the verb" and that Force be defined as "the inanimate force . . . causally involved in the action or state identified by the verb" (8).

Fillmore, however, persists in his basic definition of Instrument, despite Huddleston's challenge, clarifying his definition of Instrument as "the stimulus or immediate physical cause of an event" ("Types" 116). Liles points out that parts of the body frequently appear as Instruments in English sentences such as 3.4 (Introduction 148). Fillmore also notes that animate beings may appear as Instruments in sentences such as 3.5:

3.4 Vera scratched her back with her fingernails.

3.5 I rapped him on the head with a snake
("Case" 24n).

Fillmore points out, however, that the underlying structure of sentence 3.5 undoubtedly includes an Instrumental structure such as the one in 3.6.

3.6 I rapped him on the head with the body of a snake.
Fillmore has pointed out ("Case" 32), and Langendoen has reiterated (86), that the prepositions with and by typically

appear as the surface case markers for Instruments in English sentences, with Fillmore adding that by appears only if no Agent is present.

Dative. Fillmore originally defines the Dative case as "the case of the animate being affected by the state or action identified by the verb" ("Case" 24). In the literature following "The Case for Case," however, the Dative case has been eliminated; some of the functions which Fillmore assigned in this case have subsequently been described as functions of the Patient case, while others have been described as functions of the Experiencer case.

Patient. The Patient case has been defined by Liles as "the one directly affected by the action" (Introduction 148). In the sentences which Liles uses to illustrate Patient, all nouns in the Patient case are inanimate. In this sense, Patient is, in some ways, similar to Fillmore's original Objective case, which he had said "should be limited to things which are affected by the action or state identified by the verb" ("Case" 25). Liles notes that the case marker for English surface structures which contain Patient is the null set, \emptyset (Linguistics 39). Fillmore had noted the same for the Objective case ("Case" 32). Fillmore cites sentence 3.7 as an example of a sentence containing a noun phrase in the Objective case, with the door being that noun phrase ("Case" 27). Liles cites sentence 3.8 as an

example of a sentence containing a noun phrase in the Patient case, with the mirror being that noun phrase (Linguistics 38).

3.7 John opened the door with a chisel.

3.8 Bill cracked the mirror with a hammer.

Experiencer. Fillmore added the Experiencer case to his original list of cases, defining it as "the entity which receives or accepts or experiences or undergoes the effect of an action" and adding parenthetically, "earlier called by me 'Dative'" ("Types" 116). His definition of Experiencer would seem to include Liles' Patient. Liles, however, also includes an Experiencer, noting that the Experiencer is "most frequently associated with nonaction verbs" (Introduction 148). The examples which Liles uses to illustrate Experiencer are all +[human]. Since Fillmore notes that he uses Experiencer to replace Dative and since Fillmore's earlier Dative had been marked +[animate], it becomes clear that, both according to Fillmore and according to Liles, Experiencer must be marked +[animate].

Liles notes that a "main concern is the distinction between agent and experiencer" (Introduction 148). He illustrates the distinction by means of the following pair of sentences:

3.9 We saw the wild duck.

3.10 We watched the wild duck.

In 3.9, we is an Experiencer while in 3.10 we is an agent.

From illustrations provided by Liles and from Fillmore's definition, it is apparent that the preposition manifested on the surface as the case marker for Experiencer is the null set (\emptyset), despite the fact that Fillmore had earlier indicated the prepositional case marker for Dative to be to. The similarity between Patient and Experiencer, the main difference being in markedness $\frac{+}{-}$ [animate], also warrants the conclusion that the prepositional case marker for Experiencer is \emptyset .

Factitive. In "The Case for Case," Fillmore defines the Factitive as "the case of the object or being resulting from the action or state identified by the verb or understood as part of the meaning of the verb" (25). He illustrates the Factitive case by means of the noun dream in sentence 3.11 below:

3.11 John had a dream about Mary ("Case" 85).

Later, Fillmore replaces the Factitive case with Result, which he defines similarly as "the entity that comes into existence as a result of the action" ("Types" 116).

Locative. Originally defined by Fillmore as "the case which identifies the location or spatial orientation of the state or action identified by the verb" ("Case" 25), this case persists in the literature and is frequently called simply Location. It is marked by such prepositions as in, at, on, near, and others which indicate static location.

Related to the Locative is Movement, which is marked by prepositions such as into, onto, to, and others which indicate movement toward an object or space. Also related are the cases Source and Goal.

Objective. In "The Case for Case," Fillmore defines the Objective case as "the case of anything representable by a noun whose role in the action or state identified by the verb is identified by the semantic interpretation of the verb itself" (25). Admittedly vague in his definition, Fillmore refers to the Objective case as "the semantically most neutral case" (25). The Objective case has been subsumed in part by the Patient case. However, Fillmore has added an Object, which he defines as "the entity that moves or changes or whose position or existence is in consideration" (Types" 116). He illustrates the Object case by means of the noun smoke in sentence 3.12:

3.12 The smoke rose.

Fillmore's Object case is referred to by some as an Ergative case (Anderson, "Case for Cause" 99 and "Ergative and Nominative" 9, 12).

Cause. The case Cause appears occasionally in the literature but not uniformly. It is frequently contrasted with Instrument. Huddleston, as it was noted earlier, distinguishes between Instrument and Force as in the sentences 3.13 and 3.14:

3.13 The key opened the door.

3.14 The wind opened the door.

He describes key in sentence 3.13 as Instrument since it implies an Agent, and he describes wind in sentence 3.14 as Force since it does not imply an Agent. Babcock, however, distinguishes between Instrument and Cause as illustrated in sentences 3.15 and 3.16:

3.15 The hammer broke the window.

3.16 Frustration made John do that [break the window]
(31).

Babcock describes hammer as Instrument, observing, like Huddleston, that Instrument implies Agent. Babcock, then, describes frustration as Cause, explaining that "Cause phrases are INDEPENDENT [sic] sources of activity" (31).

Counter-Agent. This case is described in one publication by Fillmore as "the force or resistance against which the action is carried out" ("Types" 116). It does not, however, appear anywhere else in the literature, and Fillmore fails to illustrate this case in the publication in which he does define it.

Comitative. The Comitative case is the case of an NP coordinately conjoined with another NP and bearing the "same redundant features that are associated with the dominating non-C case" (Fillmore, "Case" 82). Fillmore notes that a true deep structure Comitative involves a

superordinate structure in which NP \longrightarrow NP + C, as in figure 9 ("Case" 82).

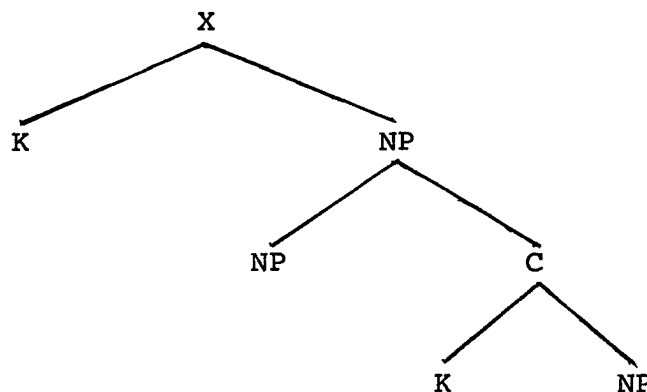


Fig. 9. The Comitative case

Fillmore adds, "The case category C has a very special status, since the selectional constraints on nouns under C are those of the superordinate NP" ("Case" 82). He illustrates the Comitative case by means of sentences 3.17 and 3.18, which, he says, share the same deep structure:

3.17 He and his wife are coming.

3.18 He is coming with his wife ("Case" 192).

Figure 10 illustrates the deep structure shared by 3.17 and 3.18. A subject-raising constraint specifies that the dominating NP of the Agent case may be raised to subject but that the Comitative cannot be raised to subject position without the dominating NP.

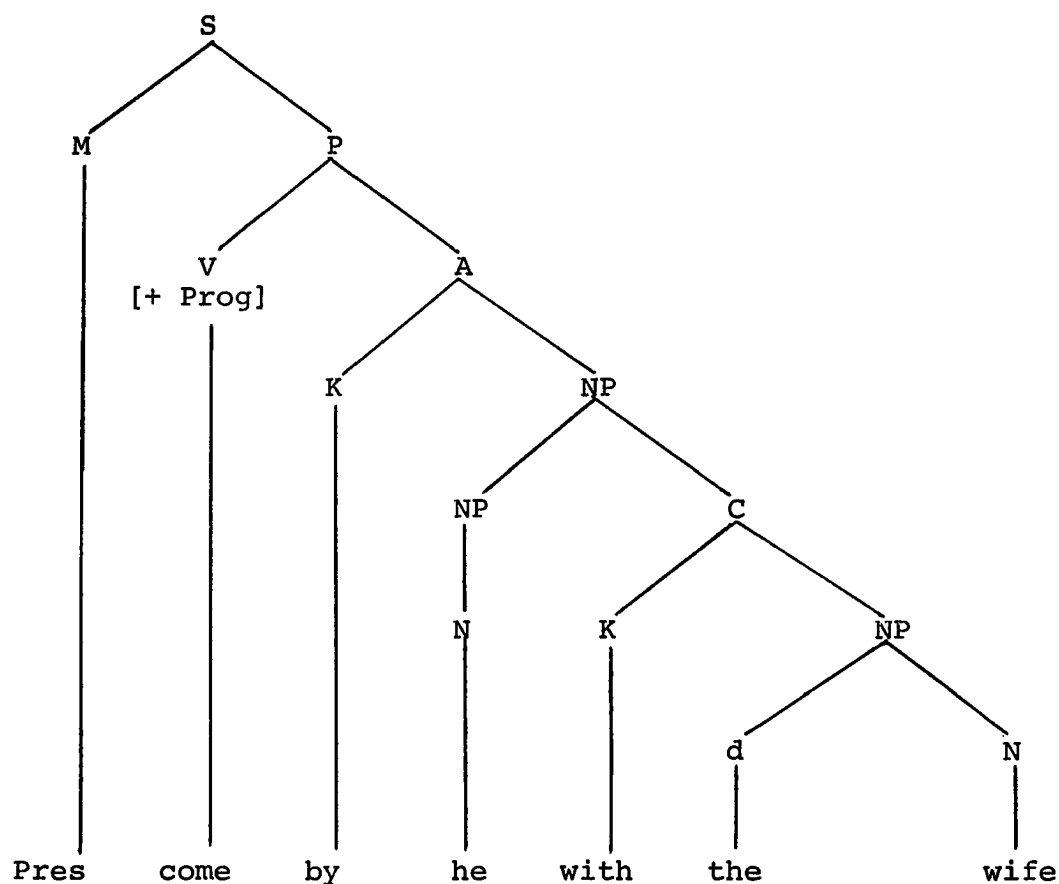


Fig. 10. Tree diagram for deep structure of sentences 3.17 and 3.18

Teng Shou-hsin derives the Comitative from phrasal conjunction (336), and Walmsey contends that Comitative is, in some instances, actually Instrumental and, in other instances, a result of topicalization (506). Buckingham, however, agrees with Fillmore that Comitative is a deep structure case (116).

Semantic Specification of Case Categories

As noted earlier, the bulk of the literature in the field of case grammar deals with the enumeration and description of deep cases. The descriptions of these cases vary from writer to writer, and there is little consistency in the manner in which the cases are defined. In many instances, there is even redundancy between cases, as was pointed out, for example, for the Patient and Experiencer cases. The most pressing task facing case grammarians, then, is the uniform specification of the universal deep cases. This matter is particularly important, for as a generative theory, case grammar assumes that the set of deep cases is finite, universal, and innate (Fillmore, "Case" 5, 24, and "Some Problems" 37). Wunderlich has noted:

. . . the cases posited by Fillmore (1968, 1971), insofar as they are taken as substantive universals, are semantically motivated by reference to the fact that certain further differentiations in the description of activities, processes or circumstances are needed. The set of possible cases will not of course be utilized by all languages in the same way; but this is also true, analogously, for the set of possible phonological features. (96)

A great deal has been written about specific deep cases within the theory, but few attempts have been made at outlining a principled system for specifying deep cases in general. Fillmore himself has, as noted earlier, defined the Objective case in various ways. In addition to the definition first given in "The Case for Case," he has also defined the Objective case as (1) a deep case which can serve as "the subject of an intransitive verb and the object of a transitive verb" ("Toward a Modern Theory" 363-64) and as (2) "the entity that moves or changes or whose position or existence is in consideration" ("Types" 116). Such modification is, of course, to be expected within any developing theory. However, the inconsistency in the terms which Fillmore and others have used for defining specific deep cases has plagued the theory from the start. Indeed, Fillmore himself has criticized "the configurational definitions of subjects and predicates" in the transformational theory ("Subjects" 251). Yet, many of the definitions set forth for specific deep cases have been as unsatisfactory as the configurational definitions which Fillmore criticizes. The precise problem is that most case grammarians have attempted to define rather than to semantically specify deep cases. Robinson, for example, has noted:

. . . it has been tacitly assumed that somehow we know how many different kinds of case features

there are and which prepositions are selected for each. This is not so. All that we can assume [at present] is that a solution of the formal problem . . . may lead us to ask reasonable questions for which answers can be expected. (79)

Two notable attempts to semantically specify deep cases rather than to define them are found in the writings of Don Lee Fred Nilsen and Thomas H. Peterson. Peterson remarks:

. . . rather than define the cases monolithically in the traditional fashion [of Fillmore and others], we choose to describe them as bundles of features in the manner of sound segments in phonological theory. This proves a convenient method because it allows interesting generalization about the relationship of deep case to lexical verbs and prepositions. . . . But this method seems fitting on an intuitive level as well, since often semantically distinct cases share common attributes; for example, Agent and Instrument both have a function of causation, and Agent and Patient both carry a sense of sentientness, and so forth. . . . So just as there are variations, or allophones, of distinctive sound, so there are variations, or CASE-TYPES, of deep cases. (84)

Nilsen asserts that the specification of deep cases should stress "relational, rather than lexical, features for case identification," and he suggests that "surface markers, transformations, and case domination are controlled by case features" (33). Nilsen proposes three pairs of relational semantic features as means of determining the deep case relationships of nouns in a proposition. These features, hierarchically related to each other, are controller-controlled, cause-effect, and source-goal. In the hierarchy, a case which has the feature +[controller] will likewise have the features +[cause] and +[source]. Similarly, a case which has the feature +[controlled] will also have the features +[effect] and +[goal]. Nilsen diagrams the hierarchy of case-feature pairs as illustrated in figure 11 (36). Thus, a deep case will be semantically specified at least as $\frac{+}{-}$ [source].

On the basis of these features, Nilsen identifies six deep cases. These deep cases and their semantic features are illustrated in table 3 (37). It is interesting to note that while the Instrument case bears a controller-controlled relationship to the Agent, it also bears a cause-effect relationship to the Patient. Similarly, Peterson presents a set of nine "case defining features," which are presented in table 4 (85).

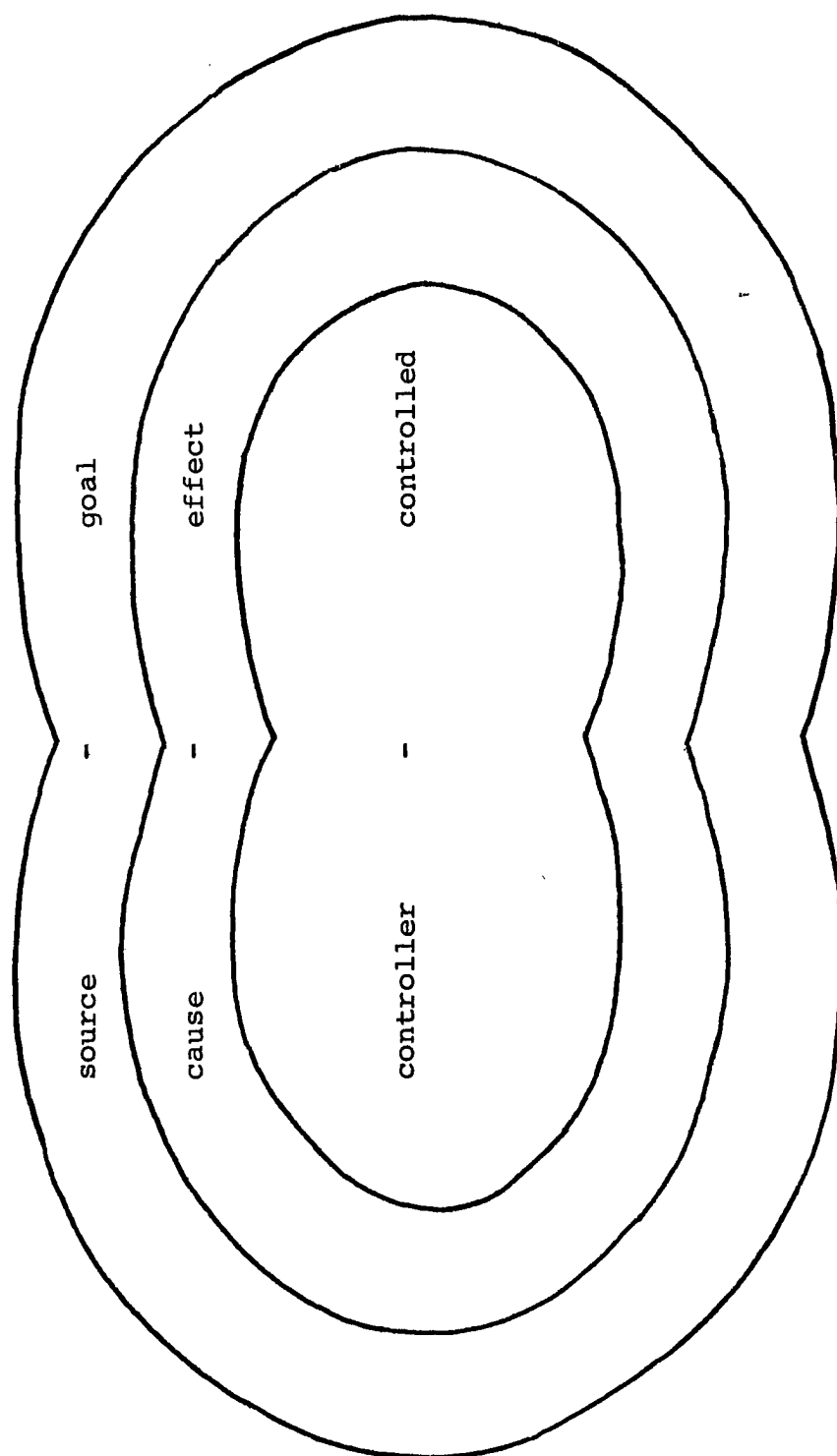


Fig. 11. Hierarchy of case-feature pairs

Table 3

Deep Cases and Their Semantic Features as Specified by Nilsen

Cases	Features					
	Con- trol- ler	Con- trol- led	Cause	Effect	Source	Goal
Agent	x		x		x	
Instrument		x	x	x	x	x
Causative			x		x	
Patient				x		x
Source					x	
Goal						x

Table 4

Case-Defining Features Identified by Peterson

Feature	Description
Originator	Functioning as the originator (or cause) of an action, motion, feeling, or state
Sentient	Functioning in a situation as having the quality of being alive
Purposive	Functioning as having volition in some action
Sourcive	Functioning as the source (location) from which an object in motion or a state originates
Recipient	Functioning as: the destination of an object in motion; the recipient of a feeling, thought, action, or attribute; the end result of some change of state
Motivational	Functioning as possessing some motion, state of impingement, or change of state connected with an action or state
Locational	Functioning as the location of an action or entity
End	Functioning as the end for which a purposive act is performed
Situational	Having the property of being a semantic situation (proposition)

On the basis of these nine case-defining features, Peterson identifies nine deep cases: Agent (A), Instrument (I), Patient (P), Goal (G), Benefactive (B), End (E), Source (S), Locative (L), and Neutral (N) (85). Table 5 illustrates Peterson's feature matrix, indicating not only distinctive features but also variations of the nine cases (86).

Peterson also illustrates each of the cases and their variations:

Agent

- A^R: Tom caught the ball. Michel bought a car.
John Pierre sold his car to Michel.
- A^S: Jan threw the ball to Tom. John Pierre sold his car. Michel bought a car from John Pierre.
- A^M: Gilbert walked to town. George brought Josy some flowers.
- A^P: Harry stared at Martha. Bob was holding a glass.
- A^O: Joe spilled his beer (unintentional).

Instrument

- I^R: We laughed at his foolishness. I was amazed at its size. The glass broke on the floor.
- I^S: Joyce is suffering from pneumonia. The glass melted from the heat.

Table 5

Semantic Specification of Deep Cases and Their Variations as Identified by Peterson

Features	Cases																							
	A					I					B		E		P			G	S	L	N			
	Case-types																							
	A ^R	A ^S	A ^M	A ^P	A [∅]	I ^R	I ^S	I ^L	I ^M	I ^{Si}	B ^R	B [∅]	E ^{Si}	E [∅]	P ^P	P ^M	P [∅]	G [∅]	S [∅]	L [∅]	N ^M	N ^{Si}	N [∅]	
Originator	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sentient	+	+	+	+	+	-	-	-	-	-	+	+	-	-	+	+	+	-	-	-	-	-	-	-
Purposive	+	+	+	+	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-
Recipient	+	-	-	-	-	+	-	-	-	-	+	-	-	-	+	+	+	+	-	-	-	-	-	-
End	-	-	-	-	-	-	-	-	-	-	+	+	+	+	-	-	-	-	-	-	-	-	-	-
Sourcive	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-	-
Locational	-	-	-	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	+	-	-	-	-
Motional	-	-	+	-	-	-	-	-	+	-	-	-	-	-	-	+	-	-	-	-	-	+	-	-
Situational	-	-	-	-	-	-	-	-	-	+	-	-	+	-	-	-	-	-	-	-	-	-	+	-

I^L: The jewels sparkled in the moonlight. Joe died in a plane crash.

I^M: He broke the bottle with a hammer. They pelted him with rocks.

I^{Si}: You open this can by pushing in the top.

Benefactive

B^R: Pierre baked a cake for Alice. (\Rightarrow Pierre baked Alice a cake.)

B^O: Alphonse opened the door for Marie.
(\Rightarrow *Alphonse opened Marie the door.)

End

E^{Si}: Rose is waiting for you to leave. I want Joe to stay.

E^O: Doug went to the store for cigarettes. I'm looking for a unicorn. I want some beer.

Patient

P^P: Marsha helped the old man to cross the street.
Jan threw the ball to Tom. He wants some water.

P^M: The garden is swarming with bees. The guard led the prisoner in.

P^O: Bill killed John. Michel heard something.
That's frightening to me.

Goal

G^O: Joan looked at the house. He pointed his gun
at Mary. They walked to town.

Source

S^O: They drove from NY to LA. He left the house.
It's carved from granite.

Locative

L^O: I live in LA. The book is on the table.

Neutral

N^M: Jan threw the ball to Tom. They loaded the
wagon with hay.

N^{Si}: I believe that the world is round.

N^O: The glass is on the shelf. Hugh is holding
a glass. (88)

The least satisfactory of Peterson's cases is the Neutral case, which suffers from the same lack of specificity as Fillmore's original Objective case. In reality, Peterson's Neutral case differs little from Patient except in its markedness +[sentient]. The following contrasts between Peterson's examples of Neutral case nouns and Patients illustrate this fact:

Neutral: Jan threw the ball to Tom.

Patient: Jan threw the baby to Tom.

Neutral: They loaded the wagon with hay. \implies

They loaded the hay onto the wagon.

Patient: They loaded the children onto the bus.

Neutral: I believe that the world is round.

Patient: I believe that Tom is telling the truth.

Neutral: The glass is on the shelf.

Patient: The baby is in the crib.

Neutral: Hugh is holding a glass.

Patient: Hugh is holding the baby.

Hugh is holding his wife closely.

There appears to be no difference between what Peterson calls Neutral case nouns in these pairs and between what he would surely call Patients in these pairs other than the markedness +[sentient] for the Patients. Furthermore, the distinction between Neutral and Patient is not reflected in the meaning of the verbs, in the change of state of the Neutral or Patient, or in the meaning of change of state of the other cases in these sentences. Since Peterson's

Neutral case suffers from the same lack of specificity as Fillmore's Objective case, one would predict that it, like Fillmore's Objective case, will either be subsumed by another case category, in this instance the Patient, or that it will have to be redefined.

Likewise, there is a certain amount of redundancy in Peterson's set of case-defining features. For example, the distinction between +[recipient] and +[end] is not at all clear, especially since Peterson's definition of recipient includes "the end result of some change of state" and his definition of end includes "the end for which a purposive act is performed." As it was noted for the distinction between Neutral and Patient, the purposiveness or animateness of the affected case does not seem to be itself affected by the purposiveness or animateness of the Agent, Instrument, or Cause. Similarly, Peterson's inclusion of +[situational] as a case feature seems redundant since it is assumed in both transformational-generative and case grammars that NP can be rewritten S.

In fact, Peterson's case-defining features can be stated in terms of Nilsen's case features more economically. Originator, for example, bears the feature +[cause] and, therefore, +[source]. Sentient bears the feature +[controller] since Nilsen assumes animateness within the feature +[controller]. Purposive also bears the feature

+**[controller]** since, as Peterson himself explains, purposive entails sentient. Because they both bear the feature +**[controller]**, sentient and purposive also bear the features +**[cause]** and +**[source]**. Sourceive clearly bears Nilsen's feature +**[source]**. Peterson's recipient bears Nilsen's feature +**[effect]** and, thus, +**[goal]**. Peterson's motivational bears either the feature +**[source]** or the feature +**[goal]**, depending upon the nature of the "motion, state of impingement, or change of state," which illustrates the ambiguity of this particular feature proposed by Peterson. Peterson's locational would seem to bear Nilsen's features +**[whole]** or +**[part]**, which will be discussed a little later. Peterson's end, like his recipient, bears the feature +**[effect]** and, thus, +**[goal]**. As noted earlier, Peterson's situational seems inappropriate since all, or at least most, NP slots can be filled by S.

Nilsen recognizes that his model does not adequately describe the deep cases of nouns which occur on the surface in sentences containing single-place predicates, since his framework requires that deep cases appear in pairs. He suggests, then, that the so-called intransitive constructions and predicate adjective/predicate noun constructions might be accounted for if the pair of features whole-part is added to the upper level of his hierarchy of features. Nilsen recognizes that the concept of a whole-part

relationship is highly abstract, especially when it is superimposed on the other features, and he admits that he is "unable at the present time to give the additional support that would be required for such a postulation" (40). Nonetheless, an expansion of his diagram of the hierarchy of case features to include the whole-part relationship would appear as figure 12. With this expansion, all case pairs will exhibit at least the whole-part relationship. A case marked +[controller], for example, will also have the features +[cause], +[source], and +[whole]. Although Nilsen himself does not further develop the implications of establishing +[whole] and +[part] as case features, he does hypothetically expand table 3 to include these features, as illustrated in table 6 (40).

While Nilsen does not include the feature +[whole] as a feature of Instrument, it must be included and has been in table 6 because any case which is described as having feature +[cause] must also have features +[source] and +[whole] according to the case-feature hierarchy. Adding the feature +[whole] to the case feature description of Instrument does not appear to cause any particular problems, for the feature applies to Instrument's relation to Patient, not to its relation to Agent: Instrument has feature +[controlled], and therefore +[effect], +[goal], and +[part], because of its relation to Agent; Instrument has feature

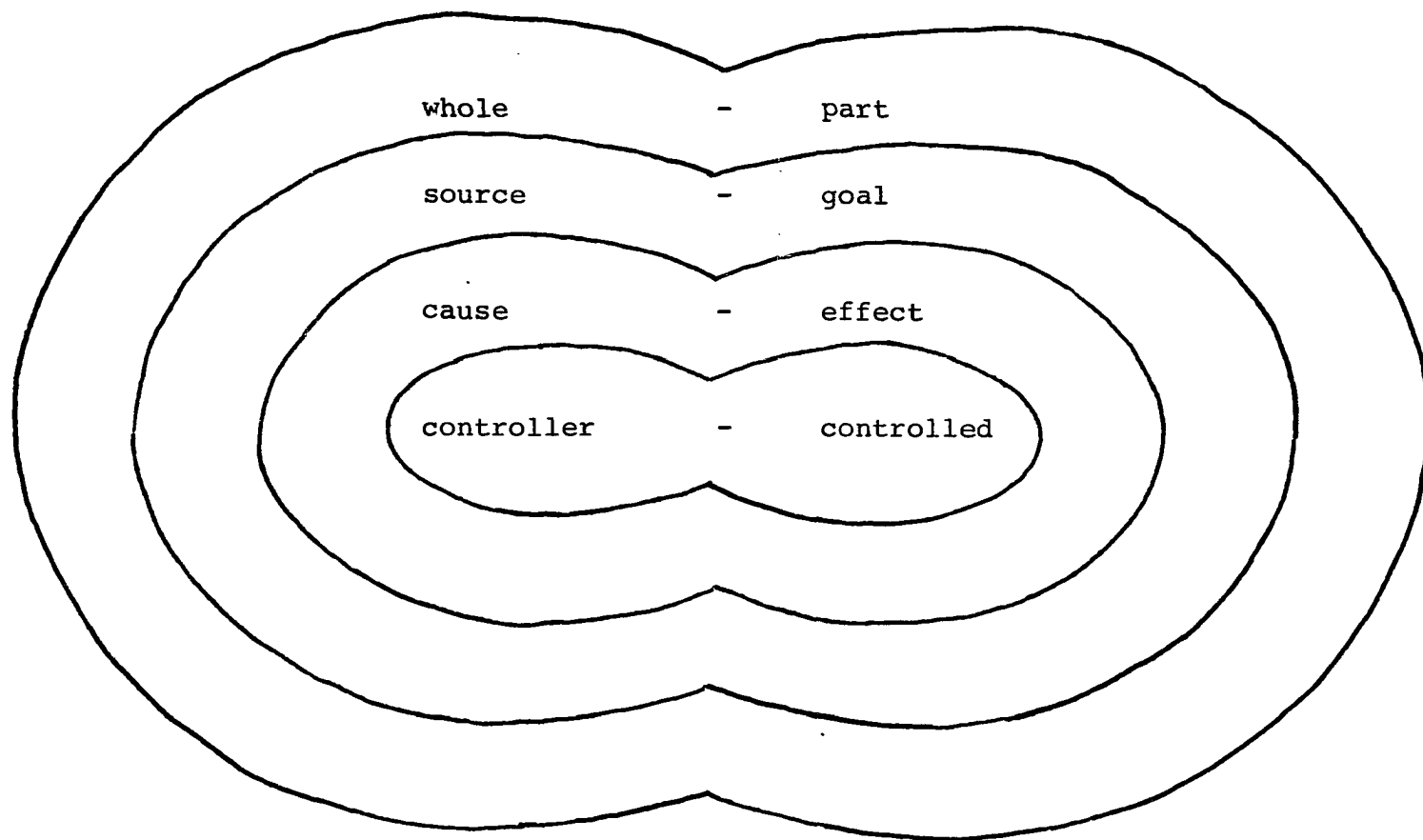


Fig. 12. Expansion of Nilsen's case-feature hierarchy

Table 6

Nilsen's Expansion of Deep Cases and Their Semantic Features
to Include the Whole-Part Relationship

Cases	Features							
	Con- trol- ler	Con- trol- led	Cause	Effect	Source	Goal	Whole	Part
Agent	+		+		+		+	
Instrument		+	+	+	+	+	[+]	+
Causative			+		+		+	
Patient				+		+		+
Source					+		+	
Goal						+		+
Whole							+	
Part								+

+ [cause], and therefore + [source] and + [whole], because of its relation to Patient.

An expansion of Nilsen's case feature analysis to include the features + [whole] and + [part] appears to be capable of accounting not only for so-called intransitive constructions and for adjectives but possibly even for verb selection in general, which has caused particular problems within the theory of case grammar.

Nilsen uses sentences 3.19 and 3.20 as examples of so-called intransitive constructions:

3.19 John itches.

3.20 John puttered around (38).

Describing sentence 3.19 and 3.20 in terms of the features +[whole] and +[part], Nilsen explains that John is a subset of the set people who itch in sentence 3.19 and a subset of the set people who putter around in sentence 3.20; for the sake of simplicity, these sets can be referred to as itchers and putterers. A much simplified tree diagram of sentence 3.19 appears in figure 13.

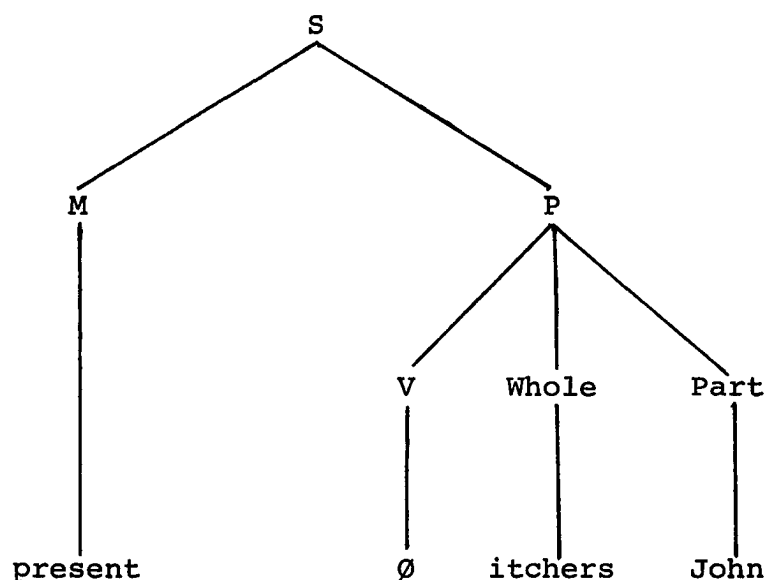


Fig. 13. Simplified tree diagram for sentence 3.19

In this model, there is no deep structure verb; that is, all of the elements of the Proposition are nominals. The semantic relationship between the elements of the Proposition is, nonetheless, clear. The nature of Modality has not been adequately developed within the case theory, but it is known that, for English sentences at least, the Modality contains tense as a Discourse Specifier which must be attached to an element of the Proposition (Nilsen 31). It is possible, therefore, that, in the absence of a verb, tense attaches itself to the case Whole and is realized in the surface structure as a verb. Thus, itchers + present tense \longrightarrow itches.

The relationship between two nouns linked in the surface structure by a copulative verb is analogous to these intransitive constructions. In sentence 3.21, it can be demonstrated that John is a subset of the set doctors.

3.21 John is a doctor.

To describe John and doctors as being in the same deep case would not adequately reflect the semantic relationship that exists between the two terms. Such an analysis would imply that they are analogous sets, as reflected in figure 14, in which John and doctors are represented not by concentric circles but by superimposed circles.

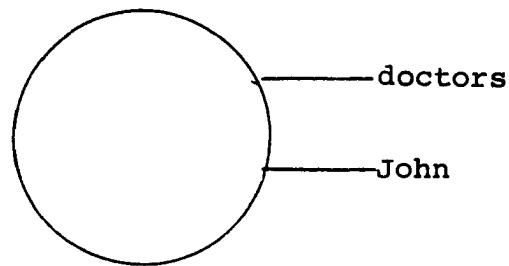


Fig. 14. Venn diagram for analogous sets

Figure 14 cannot explain the relationship, however, because there are obviously some doctors who are not John. A more adequate diagram is presented in figure 15. In this figure, John is represented as a subset of doctors.

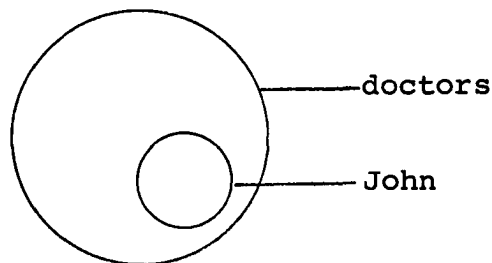


Fig. 15. Venn diagram for a subset

The same whole-part relationship can be seen to exist between the elements of sentence 3.22.

3.22 John is similar to Peter.

3.23 Peter is similar to John.

Figure 16 uses a Venn diagram to illustrate the whole-part relationship that exists in sentence 3.22, in which John is understood to be a subset of the set people who are similar to Peter. At the same time, figure 16 illustrates why sentences 3.22 and 3.23 are not grammatically analogous.

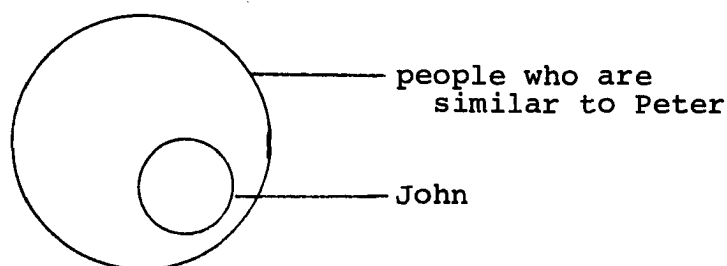


Fig. 16. Venn diagram for sentence 3.22

Case grammarians almost universally treat adjectives as verbs. Thus, sentence 3.24 is construed as having a deep structure such as sentence 3.25, and sentence 3.26 is construed as having a deep structure such as 3.27.

3.24 The sun is red.

3.25 The sun reddens.

3.26 John is tall.

*3.27 John tall.

It is difficult to determine the case labels for sun and John in these sentences if the features +[whole] and +[part] are not added to Nilsen's framework of semantic specification. Certainly, sun and John cannot be described as Agents

or Instruments because they do not appear to have either feature +[controller] or feature +[controlled]. They cannot be described as Causatives since they lack the feature +[cause]. Nor does it seem adequate to specify either of them as Source or Goal. If they are described as Patients, which have feature +[effect] in relation to the abstract verbal construct proposed here, it would be difficult to justify assigning the feature +[cause] to the case of either red or tall.

Adjectives in surface constructions seem to this writer to reflect an attempt to classify nouns. If sun and John in sentences 3.24 and 3.26 are identified as the case Part, having feature +[part] in relation to the case Whole (red objects and tall people), the process of classification is reflected in the deep case structure of these sentences. The surface adjectival constructions, red and tall, are surface manifestations of the deep case relations as illustrated by means of the Venn diagrams in figures 17 and 18.

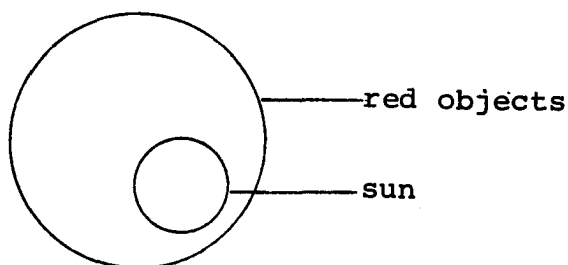


Fig. 17. Venn diagram for sentence 3.24

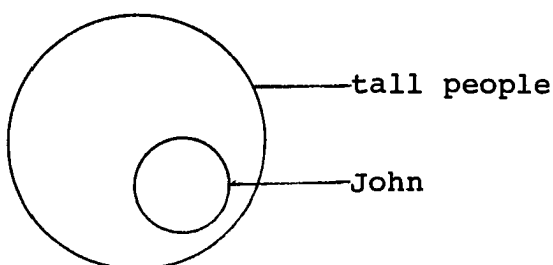


Fig. 18. Venn diagram for sentence 3.26

In describing how the features $+[whole]$ and $+[part]$ operate within the underlying deep structure of surface constructions traditionally called intransitive in sentences 3.19 and 3.20, the verbs itches and puttered around were expressed as deep structure nominals, itchers and putterers, and were shown to have features $+[whole]$ in relationship to John. There is some reason to examine whether at the deep level all surface verbals appear in whole-part relationship with NPs in the Proposition. For example, in sentence 3.28, John can be considered a subset of the larger set of givers.

3.28 John gave Mike a book.

Such a notion, however, might require an alteration in the description of how cases operate within the deep structure.

It is generally considered that each element of the deep structure has a single case label which describes how the element relates to the Proposition. However, configuring the verb itself as a case within the deep structure

might require that each element in the Proposition have a case relationship to every other element of the Proposition. A similar notion is suggested by Charniak, who concurs with Jackendoff in noting that in sentence 3.29 Fred is both Agent and Source and that in sentence 3.30 Joe is both Agent and Goal:

3.29 Fred sold the car to Joe.

3.30 Joe bought the car from Fred (Charniak 290).

In sentence 3.28, then, John can be described as having the feature +[part] in relation to givers, +[source] in relationship to Mike, and [cause] in the relationship to book. In sentence 3.28, then, John can be said to bear the case labels Part (in relation to givers), Source (in relation to Mike), and Causative (in relation to book). In fact, every element of the deep structure can likewise be shown to exhibit a case relationship with each of the other elements in the structure. In sentence 3.28, givers is Whole in relation to John, Source in relation to Mike, and Causative in relation to book. Mike is Goal in relation to John, Goal in relation to givers, and Goal in relation to book. Book is Patient in relation to givers, Patient in relation to John, and Patient in relation to Mike. The case frame of sentence 3.28 might, then, appear something like that illustrated in figure 19.

John	givers
[Part-Source-Causative]	+ [Whole-Source-Causative]
+	
Mike	book
[Goal-Goal-Goal]	+ [Patient-Patient-Patient]

Fig. 19. Multiple case frame for sentence 3.28

As illustrated in figure 19, Mike and book each maintain the same case relationship to each element in the Proposition; that is, Mike is always Goal, and book is always Patient. Since the Causative case has the feature +[source], John can be seen to have the same featural relationship to Mike that it does to book, and givers can also be seen to have the same featural relationship to Mike that it does to book. The only significant difference in case relationships is that John and givers both have different featural relationships to each other than they do to the other elements of the Proposition. It is, perhaps, this different featural relationship that signals the lexical insertion gave instead of took at the surface level; had the whole-part relationship existed between the Goal and the case of the verb, the lexical insertion of took would have been signalled instead of gave, and the surface sentence would have been realized as sentence 3.31.

3.31 Mike took the book from John.

The same relationship can probably be applied to such

converse sentences as 3.32 and 3.33 and might likewise be applicable to such pairs as 3.34 and 3.35.

3.32 John sent Mike a letter.

3.33 Mike received a letter from John.

3.34 John sang a song to Mike.

3.35 Mike listened to a song (sung) by John.

On the basis of sentences 3.32-3.35, it might be argued that the verb is not present in the deep structure at all but enters the sentence closer to the surface in a transformation governed by lexical constraints which result from the case relationships of the nouns of the Proposition. However, sentences 3.36 and 3.37 present additional evidence that the verb might appear as a case category in the deep structure.

3.36 Mike died (in an automobile accident).

3.37 John killed Mike (in an automobile accident).

In the deep structure of sentence 3.36, the verb died appears as the set dead people and bears the case label Whole in relation to Mike. In the deep structure of sentence 3.37, the verb killed appears as killers and bears the case label Whole in relation to John.

In sentence 3.36, Mike is Part in relation to dead people but also appears to bear the label Patient with features +[effect] and +[goal]. Dead people, on the other hand, is Whole in relation to Mike but does not appear to

bear the case label Causative, which is the case label paired with Patient in Nilsen's framework for specification. The case frame of sentence 3.36 appears to be something like that illustrated in figure 20.

Mike dead people
[Part-Patient] + [Whole]

Fig. 20. Multiple case frame for sentence 3.36

In sentence 3.37, John is Part in relation to killers and Agent in relation to Mike; killers is Whole in relation to John and Agent in relation to Mike; Mike is Patient in relation to both John and killers. The case frame of 3.37 might, then, resemble that presented in figure 21.

John killers Mike
[Part-Agent] + [Whole-Agent] + [Patient-Patient]

Fig. 21. Multiple case frame for sentence 3.37

If sentence 3.37 undergoes a passive transformation, which deletes the Agent, it becomes sentence 3.38.

3.38 Mike was killed (in an automobile accident).
It would seem that this passive sentence, 3.38, is likely to occur, however, even if the Agent is unknown, as illustrated in the discourse represented by sentences 3.38-3.40.

3.38 Mike was killed (in an automobile accident).

3.39 Who killed him?

3.40 I don't know.

It appears, then, that the choice of Mike died or Mike was killed is determined not by whether the Agent is unknown, or even whether it is perceived that there is an Agent, but by whether or not the Patient is classified as having a whole-part relationship with the verb in the deep structure.

While the observations made above are highly speculative, they have touched upon the operation of verbs within the deep structure, and case grammarians have not yet adequately described how verbs operate within the framework of case grammar. Case grammar relates nouns to each other but does not satisfactorily relate nouns to verbs. These speculations have, therefore, attempted to show that verbs might be described as having case relations to other elements of the Proposition in the deep structure, much the same as nouns do.

Chapter IV

Unexplored and Underexplored Territory: "Some Problems for Case Grammar"

The theory of case grammar has the potential for capturing generalizations about language structure and language use which other current theories of grammar do not have. Specifically, the theory demonstrates the interrelatedness of syntax and semantics more poignantly than either transformational-generative grammar or semantic-generative grammar. Baron, for example, has noted:

Of the grammatical models available, only case grammar . . . recognizes the primary importance of the semantic component in its combination of the syntactic and phonological components of a synchronic grammar of a language, thus making possible a broader description and explanation of the language. (13)

He adds:

One of the advantages of Fillmore's theory over both traditional and transformational grammar is that Fillmore incorporates the lexicon more or less directly into the syntactic system,

formalizing semantic theory to a greater extent than had been done in the past. (14)

Despite the acknowledged potential of the theory, the theory remains seriously underdeveloped in many areas and virtually undeveloped in many others. Nonetheless, progress has been made in certain areas. This chapter will delineate those areas of the theory which require further development and, when apparent, suggest directions which future study might take.

As demonstrated in the previous chapter, significant progress has been made in the semantic specification and the enumeration of the deep cases. Most notably, the work of Nilsen and that of Peterson have established a sound methodology for replacing configurative definitions of deep cases with semantically specified descriptions, utilizing semantic case features. The progress here is as significant as the earlier progress of structuralists and transformationalists toward replacing configurative definitions of subject, predicate, and other syntactic elements, as in the traditional grammars, with the phrase structure rules of contemporary linguistic study. Nonetheless, in the literature, the treatment of specific deep cases remains ad hoc. Until theorists uniformly apply principles of semantic specification in the enumeration of deep cases, there will continue to be a proliferation of deep cases

which are not clearly distinct. When greater uniformity in the application of principles of semantic specification of the deep cases is seen, the number of deep cases will diminish, and the theory will approach its goal of specifying the finite set of universal deep cases.

A second area of the theory which requires further, more extensive, development is the nature of the Modality. Nilsen has observed that the Modality, to which he refers as the Mode, is comprised of Discourse Specifiers and Sentence Specifiers (30), as illustrated in figure 22.

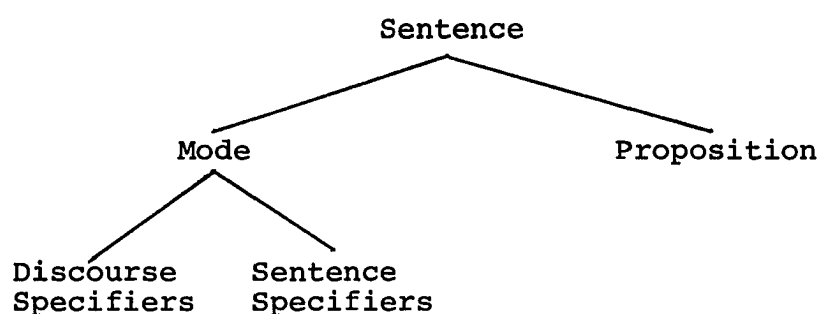


Fig. 22. Nilsen's illustration of Modality

Nilsen enumerates Discourse Specifiers as Place, Time, Style, Manner, and Extent, and others, noting that "these features of discourse need to be established only once in a particular discourse, and . . . once a particular discourse feature is established it applies to all future sentences"

(31). Nilsen's diagram of Discourse Specifiers (31) is illustrated in figure 23.

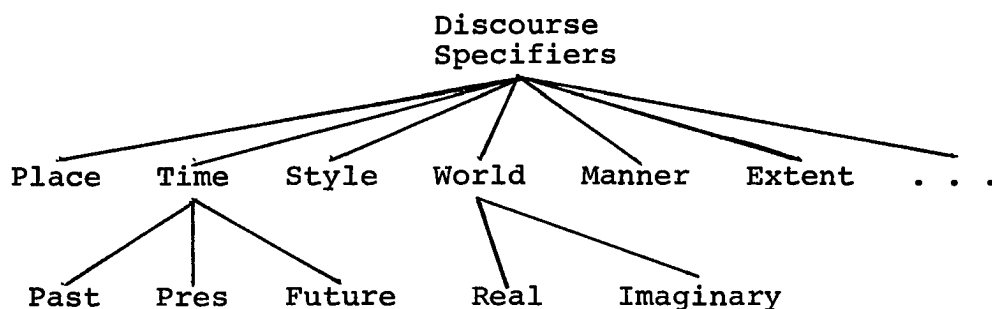


Fig. 23. Nilsen's diagram of Discourse Specifiers

Nilsen enumerates Sentence Specifiers as Performance, Topicalization, Mode, and Aspect (31), as illustrated in figure 24.

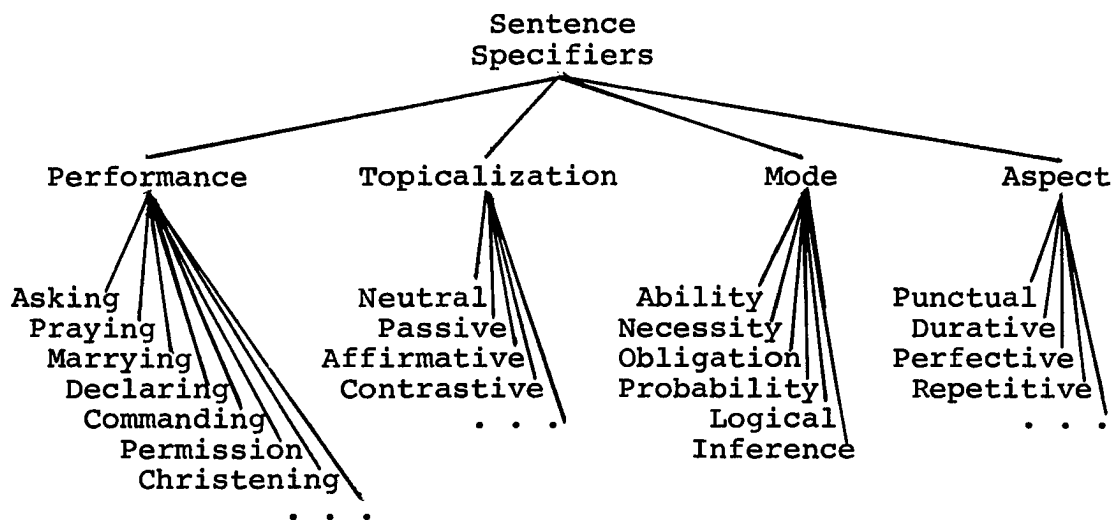


Fig. 24. Nilsen's diagram of Sentence Specifiers

Others, of course, have addressed the issue of Modality in case grammar but only peripherally (Somers 258-59; Lee 564). While Nilsen provides more descriptive detail about the nature of Modality as a whole than do any of the others, it is still not clear how Modality interacts with Proposition to yield a surface structure. Specifically, for example, there has been no adequate explanation of how tense, aspect, and mood, all of which appear in Modality, become attached to the verb, which appears in the Proposition. Similarly, the interaction of Sentence Specifiers in the Modality with determiners in the Proposition, which has yet to be formalized, has obvious implications for explaining sentential ambiguity.

The third, and final, major area of the theory which requires further development is the nature and operation of transformations. Some fundamental transformations have been identified and are fairly obvious:

1. Subject raising
2. Deletion of subject case marker (preposition)
3. Objectivalization (direct object placement)
4. Deletion of direct object case marker (preposition) (Liles, Linguistics 47).

These, of course, are central to the generation of surface structures since the verb is in initial position in the deep structure of the Proposition. However, even for these

transformations, it has not yet been made clear how, for example, such Sentence Specifiers as Topicalization and Performance and such Discourse Specifiers as Style affect subject raising and direct-object placement.

Clearly, additional transformations specific to the theory of case grammar will be identified. Fillmore has noted, "I thought of my work, not as a proposal to eliminate deep structures altogether, but as an effort to find a level of syntactic structure which was deeper than that offered by the then standard theory [of transformational-generative grammar]" ("Problems" 35). If a set of transformations specific to case grammar can be identified, and this set of transformations yields an intermediate structure similar to the deep syntactic structure of the Revised Standard Theory of transformational-generative grammar, then the transformational component of the Revised Standard Theory can be adapted to operate on this intermediate structure. The likelihood of such a development within the theory would appear to be high, for Fillmore himself has referred to case grammar theory as a "substantive modification to the theory of transformational grammar," not as a replacement for the transformational-generative theory ("Case" 21).

Chapter V

Ray S. Jackendoff: The Extended Lexical Hypothesis, \bar{X} Syntax, and Case Grammar

Ray S. Jackendoff has proposed various modifications to the Revised Standard Theory of transformational-generative grammar. Specifically, he has proposed the Extended Lexical Hypothesis, and he has expanded Chomsky's theory of \bar{X} Syntax. In doing so, Jackendoff dismisses the theory of case grammar despite the fact that there are many similarities between the theory of case grammar and Jackendoff's proposals. This chapter will compare Jackendoff's Extended Lexical Hypothesis and his expansion of the theory of \bar{X} Syntax as these two theories relate to the theory of case grammar.

Much of the recent debate in linguistic theory has been concerned with the relationship between syntax and semantics in the grammar. Chomsky's Aspects of the Theory of Syntax attempted to account for the semantic component of the grammar in a way that his earlier Syntactic Structures could not. Jackendoff contends that the theory advanced in Aspects is too heavily dependent upon semantics to capture important generalizations about the syntactic component.

Jackendoff, therefore, has proposed the Extended Lexical Hypothesis:

. . . if rules of semantic interpretation can be formulated properly, their properties and the properties of the semantic representations they derive can be used to account for . . . semantic phenomena, leaving the syntactic component as free of semantic intervention as it was in Syntactic Structures. (Semantic Interpretation xi)

Jackendoff's Extended Lexical Hypothesis asserts that (1) syntax and semantics are two separate components of the grammar, (2) transformations do not derive morphological structures, and (3) transformations are "restricted to movement rules and insertion and deletion of constants and closed sets of items" (Semantic Interpretation 13). Within Jackendoff's framework, the semantic component of the grammar is separated into four parts: (1) the functional structure, (2) the table of coreference, (3) focus and presupposition, and (4) the modal structure. These four parts of the semantic component, together with a set of well-formedness conditions, interact with the syntactic component to yield an interpretation for a structure generated by the phrase structure rules and transformations. Consequently, Jackendoff's syntactic component will, for example, generate

Chomsky's now famous Colorless green ideas sleep furiously, but the semantic component will assign a nonsensical interpretation. (This was Chomsky's original position in Syntactic Structures, which he later revised in Aspects.) It should be noted, then, that the syntactic component of a grammar of the form proposed by Jackendoff will generate not only the infinite set of acceptable surface structures but also an infinite set of unacceptable surface structures.

The role that Jackendoff ascribes to the functional structure within the semantic component is assumed by the syntactic component in Fillmore's theory of case grammar. Jackendoff describes the functional structure as representing "relations in the sentence induced by the verbs, including such notions as agency, motion, and direction" (Semantic Interpretation 3). In the semantic interpretation of an underlying syntactic structure, the functional structure interacts with "grammatical relations, that is, the structural relations obtaining between verbs and the noun phrases, adjective phrases, prepositional phrases, and sentence complements that they strictly subcategorize" (Semantic Interpretation 25). Jackendoff notes, as do case grammarians, that grammatical relations such as subject and direct object are not always semantically significant. He cites sentences 5.1 and 5.2, which are similar to ones also frequently cited by case grammarians.

5.1 Fred bought some hashish from Reuben.

5.2 Reuben sold some hashish to Fred.

In both sentences, Fred bears what Jackendoff calls the thematic relation goal, and Reuben bears the thematic relation source, although Fred and Reuben are distinct surface grammatical structures in each of the two sentences. Fred is the subject of sentence 5.1 and the object of a prepositional phrase in sentence 5.2, while Reuben is the object of a prepositional phrase in sentence 5.1 and the subject of sentence 5.2. Jackendoff contends that one of the thematic relations, that of agent, is different in the two sentences; he notes that Fred seems to be agentive in sentence 5.1 and that Reuben seems to be agentive in 5.2. While Jackendoff admits that his thematic relations are similar to case grammar's case relationships, he dismisses the case theory on the basis of sentences 5.1 and 5.2, noting, "A theory of case grammar in which each noun phrase has exactly one semantic function in deep structure . . . cannot provide deep structures which . . . provide all semantic information about the sentence " (Semantic Interpretation 36).

Jackendoff's account seems to be mistaken on two accounts. First, in the examples which Jackendoff cites, it is not at all clear that Fred is agent in sentence 5.1 nor that Reuben is agent in sentence 5.2, especially if one accepts the notion that agency entails either the feature

+[controller] or the feature +[instigator]. In 5.2, for example, Reuben does not necessarily control the action indicated by the verb sold, nor does he necessarily instigate the action. The phenomenon which Jackendoff describes as agency seems to be more accurately described as the result of subject-raising: in 5.1 and 5.2, if source is raised to subject position, the verb choice is sell; if goal is raised to subject position, the verb choice is buy.

Secondly, even in sentences where a given NP seems to bear two distinct case relations, it is possible that the case grammar theory can accommodate a sufficient analysis by means of a configuration of case relationships which is no more complex than the analysis provided by Jackendoff's semantic interpretation analysis, as noted in chapter three of the present work. As a matter of fact, Nilsen's framework for semantic specification of deep case relationships provides a methodology which accounts for what Jackendoff describes as multiple thematic features. For example, the agent case bears the semantic feature +[controller] and, consequently, the features +[cause] and +[source] (Nilsen 36-37).

Jackendoff identifies five thematic relations within the functional structure of the semantic component, relating them hierarchically as follows:

1. Agent
2. Location, Source, Goal
3. Theme (Semantic Interpretation 43).

Jackendoff's Thematic Hierarchy Condition specifies:

The passive by-phrase must be higher on the Thematic Hierarchy than the derived subject.

(Semantic Interpretation 43)

Jackendoff's Thematic Hierarchy and his Thematic Hierarchy Condition relate closely to constraints on subject-raising identified by case grammarians, for example, Langendoen (70).

Despite Jackendoff's assertions to the contrary, case grammar can account for the thematic relations which he ascribes to the functional structure of the semantic component. Consequently, the case theory is capable of capturing generalizations about the relationship between syntax and semantics which Jackendoff's theory is incapable of capturing.

In his work, \bar{X} Syntax: A Study of Phrase Structure, Jackendoff attempts to illustrate the implications of the Extended Lexical Hypothesis for the syntactic components of the grammar within the framework of the Revised Standard Theory of transformational-generative grammar, specifically within the context of Chomsky's concept of the \bar{X} convention. Here, Jackendoff is particularly concerned about the base,

or phrase structure, component of the grammar. Earlier, Chomsky had introduced the use of the variable X to represent a lexical category ("part of speech") in the phrase structure, using the symbol \bar{X} to represent the node immediately dominating X and the symbol $\bar{\bar{X}}$ to represent the node which is two nodes above X . (Following the notation introduced by Jackendoff, X' , X'' , and X''' will be used hereafter to note \bar{X} , $\bar{\bar{X}}$, and $\bar{\bar{\bar{X}}}$, respectively.) Jackendoff states:

The structural schema . . . in which X represents any lexical category . . . is claimed to constitute a linguistically significant generalization of the structures associated with major categories. . . . That is, we expect there to exist rules whose structural descriptions refer to a range of structures including more than one value of X . . . but we do not expect to find rules whose domains include nodes at different levels. (\bar{X} Syntax 17)

Jackendoff illustrates this two-level X' convention as depicted in figure 25.

Consistent with the Lexical Hypothesis, Jackendoff admits of six lexical categories: noun (N), verb (V), adjective (A), adverb (Adv), preposition (P), and quantifier (Q), insisting that nominals, adverbs, and adjectives

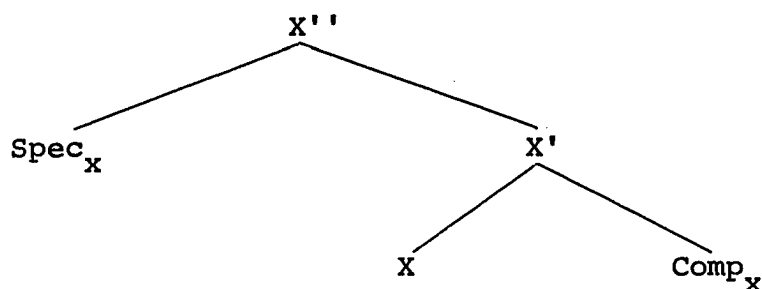


Fig. 25. Jackendoff's two-level X convention

are not derived structures as some transformationalists have contended (X Syntax 36).

While Chomsky had formulated a two-level theory of the X convention, other transformationalists subsequently contended that various lexical categories exist at levels other than two. Jackendoff then proposed the Uniform Three-Level Hypothesis, which establishes a three-level theory of the X convention. In this theory, syntactic categories are introduced at various levels of the derivation of X. For example, $V''' \longrightarrow N''' - M''' - V''$, with M representing modal. Jackendoff provides the tree diagram in figure 26 for the derivation of M (X Syntax 50). The tree diagram in figure 27 results from the application of Jackendoff's linear statements of the basic phrase structure rules for V and M (X Syntax 54).

Jackendoff develops the phrase structure rules of N in a way that is difficult to represent abstractly as for

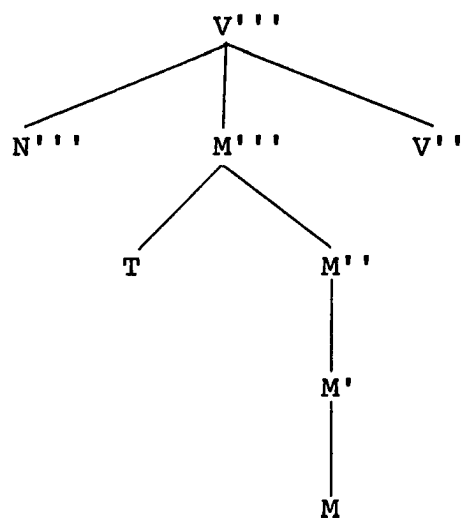


Fig. 26. Jackendoff's tree diagram
for the derivation of M

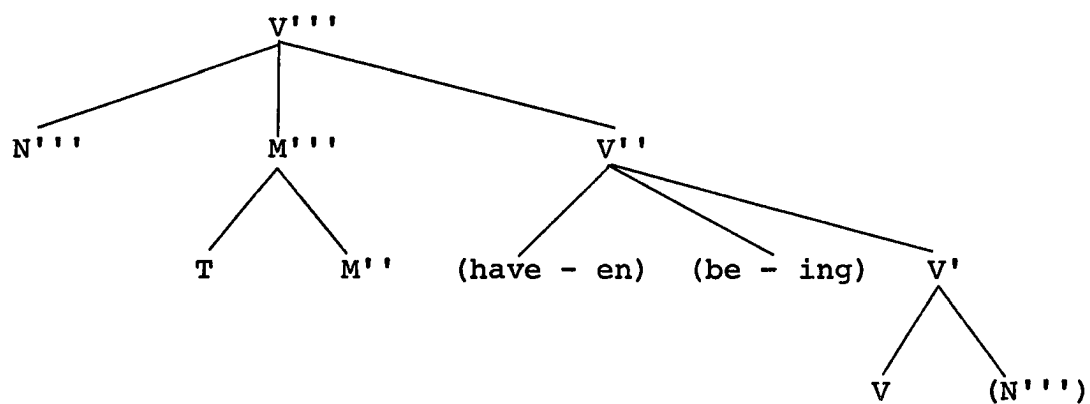


Fig. 27. Tree diagram for the derivation of V and M

V and M. In other words, the phrase structure derivation for N can be conveniently demonstrated by tree diagram only for a specific surface structure. The rewrite rules for N''', however, are demonstrated in sentence 5.3, and the rewrite rules for N'' and N' are demonstrated in sentences 5.4 and 5.5, respectively.

$$5.3 \quad N''' \longrightarrow (\left\{ \begin{matrix} N''' \\ \text{Art}''' \end{matrix} \right\}) - N''$$

$$5.4 \quad N'' \longrightarrow N'$$

$$5.5 \quad N' \longrightarrow N - (P''')$$

Since N''' is a daughter of V''', V', and N''' as well as of P''', Jackendoff believes that his three-level theory can generate numerous complements and specifiers from the phrase structure rules which other theories can derive only by means of transformations.

Aside from the fact that Jackendoff's theory seems, to this writer at least, to be little more than a complex form of pretransformational, deep structure immediate constituency analysis, there are numerous problems within the theory as it relates to both the transformational-generative model and the case grammar model. Jackendoff admits that some of the syntactic categories he introduces are not theoretically significant:

In fact, we will see even in English that there are a few cases where a particular grammatical

relation is defined as part of an x^i specifier for some categories and part of an x^i complement for others. It must be understood, therefore, that the distinction between specifier and complement is to be regarded here as of no theoretical significance, but only as a convenience.

(\bar{X} Syntax 37)

Jackendoff's position seems, to say the least, rather tenuous here, for he is predicating a major distinction in the theory upon mere convenience.

Furthermore, in discussing adjective phrases such as considerate of her needs, Jackendoff notes:

A significant number of adjectives related to transitive verbs take of-NP in their complements: fearful/considerate/desirous/sollicitous of NP, for example, are related to fear/consider/desire/solicit NP. To simplify the statement of lexical relations, we can consider these particular of-NP complements to be simple direct objects in deep structure, treating the of as a specified grammatical formative which is inserted transformationally. (\bar{X} Syntax 37)

Noting that such adjective phrases can be modified by adverbs, Jackendoff provides the tree diagram in figure 28 for utterly considerate of her needs, with the transformationally inserted of supplied.

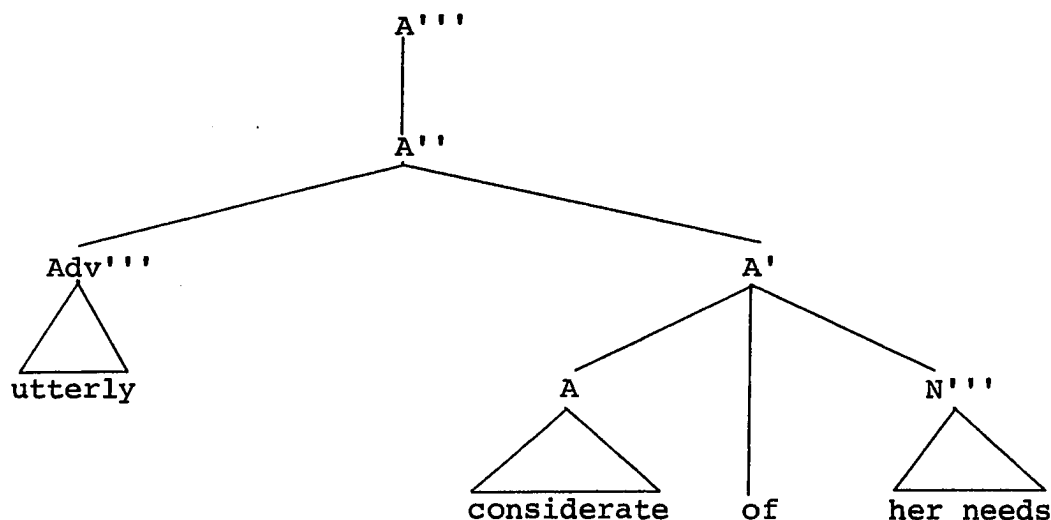


Fig. 28. Tree diagram for derivation of A'''

Two of the stated objectives of the Lexicalist Hypothesis are to reduce the power of the transformations and to capture generalizations about related syntactic structures. Certainly, the kind of transformation proposed for of-insertion in the example in figure 28 seems more dependent upon idiosyncracies of lexical items than the Lexical Hypothesis seems to prefer. One need consider only the pairs of seemingly related surface structures in sentences 5.6-5.8.

5.6a utterly considerate of her needs

5.6b He considers her needs.

5.7a utterly dependent upon his wife

5.7b He depends upon his wife.

5.8a constantly attentive to his wife's needs

5.8b He constantly attends to his wife's needs.

5.8c He constantly attends his wife's needs.

In 5.6b the verb considers is not followed by a preposition.

In 5.7a and 5.7b, respectively, the adjective dependent and the verb depend are both followed by the preposition upon.

In 5.8c, the verb attend is not followed by a preposition, while, in its related use in 5.8b, it is followed by the preposition to, as is the adjective attentive in 5.8a.

By analogy with Jackendoff's example, the prepositions in these sentences would be transformationally inserted in some adjectival uses. If the preposition-insertion transformation is the same as the one which inserts of in Jackendoff's example, then that transformation must be dependent upon semantic or lexical criteria, a situation which is inconsistent with the Lexical Hypothesis. If, on the other hand, the required insertion transformations are distinct from Jackendoff's of-insertion transformation, then they will be highly idiosyncratic and will thereby increase the power of the transformational component, a situation which is also inconsistent with the Lexical Hypothesis. While Jackendoff is unwilling to generate adjectives from verbs, he has constructed a phrase structure which seems to be highly dependent upon the semantic relationships between items in a specific set of English verbs and adjectives.

This problem does not occur in the case grammar treatment of such expressions since the transformational component in the case grammar model is allowed the power to transform deep structure cases into surface structure constructions and to insert the prepositions required as case markers and as lexical formatives specified in the lexicon.

Another problem arises in Jackendoff's treatment of "measure phrases" (X Syntax 137-141). Jackendoff states, "A measure phrase is an N'" immediately dominated by X'" (140). Sentence 5.9 is an example he uses to illustrate such measure phrases.

5.9 Fran stayed in Africa three years.

The tree diagram in figure 29 is constructed on the basis of a tree which Jackendoff provides for a similar sentence and on the basis of the explanation following. On the basis of Jackendoff's analysis, the sentence diagrammed in figure 29 apparently has a deep structure different from that of sentence 5.10.

5.10 Frank stayed in Africa for three years.

Certainly such an analysis misses an important generalization about syntactic constructions traditionally referred to as adverbs of duration, a generalization that is adequately captured in the mainstream of transformational-generative and case grammars by means of an optional transformation which deletes the preposition for in prepositional phrases used as adverbs of duration.

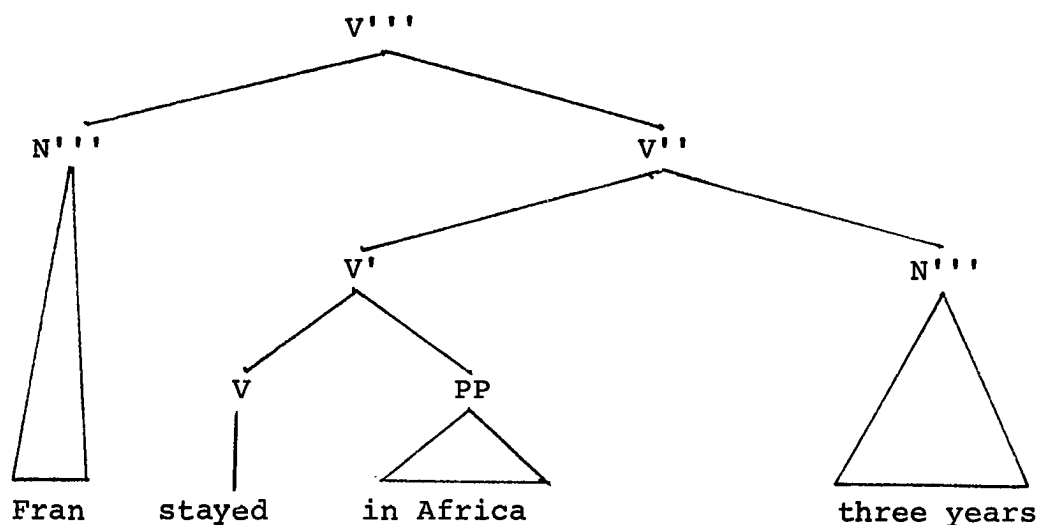


Fig. 29. Tree diagram for sentence 5.9

In the final analysis, the X convention as presented by Jackendoff seems to work at cross purposes. On the one hand, Jackendoff presents "syntactic arguments . . . aimed at showing that various categories are syntactically distinct and not derived one from the other" (X Syntax 243). His Lexicalist Hypothesis proposes, then, that syntax, semantics, and lexicon are distinct components and that the semantic component does not have input into the syntactic component. On the other hand, he states that "a program of lexicalist semantics . . . would conceive of the hierarchical aspect of rules of phrase structure as being to a significant extent dictated by semantic considerations" (X Syntax 244).

Jackendoff is correct in asserting that "the relationship between syntax and semantics is a strong one" (X Syntax 244). However, the X convention theory of phrase structure which he proposes seems to confuse that relationship rather than to clarify it. Chomsky, for example, has noted: "'thematic relations' such as agent, instrument, etc., are determined by the interaction of formally defined grammatical relations [emphasis added] of deep structure and lexical properties" (Current Issues 60). And Fillmore has observed:

Some facts about language that have been hitherto treated in terms of a semantic interpretive component viewed as distinct from the syntactic component have been absorbed into the latter [within the theory of case grammar]--that is, they have been shown to be explainable within a combined syntactic-semantic component. . . . It seems to me that the explanatory scope of semantics as such, to the extent that semantic knowledge can be separated from knowledge of syntax (or syntax-semantics) . . . should be limited to a clarification of the conceptual interrelatedness of lexical items and the semantic judgements on sentences that can be directly accounted for in terms of this interrelatedness. ("Grammar of Hitting and Breaking" 131-32)

Finally, McCawley has concluded:

. . . there is no natural breaking point between a "syntactic component" and a "semantic component" of a grammar such as the level of "deep structure" was envisioned to be in Chomsky (1965) and . . . the burden of proof should be on those who assert that such a breaking point exists. . . . Setting up a level of "deep structure" makes it impossible to treat as unitary processes certain phenomena which in fact are unitary processes. (171-72)

Jackendoff's X convention of syntax is a prime example of the convolution that occurs when one attempts to separate syntax and semantics, to separate form and meaning. The theory of case grammar, on the other hand, although woefully underdeveloped at present, is an attempt to formalize the grammar in a manner that reflects the interrelatedness of syntax and semantics, of form and meaning. While the specific formulations presented to date within the case grammar theory may eventually yield to other, perhaps more accurate, formulations, the case grammar model is undoubtedly a more unified model of universal grammar.

Chapter VI

Theoretical Applications: Case Grammar and the Teaching of College Composition

Applications of the theory of case grammar have been demonstrated in the area of language acquisition and in the area of literary criticism. In the area of language acquisition, de Villiers and de Villiers, for example, have observed, "Children do not learn the order of particular words but rather how to arrange particular semantic roles such as agent or patient. . ." (73). They further note:

Although a plausible argument can be made for analyzing child speech at a level of description that reveals orderliness, there is no a priori reason to believe that such orderliness exists, and the argument must be buttressed by better evidence for the child's knowledge and use of these semantic categories. (77)

Finally, they observe:

. . . the acquisition of grammatical roles is seen as a relatively late achievement, if it occurs at all, with the roles arising from initially semantic concepts. . . . There is

every reason to suppose that young children begin with a restricted notion of agent. . . . This same observation renders it unlikely that the child at an early stage has the relatively abstract grammatical notion of subject. We agree with Bowerman that much of the crucial evidence in favor of the grammatical roles of subject and object is missing in early child speech. (80)

Thus, the case relations specified in the theory of case grammar are evidenced in the study of language acquisition, and the acquisition of case relations may even precede the acquisition of syntactic structures in a child's overall language development.

In the area of literary criticism, Samuel Jay Keyser and Marvin K. L. Ching have both demonstrated the applicability of the theory of case grammar to the methodology of literary criticism. Keyser illustrates, for example, the effect of Wallace Stevens' manipulation of case, especially the manipulation of agency, upon the themes of selected poems (257-82). Ching observes that the theory of case grammar can be used to explain how readers understand and interpret oxymora as a poetic device (319-27).

Despite these applications of the theory of case grammar to language phenomena and language situations, no effort

has been made to demonstrate the applicability of the theory to the teaching of college composition. Failure to apply the theory to the teaching of composition is, however, not surprising. W. Ross Winterowd, for example, notes that there has been no parallel in the study of rhetoric comparable to the development of the "new criticism" or the "new grammar." Nonetheless, he asserts, "Units of discourse larger than the sentence are structurally describable" (Rhetoric 132). This chapter, then, will discuss some theoretical applications of the theory of case grammar to the teaching of college composition. Given the underdeveloped state of the theory, no attempt has been made to construct and implement an experimental design or to validate the applications discussed. However, the discussion will demonstrate that applications of case grammar to the teaching of college composition are both theoretically possible and theoretically desirable. It is hoped that the discussion of these theoretical applications will lead to further interest in and development of the theory of case grammar as it relates to the teaching of composition.

Specifically, there appear to be at least three applications of the theory of case grammar to the teaching of college composition. First, the theory can provide a workable framework for teaching critical thinking skills within

a composition course, an area in which composition specialists as well as general education specialists indicate the need for development of pedagogy and methodology. Second, the theory can provide a workable tool for paragraph analysis to guide students in understanding the need for and the nature of support in illustrative essays and in their own papers. Finally, the theory of case grammar can provide insightful modifications to the theory of generative rhetoric, which has served as the underlying pedagogy for much of contemporary composition theory.

Case Grammar and Critical Thinking Skills

Early philosophers and logicians understood very well the close connection between the study of human thought and reasoning and the study of language and language structures. Much of the scholarship of philosophy and logic is, in fact, closely related to the study of semantics. Conversely, much of the writing of semanticists, especially but not solely in the area of generative semantics, employs the methodology of philosophy and symbolic logic. Thus, the study of language and the study of human thought have almost always been linked by scholars. Indeed, Chomsky's introduction of the theory of transformational-generative grammar and its reliance on native speakers' intuitions about their language amount to a realization of the interconnectedness of the

study of language and the study of philosophy. Even the methodology of both transformational-generative grammar and case grammar draw heavily upon the methodology of philosophy and logic.

Furthermore, classroom instruction in required freshman composition courses entails much more than simply providing students with workable structures into which they can insert their ideas; it entails much more than simply presenting static rudiments of formal written discourse. It has become clear to composition teachers that imbedded in the pedagogy and objectives of composition instruction is the teaching and reinforcing of critical thinking skills. The task of the composition teacher seems even more complicated by the fact that the discipline of composition has no real content of its own. That is, students write about ideas and issues which are not themselves the direct concern of the composition course and which are not themselves necessarily within the realm of the teacher's expertise. Thus, form and meaning often become divorced from each other within the methodology of composition instruction in much the same way that syntax and semantics have become divorced from each other within the theory of transformational-generative grammar.

The theory of case grammar, especially those aspects of the theory related to the semantic specification of deep case, can, however, provide a workable framework for the teaching and reinforcing of critical thinking skills within

the composition class. Furthermore, the theory and its relation to the areas of philosophy and logic can even provide a content for the development and enhancement of these seemingly elusive critical thinking skills. Specifically, the composition teacher can utilize the theory of case grammar as a framework for developing critical thinking skills within the composition class, for example, by concentrating on three aspects of the theory: the notion of implied agency, the operation of the converse features +[controller] and +[controlled] in the semantic specification of deep case, and the operation of the features +[cause] and +[effect] in the semantic specification of deep case.

First, by focusing on the occurrence of implied agency in English sentences, the composition teacher can address the reasoning skills of implication and inference. For example, sentences 6.1 and 6.2 demonstrate the use of specific past tense English verbs, died and killed, one of which implies an Agent and one of which does not. Conceivably, the two sentences could be used to describe the same real-world phenomenon.

6.1 Four hundred soldiers died in the battle.

6.2 Four hundred soldiers were killed in the battle.

The use of the verb died in sentence 6.1 does not imply agency; grammatically, the use of the verb died even

precludes the occurrence of an Agent. On the other hand, the use of the passive construction with the verb killed in sentence 6.2 definitely implies an Agent, although the Agent does not appear in the surface structure.

The composition teacher, understanding that his or her role is not simply to teach students to compose but, even more importantly, to assist students in developing an understanding of the manipulation of language structures both as readers and as writers, might use sentences such as 6.1 and 6.2 and a related discussion of grammatical agency as a means of treating implication and inference as well as the difference between implication and inference. For example, sentence 6.1 implies neither agency nor lack of agency; rather, sentence 6.1 ignores whether or not there is an Agent involved in the action. To illustrate, sentence 6.3, which is similar to sentence 6.1, might be written in contrast to sentence 6.4, which is similar to sentence 6.2.

6.3 Four hundred of the enemy's soldiers died in the battle.

6.4 Four hundred of our soldiers were killed in the battle.

Sentence 6.4, for example, would allow the insertion of an Agent in a prepositional phrase such as by the enemy, while sentence 6.3 would not allow the insertion of an Agent in a prepositional phrase such as by our troops. This pair of

sentences might, then, be used by a writer who wishes to show the enemy as an agent of death, as in 6.4, without showing our troops as a similar agent of death, as in 6.3, and without denying the facts (i.e. the number of soldiers killed on both sides).

Clearly, the use of the language in sentences 6.3 and 6.4, specifically the manipulation of implied grammatical case, amounts to more than mere subtlety. The implications of the two sentences, especially when they are contrasted, and the potential inferences which an unexperienced reader or listener might, illogically of course and unknowingly perhaps, draw from these sentences are issues which supersede "clarity of expression" or other such notations which a composition teacher might be inclined to write on students' papers. They are clearly issues of critical thinking and analysis which are essential to composition instruction.

Like the issue of implied agency, the relationship between the semantic features +[controller] and +[controlled] within the theory of case grammar can serve as a useful tool in strengthening students' critical thinking skills within the composition class. The feature +[controller] is a semantic specifier for the Agent case, and the feature +[controlled] is a semantic specifier for the Instrument case, as explained in chapter three of this work.

Furthermore, the presence of an Instrument always implies an Agent even if the Agent is unexpressed or unknown. Thus, sentences 6.5-6.7 are construed as having the same deep case structure.

6.5 The window broke.¹

6.6 A rock broke the window.

6.7 Jonathan broke the window with a rock.

In the interests of strengthening students' critical thinking skills, the composition teacher might, for example, ask students to demonstrate or explain the circumstances within which each sentence in a set of sentences such as 6.5-6.7 might be employed by a writer. Specifically, the teacher might require students to write three brief paragraphs, using each sentence in a different paragraph for a specific purpose. Sentence 6.5, then, might be effectively employed in a narrative paragraph in which both the Agent and the Instrument have been stated in previous sentences or in which the Agent and Instrument become known as the narrative develops. Similarly, sentence 6.6 might be employed in a paragraph in which the Agent is either

¹ Sentence 6.5 might actually have a deep case structure different from that of 6.6 and 6.7 if the window were broken by hail, wind, or something else which could be classified as Force or Cause rather than as Instrument. For the purposes of this discussion, however, it is assumed here that sentence 6.5 shares the same deep case structure as 6.6 and 6.7, with the deep structure Agent and Instrument deleted in the surface structure.

unimportant or unknown. Finally, sentence 6.7 might be used to begin a paragraph which focuses on the consequences, the results, or the continuation of the situation. Such an exercise could help students to understand the relevance of specific details and facts to the writer's purpose.

The college composition teacher can also use the case grammar theory as a means of strengthening students' critical thinking skills by focusing on the operation of the features `+[cause]` and `+[effect]` in the semantic specification of deep case. According to the hierarchy of case features developed by Nilsen and explained in chapter three of this work, the feature `+[controller]` entails the features `+[cause]` and `+[source]`, and the feature `+[controlled]` entails the features `+[effect]` and `+[goal]`. While the feature `+[controlled]` is the primary specifier for the Instrument case, the Instrument case also bears the feature `+[cause]`, which entails the feature `+[source]`. Thus, the Instrument case is semantically specified as entailing all of Nilsen's case features with the exception of the feature `+[controller]`. The features `+[cause]` and `+[effect]` and the logical, philosophical notion of causality are, then, as important to an understanding of the grammar as they are to an understanding of rhetoric, for cause and effect are two of the modes of development, or rhetorical principles, included in virtually all college composition texts and handbooks.

Yet the notion of causality is not so easily taught, nor is it so easily understood. Philosophical pragmatists have even noted that causality is not scientifically observable, pointing out that while temporal and spatial contiguity can be observed and verified, causality cannot, even in the most straightforward physical phenomena. Thus, the concept of causality involves inference and inductive reasoning. Still, these pragmatists also point out that human beings almost universally act as though the cause-effect relationship were scientifically observable and verifiable. Even the scientific method itself allows for causality as a factor in the conclusions drawn from scientific experiments. Thus, causality, while it is not philosophically or scientifically verifiable, is a pragmatic fact of human life. In the case grammar model, it is also a fact of the grammar.

In sentence 6.7, Jonathan broke the window with a rock, both the Agent, Jonathan, and the Instrument, rock, are marked for the feature +[cause]. However, both in a philosophical sense and in a grammatical sense, the concept of causality is different as it is understood in relation to Jonathan and in relation to rock. In a philosophical sense, rock is understood as the immediate cause and Jonathan as the final cause of the breaking of the window. Similarly, in the grammatical sense, rock is understood as the

Instrumental cause and Jonathan as the Agentive cause.

Ultimately, then, there is little difference between the philosophical and grammatical analyses of causality in a sentence such as 6.7.

However, in a sentence such as 6.8, there does appear to be a difference between the philosophical analysis and the grammatical analysis of causality.

6.8 The wind broke the window.

In 6.8, wind bears the feature +[cause] and appears in the deep structure case Force or Cause. Such a deep case differs from Agent in that it lacks the features +[controller] and +[sentient]. It differs from Instrument in that it lacks the feature +[controlled]; that is, grammatically it is not associated with an Agent. In some philosophical frameworks, however, wind is considered the final cause, while in others it is considered as the immediate cause with God or nature as the final cause. In other words, the grammatical and philosophical analyses of causality in 6.8 correspond in those instances where the philosophical framework does not require that forces of nature be attributed indirectly to the act of a deity.

Clearly, then, the case grammar theory can provide a language-centered focus for introducing students to the philosophical concept of causality, thus assisting students in developing and strengthening their critical thinking and

analytic skills within the context of the college composition class.

Case Grammar and the Nature of Support

One of the major tasks facing the student in a college composition course is the development of an understanding of the need for specific support and documentation within formal written discourse, as well as an understanding of the nature of such support. Many beginning writers in college composition classes rely heavily upon such stock phrases as "I believe," "I think," and "I feel." Often, these beginning writers seem to operate on the premise that the use of such stock phrases absolves them from the obligation to provide objective support for their beliefs, thoughts, or feelings on the issues about which they write. At the same time, they may not fully understand the relationship between their own ideas and those of others. They seem to perceive that a sentence such as 6.9 does not require support.

6.9 I think that abortion is murder.

At best, these students often perceive that a sentence such as 6.10 entails a superordinate clause such as those supplied in sentences 6.11-6.14.

6.10 Abortion is murder.

6.11 (Someone says that) abortion is murder.

6.12 (Everyone says that) abortion is murder.

6.13 (Some people say that) abortion is murder.

6.14 (I say that) abortion is murder.

Frequently, student writers recognize that sentences 6.10-6.14 require documentation and support, but generally, they fail to recognize that sentence 6.9 also requires documentation and support. For sentences 6.11-6.14, documentation is required to substantiate who it is that says abortion is murder. Sentence 6.10, however, requires documentation that will substantiate that abortion is a subset of the set of murders. Within the framework of Nilsen's proposal for the inclusion of the features +[whole] and +[part] in the semantic specification of deep case, the documentation must substantiate that abortion bears the feature +[part] and that murder bears the feature +[whole]. Figure 30 provides a Venn diagram for sentences 6.11-6.14, while figure 31 provides a Venn diagram for sentence 6.10.

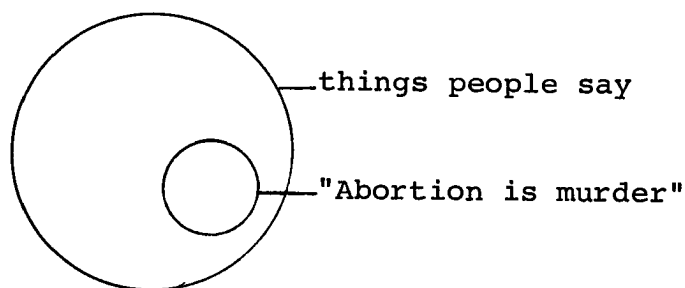


Fig. 30. Venn diagram for sentences 6.11-6.14

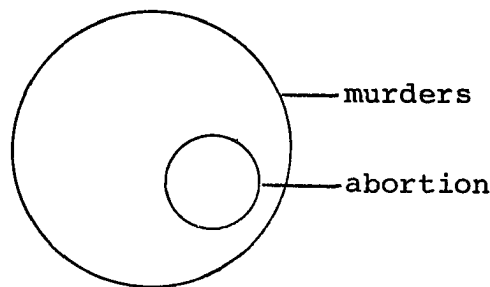


Fig. 31. Venn diagram for sentence 6.10

The case grammar model, then, provides a framework within which teachers can demonstrate to students the difference between statements such as those made in sentence 6.10 and those made in 6.11-6.14, especially as these kinds of statements relate to the need for support and to the specific nature of the support required. For the sentences represented in figure 30, for example, support is necessary to document that someone actually did say something. Generally, this kind of support is provided by means of a quotation with an accompanying citation. Within the overall context, of course, a writer may often explain why someone said something, but even then the required documentation will authenticate the statement itself. Even when a writer explains why a source has said something, the writer relies on the source's explanation, regardless of the truth conditions of the statement itself. This is often the case when students cite religious or political documents.

On the other hand, the support and documentation for the sentence represented in figure 31 must relate directly to the truth conditions of the statement itself. That is, support and documentation are required to substantiate that abortion is indeed a subset of murders, that abortion is characteristic of those acts classified as murders.

Within written discourse, there are, certainly, appropriate uses of sentences of the kind represented by 6.11-6.14. However, these sentences cannot be used in lieu of sentences of the kind represented by 6.10, nor can they be used in lieu of sentences which support sentences of the kind represented by 6.10 in expository prose. Sentences of the kind represented by 6.11-6.14 are considered collaborative sources and can be used to bolster one's position only after one's position has been adequately supported. They cannot, then, be used as primary support for sentences such as 6.10 since their truth conditions are subsets of an entirely different set from the set of truth conditions for a statement such as 6.10.

Clearly, the case grammar model provides a workable tool for discourse analysis related to the need for and the nature of support and documentation in formal, written discourse. The case grammar model seems especially suited to this purpose since it can deal first at the level of the sentence while allowing for expansion to the level of

the paragraph and to the level of discourse. Teachers of college composition will find the model a useful tool for expanding students' critical thinking skills within the specific context of the typical freshman composition class; especially, the sentential analysis of the case grammar model can provide a focused context for demonstrating the nature of logical support in written discourse.

Case Grammar and Generative Rhetoric

Current theories of generative rhetoric have been formulated on the foundation of transformational-generative grammar. Just as transformational-generative grammar is not presented as a model of speech production, so generative rhetoric is not presented as a model of discourse production. However, generative rhetoric is, admittedly, more prescriptive in nature than is transformational-generative grammar, for generative rhetoric attempts to provide an analysis of formal written discourse, which is itself an artificial language construct, while transformational-generative grammar attempts to provide an analysis of natural language. Nonetheless, generative theories of grammar and rhetoric attempt to account for the phenomenon that language structures are predictably constant both at the level of the sentence and at the level of discourse. Thus, the theory of case grammar has the potential for

providing insightful modifications to the theory of generative rhetoric, which has served as the underlying pedagogy for much of contemporary composition theory.

Francis Christensen and Alton Becker have laid the groundwork for a generative theory of rhetoric that may eventually be capable of describing the paragraph in much the same way that transformational-generative and case grammars are capable of describing the sentence. William Irmscher has noted that the 1965-66 articles by Alton Becker and Paul Rodgers comprise the "first serious reconsideration of paragraph structure in almost a century" since Alexander Bain had introduced the paragraph into the study of rhetoric as a unit of discourse in 1866 (98). It is no wonder, then, that the precise place of the paragraph within the field of rhetorical study has yet to be defined. Linguists, for example, have observed that discourse in natural language is comprised of units smaller and larger than the sentence; nonetheless, the sentence has emerged as the unit of analysis within the grammar, primarily because it is a definable unit. Richard Young and Alton Becker note:

Written paragraphs are . . . definable units.
. . . Informal research [at the University of Michigan's Center for Research] has shown that readers, given a text in which all paragraph indentations have been removed, can successfully mark paragraph breaks. (100)

The paragraph is clearly the basic unit of written discourse; consequently, initial formulations of a generative rhetoric are made in terms of the paragraph:

The description of the structure of a sentence and the description of the structure of an expository paragraph . . . are not sharply different kinds of activity, for all involve selecting and ordering language in a significant way. The traditional separation of grammar, logic, rhetoric, and poetics begins to break down. (Young and Becker 87)

Christensen identifies the three main divisions of rhetoric as invention, disposition, and style (x-xi). Baird defines invention as "investigation, analysis, and grasp of subject matter" and disposition as "concept of arrangement, of orderly planning, of structure" (15). Baird clearly identifies structure with disposition, noting that disposition includes "the principles of selection, orderly arrangement, and proportion of parts of the discourse" (172). In effect, generative rhetoric combines the classical notions of invention and disposition in its paragraph-structure rules, which are analogous to the phrase-structure rules of generative grammar, thereby accounting for the discovery aspect of the composing process. In this scheme, both invention and disposition become functions of paragraph structure.

Christensen defines the paragraph as "a sequence of structurally related sentences . . . related by coordination and subordination" (57). He notes that the structural sequence of sentences in simple paragraphs is either coordinate or subordinate, with the most common sequence of sentences within a paragraph being the mixed sequence. Figure 32 presents Christensen's scheme for the mixed sequence paragraph, with the levels of generality or abstraction represented numerically, number 1 representing the most general or most abstract, that is, the topic sentence (63).

Mixed Sequence Paragraph

- 1.
- 2.
- 2.
- 2.
- 3.
- 4.
- 2.
- 3.
- 3.
- 4.

Fig. 32. Christensen's scheme
for the mixed sequence paragraph

Christensen observes, "Justification for the term generative lies" in the notion of levels of generality, for "the teacher can, with perfect naturalness, suggest the addition of subordinate sentences to clarify and of coordinate sentences to emphasize or enumerate" (63).

Utilizing the tagmemic description of the sentence as a foundation, Young and Becker emphasize the concept of levels of generality within a paragraph, noting that tagmemics "specify in addition to the surface structure of patterns an ordered set of operations to be carried out on the patterns" (97). They formulate the description of the paragraph presented in 6.15:

$$6.15 \quad +T^2 \pm R + I^n \quad (100).$$

In the formula presented in 6.15, T represents topic, which may appear two times within the paragraph sequence; R represents restriction; I represents illustration, which may appear n number of times within the paragraph; + represents a mandatory constituent; and \pm represents an optional constituent. Other formulations of the paragraph sequence are possible by replacing T and I with P (problem) and S (solution), with Q (question) and A (answer), or with C (cause) and E (effect), as illustrated in 6.16-6.18:

$$6.16 \quad +P^2 \pm R + S^n.$$

$$6.17 \quad +Q^2 \pm R + A^n.$$

$$6.18 \quad +C^2 \pm R + E^n.$$

Paragraph pattern variations are possible within Young and Becker's scheme because of the readings generated by the symbol \pm and because of the exponents, as well as because of permutation. Some of these variations are illustrated in 6.19-6.22:

6.19 +T +I.

6.20 +I +R +T.

6.21 +T +I +R +I.

6.22 +T +R +I +T.

Pattern 6.19 is generated since R is optional. Pattern 6.20 is generated by means of permutation; it illustrates inductive structure. Finally, patterns 6.21 and 6.22 are generated because of the repetition available in the exponents.

With a model of generative rhetoric in the form of transformational-generative grammar, the potential applications of case grammar begin to emerge more clearly. One weakness of the model based on transformational-generative grammar is that it will have difficulty relating the individual paragraph to the work as a whole, just as transformational-generative grammar has difficulty relating the individual sentence to the discourse as a whole. In this regard, the case grammar model has already established the relationship of the individual sentence to the discourse as a whole, and by analogy, a generative rhetoric based upon the case grammar model will be able to show

the relationship of the individual paragraph to the written discourse as a whole.

In chapter four, it was noted that Nilsen has described Modality as being comprised of both Discourse Specifiers and of Sentence Specifiers; he has pointed out that Discourse Specifiers "need to be established only once in a particular discourse, and . . . once a particular discourse feature is established it applies to all future sentences" (31). Thus, if the case grammar model is applied to rhetorical theory, the paragraph can be described as containing a modality constituent which expresses the relation of the individual paragraph to the discourse as a whole.

Furthermore, a generative rhetoric modelled on transformational-generative grammar is, like transformational-generative grammar itself, heavily dependent upon form at the expense of meaning. One variation of Young and Becker's scheme as stated in 6.22, +T +R +I +T, is as closely related to the traditional description of the paragraph, introduction-body-conclusion, as Chomsky's description of the sentence, $S \rightarrow NP + VP$, is related to traditional grammar's description of the sentence, S-V-O. The correspondence between Young and Becker's scheme and the traditional scheme is illustrated in figure 33.

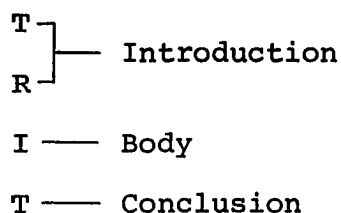


Fig. 33. Correspondence between Young and Becker's scheme and traditional description of paragraph structure

In addition, a model of generative rhetoric based upon transformational-generative grammar does not adequately reflect the classical rhetorical constituent of invention within the writing process since a model based on form rather than meaning assumes a fixed order; it does not provide a means of imposing order on units of meaning. As subject-raising and other ordering transformations within case grammar account for the final surface structure of sentences, so analogous transformations within a generative rhetoric based on the case grammar model can account for the final surface structures of paragraphs, and like case grammar transformations, they will involve the ordering of related units of meaning. The form of discourse rules for a generative rhetoric might appear as illustrated in figure 34.

The model of generative rhetoric based on the case grammar theory of the sentence accounts for discourse specifiers in the modality of the discourse as well as in the modality of the paragraph. A set of redundancy rules

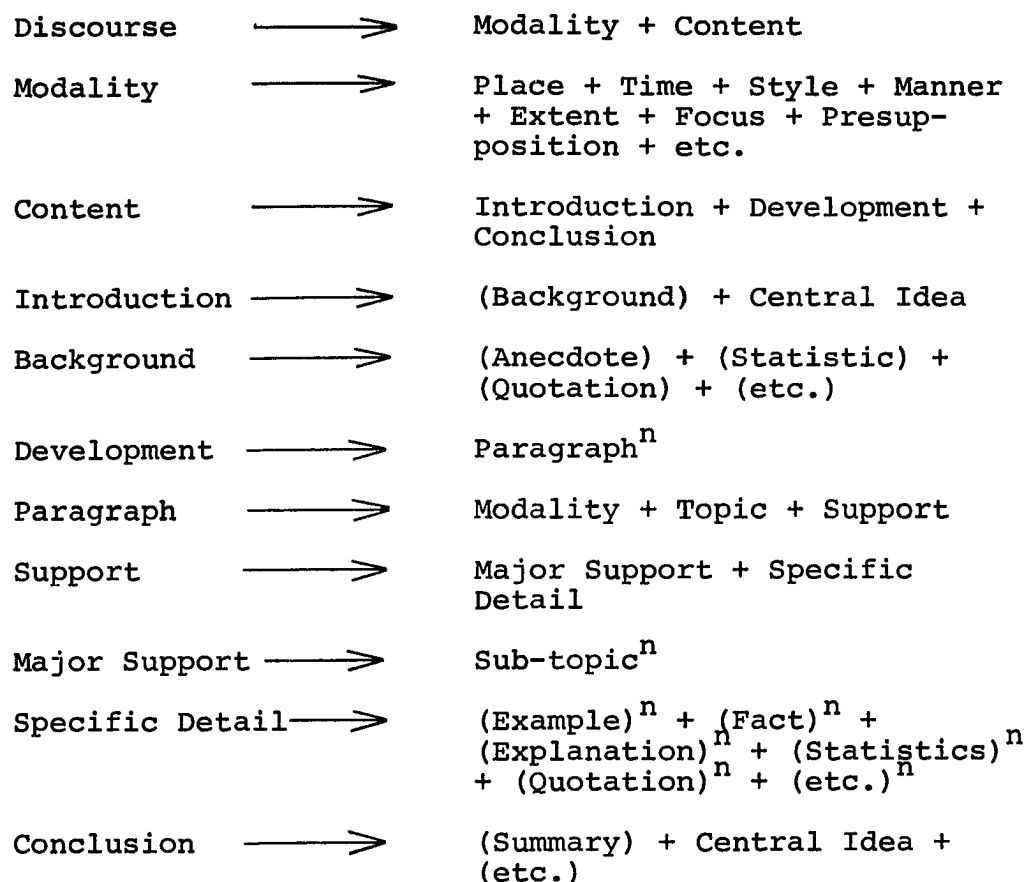


Fig. 34. Discourse rules for a generative rhetoric modelled on case grammar

would describe when these specifiers must be repeated within the discourse and when they may be omitted. While the description of Content as Introduction + Development + Conclusion may appear to mirror the traditional paragraph description (introduction-body-conclusion), the description is intended to account not for form but for meaning, for Introduction and Conclusion relate to Development in a

quasi-semantic manner by embodying the major ideas of the discourse. In shorter works, Introduction may be affixed to the first paragraph, just as Conclusion may be affixed to the final paragraph. Form, then, is effected not by the operation of the discourse rules but by the operation of the transformational, or ordering, component.

Application of the discourse structure rules is analogous to what many teachers refer to as brainstorming: the writer generates the various supports for the topic before attempting to order them, always bearing in mind, however, the relationship of ideas to one another, refining the ideas and their relationship to one another in the process. Ordering transformations guide the writer in constructing surface paragraph structures. Sometimes order is determined by elements of modality, such as focus and presupposition; sometimes order is determined by emphasis or logic, but always, order is determined only after ideas have been generated. In the process, some details are combined in the use of principles of subordination and coordination based upon the relationship of ideas to one another and to the discourse as a whole. For similar reasons, some ideas are deleted. Finally, coherence is achieved by means of transitions and repetition guided by discourse specifiers and by the results of ordering transformations.

Certainly, the model of a generative rhetoric based upon the case grammar theory of the sentence as presented above is, admittedly, incomplete. Furthermore, just as the case grammar theory of the sentence is heavily dependent upon its predecessor, transformational-generative grammar, so the model presented above is clearly dependent upon and very much related to its predecessors, models of generative rhetoric based upon the transformational-generative theory of grammar. This, of course, should be expected, for, as it has been noted, Fillmore himself has referred to the theory of case grammar not as a replacement for the theory of transformational-generative grammar but as a modification to the theory.

The model of generative rhetoric based upon the case grammar theory of the sentence illustrates that form and meaning, syntax and semantics, are intricately related at the deepest level of invention. The model, therefore, has advantages both for the teacher of composition and for the student of writing, as well as for the practicing writer. For the teacher of composition, the model provides a framework for discussing weaknesses in students' papers and for recommending specific measures to address those weaknesses without interfering in the process of invention. For the student of writing, as well as for the practicing writer, the model describes the writing process and provides a set

of guidelines for generating formal expository prose without inhibiting the student's or the practicing writer's creativity. While the rules of the grammar are certainly fixed, the language user daily employs those rules in the creative generation of surface structures. Similarly, while the conventions of formal written discourse may seem, to some, even more rigidly fixed than the rules of the grammar, the case grammar model of generative rhetoric illustrates that, like the grammar of the language, the conventions of formal rhetoric need not inhibit the writer's creativity. Indeed, the conventions of formal rhetoric, if adequately constructed, should inspire creativity.

A Perspective for Composition Teachers

In writing, as in the teaching of writing, surface grammar is clearly less of a concern than are logic and support. Rarely will faulty surface grammar, at least as it typically occurs in freshman papers, affect the statement of meaning in a discourse as drastically as will faulty logic or inadequate support. Certainly, students are expected to employ the conventions of standard written English in the papers they write in college composition classes. Even experienced writers, however, focus attention on these conventions in the process of editing their work. The greatest difficulty occurs, not only for student writers but even for

experienced writers, in the generation of ideas and in the identification of appropriate support. Thus, case grammar, because of its foundation in the semantics of logical relationships, is indeed a useful tool for the teacher of college composition.

In the application of the theory of case grammar to the teaching of college composition, however, it is neither necessary nor even desirable that the theory be included as a component of the composition curriculum. As with any applied theory of linguistics, the teacher does not teach the theory itself but uses the theory in the formulation of instructional methodologies. The teacher of English as a Second Language, for example, does not teach students the transformational-generative theory of grammar; rather, he or she uses the theory as a foundation for the methodology employed in approaching the teaching situation. Similarly, as with the application of any theory, it is essential that the teacher have a thorough understanding of the theory itself before attempting to apply it. Thus, the teacher of composition will find it necessary to study case grammar first from a theoretical perspective and then with an eye toward applying the theory to the teaching of composition. In this way, the experienced or even the novice composition teacher will discover numerous applications of the theory to the teaching of college composition in addition to those applications demonstrated above.

SELECTED BIBLIOGRAPHY

Selected Bibliography

- Allen, Harold B., and Michael D. Linn, eds. Readings in Applied English Linguistics. 3rd ed. 1958. New York: Knopf, 1982.
- Anderson, John. "Adjectives, Datives and Ergativisation." Foundations of Language 5 (1969): 301-323.
- . "The Case for Cause: A Preliminary Enquiry." Journal of Linguistics 6 (1969): 99-104.
- . "Dependency and Grammatical Functions." Foundations of Language 7 (1971): 30-37.
- . "Ergative and Nominative in English." Journal of Linguistics 4 (1968): 1-32.
- . The Grammar of Case: Toward a Localistic Theory. Cambridge, Eng.: Cambridge UP, 1971.
- . "On the Status of 'Lexical Formatives.'" Foundations of Language 4 (1968), 308-313.
- . "Some Proposals Concerning the Modal Verb in English." Edinburgh Studies in English and Scots. Ed. A. J. Aitken, Angus McIntosh, and Herman Paisson. London: Longman, 1971. 69-120.
- Anderson, Stephen R. "On the Role of Deep Structure in Semantic Interpretation." Foundations of Language 7 (1971): 387-96.
- Babcock, Sandra Scharff. "Paraphrastic Causatives." Foundations of Language 8 (1972): 30-43.

- Bach, Emmon. "Have and Be in English Syntax." Language 43 (1967): 462-85.
- . "Nouns and Noun Phrases." Universals in Linguistic Theory. Ed. Emmon Bach and Robert T. Harms. New York: Holt, 1968. 90-122.
- Baird, A. Craig. Rhetoric: A Philosophical Inquiry. New York: Ronald, 1965.
- Baron, Dennis E. Case Grammar and Diachronic English Syntax. The Hague: Mouton, 1974.
- Baskervill, W. M., and J. W. Sewell. A School Grammar of the English Language. 1900. New York: American, 1903.
- Boagey, Winifred. Rev. of Toward a Semantic Specification of Deep Case by Don Lee Fred Nilsen. Foundations of Language 11 (1974): 583-89.
- Böhm, Roger. "On Causing without a Subject." Lingua 53 (1981): 3-31.
- Bolton, W. F. A Living Language: The History and Structure of English. New York: Random, 1982.
- Brekel, Herbert. "Generative Semantics vs. Deep Structure." Studies in Syntax and Semantics. Ed. F. Kiefer. Dordrecht, Neth.: D. Reidel, 1970. 80-90.
- Broderick, John P. Modern English Linguistics: A Structural and Transformational Approach. New York: Harper, 1975.
- Brown, Jason. Mind, Brain and Consciousness: The Neuropsychology of Cognition. New York: Academic, 1977.

- Buckingham, Hugh W. "The Comitative and Case Grammar." Foundations of Language 10 (1973): 111-21.
- Carlson, Greg N. "Thematic Roles and Their Role in Semantic Interpretation." Linguistics 22 (1984): 259-79.
- Carroll, Joyce. "Phenomonology and the Writing Process." CEA Critic 44.2 (1982): 1-5.
- Cassidy, F. G. "'Case' in Modern English." Language 13 (1937): 240-45.
- Chafe, Wallace L. Meaning and the Structure of Language. Chicago: U of Chicago P, 1970.
- Charniak, Eugene. "The Case-Slot Identity Theory." Cognitive Science 5 (1981): 285-92.
- Ching, Marvin K. L. "Interpreting Meaningful Nonsense." Linguistic Perspectives on Literature. Ed. Marvin K. L. Ching, Michael C. Haley, and Ronald F. Lunsford. Boston: Routledge, 1980. 319-27.
- Chomsky, Noam. Aspects of the Theory of Syntax. Cambridge, MA: MIT P, 1965.
- . Cartesian Linguistics: A Chapter in the History of Rationalist Thought. New York: Harper, 1966.
- . "Conditions on Rules of Grammar." Current Issues in Linguistic Theory. Ed. Roger W. Cole. Bloomington, IN: Indiana UP, 1977. 3-50.
- . Current Issues in Linguistic Theory. The Hague: Mouton, 1966.

- . "The Current Scene in Linguistics: Present Directions." Modern Studies in English: Readings in Transformational-Generative Grammar. Ed. David A. Reibel and Sanford A. Schane. Englewood Cliffs: Prentice, 1969. 3-12.
- . "Deep Structure, Surface Structure, and Semantic Interpretation." Semantics: An Interdisciplinary Reader in Philosophy, Linguistics, and Psychology. Ed. Danny D. Steinberg and Leon A. Jakobovits. 1971. Cambridge, Eng.: Cambridge UP, 1975. 183-216.
- . "Degree of Grammaticalness." The Structure of Language: Readings in the Philosophy of Language. Ed. Jerry A. Fodor and Jerrold J. Katz. Englewood Cliffs: Prentice, 1964. 384-89.
- . "Generative Grammars as Theories of Linguistic Competence." Modern Studies in English: Readings in Transformational-Generative Grammar. Ed. David A. Reibel and Sanford A. Schane. Englewood Cliffs: Prentice, 1969. 13-18.
- . Language and Mind. 1968. New York: Harcourt, 1972.
- . Language and Responsibility. Trans. John Viertel. New York: Pantheon, 1979.
- . "On the Notion 'Rule of Grammar.'" The Structure of Language: Readings in the Philosophy of Language. Ed. Jerry A. Fodor and Jerrold J. Katz. Englewood Cliffs: Prentice, 1964. 119-36.

- . Reflections on Language. New York: Random, 1975.
- . "Remarks on Nominalization." Readings in English Transformational Grammar. Ed. Roderick A. Jacobs and Peter S. Rosenbaum. Waltham, MA: Ginn, 1970. 184-221.
- . "A Review of B. F. Skinner's Verbal Behavior." The Structure of Language: Readings in the Philosophy of Language. Ed. Jerry A. Fodor and Jerrold J. Katz. Englewood Cliffs: Prentice, 1964. 547-78.
- . "Some Empirical Issues in the Theory of Transformational-Generative Grammar." Goals of Linguistic Theory. Ed. Stanley Peters. Englewood Cliffs: Prentice, 1972. 63-130.
- . Studies on Semantics in Generative Grammar. The Hague: Mouton, 1972.
- . Syntactic Structures. 1957. The Hague: Mouton, 1964.
- . "A Transformational Approach to Syntax." The Structure of Language: Readings in the Philosophy of Language. Ed. Jerry A. Fodor and Jerrold J. Katz. Englewood Cliffs: Prentice, 1964. 211-45.
- Christensen, Francis. Notes Toward a New Rhetoric: Six Essays for Teachers. New York: Harper, 1967.
- Crystal, David, ed. Linguistic Controversies: Essays in Linguistic Theory and Practice in Honor of F. R. Palmer. London: Edward Arnold, 1982.

- Davidson, Donald, and Gilbert Harman, eds. Semantics of Natural Language. 2nd ed. Dordrecht, Neth.: D. Reidel, 1972.
- DeLancey, Scott. "An Interpretation of Split Ergativity and Related Patterns." Language 57 (1981): 626-57.
- De Villiers, Jill G., and Peter A. de Villiers. Language Acquisition. Cambridge, MA: Harvard UP, 1978.
- Dinneen, Francis P. An Introduction to General Linguistics. New York: Holt, 1967.
- Diver, William. "The System of Agency of the Latin Noun." Word 20 (1964): 178-96.
- Doherty, Paul C. "Hirsch's Philosophy of Composition: An Evaluation of the Argument." College Composition and Communication 33 (1982): 184-92.
- Dykema, Karl W. "Where Our Grammar Came From." Language: Introductory Readings. 2nd ed. Ed. Virginia P. Clark, Paul A. Eschholz, and Alfred F. Rosa. New York: St. Martin's, 1977. 271-85.
- Fillmore, Charles J. "The Case for Case." Universals in Linguistic Theory. Ed. Emmon Bach and Robert T. Harms. New York: Holt, 1968. 1-88.
- . "The Grammar of Hitting and Breaking." Readings in English Transformational Grammar. Ed. Roderick A. Jacobs and Peter S. Rosenbaum. Waltham, MA: Ginn, 1970. 120-33.

- . "Lexical Entries for Verbs." Foundations of Language 4 (1968): 373-93.
 - . "On Generativity." Goals of Linguistic Theory. Ed. Stanley Peters. Englewood Cliffs: Prentice, 1972. 1-19.
 - . "A Proposal Concerning English Prepositions." Report of the Seventeenth Annual Round Table Meeting on Linguistics and Language Studies. Ed. Francis P. Dinneen. Washington, DC: Georgetown UP, 1966. 19-33.
 - . "Some Problems for Case Grammar." Twenty-Second Annual Roundtable Monograph. Ed. Richard J. O'Brien. Washington, DC: Georgetown UP, 1971. 35-55.
 - . "Subjects, Speakers, and Roles." Synthese 21 (1979): 251-74.
 - . "Topics in Lexical Semantics." Current Issues in Linguistic Theory. Ed. Roger W. Cole. Bloomington, IN: Indiana UP, 1977. 76-138.
 - . "Toward a Modern Theory of Case." Modern Studies in English. Ed. David A. Reibel and Sanford A. Schane. Englewood Cliffs: Prentice, 1969. 361-75.
 - . "Types of Lexical Information." Studies in Syntax and Semantics. Ed. F. Kiefer. Dordrecht, Neth.: D. Reidel, 1970. 109-137.
- Fodor, J[erry] A. "Three Reasons for Not Deriving 'Kill' from 'Cause to Die.'" Linguistic Inquiry 1 (1970): 429-38.

- , and Jerrold J. Katz, eds. The Structure of Language: Readings in the Philosophy of Language. Englewood Cliffs: Prentice, 1964.
- Fodor, Janet Dean. Semantics: Theories of Meaning in Generative Grammar. New York: Crowell, 1977.
- Francis, W. Nelson. "Revolution in Grammar." Language: Introductory Readings. 2nd ed. Ed. Virginia P. Clark, Paul A. Eschholz, and Alfred P. Rosa. New York: St. Martin's, 1977. 286-303.
- Freund, John. "Entropy and Composition." College English 41 (1980): 493-516.
- Gaeng, Paul A. Introduction to the Principles of Language. New York: Harper, 1971.
- Gage, John T. "Philosophies of Style and Their Implications for Composition." College English 41 (1980): 615-22.
- Goldberg, Marilyn. "Re: Researching the Mind." CEA Critic 44.2 (1982): 28-32.
- Golden, James L., and Edward P. J. Corbett. The Rhetoric of Blair, Campbell, and Whately. New York: Holt, 1968.
- Green, Lawrence D. "Enthymemic Invention and Structural Prediction." College English 41 (1980): 623-34.
- Gruber, Jeffrey S. "Look and See." Language 43 (1967): 937-47.
- Harman, Gilbert. "Deep Structure as Logical Form." Semantics of Natural Language. 2nd ed. Ed. Donald

- Davidson and Gilbert Harman. Dordrecht, Neth.: D. Reidel, 1972. 25-47.
- Hawkins, John A. "Notes on Cross-Category Harmony, X-bar and the Predictions of Markedness." Journal of Linguistics 18 (1982): 1-35.
- Hawkins, Roger. "On 'Generating Indirect Objects in English': A Reply to Allerton." Journal of Linguistics 17 (1981): 1-178.
- Henle, Robert J. Latin Grammar. 1945. Chicago: Loyola UP, 1958.
- Herndon, Jeanne H. A Survey of Modern Grammars. 2nd ed. New York: Holt, 1976.
- Holzman, Michael. "Writing as Technique." College English 44 (1982): 129-34.
- Huddleston, Rodney, "Some Remarks on Case-Grammar." Linguistic Inquiry 1 (1979): 501-511.
- Humbolt, William von. Linguistic Variability and Intellectual Development. Trans. George C. Buck and Frithjof A. Raven. Coral Gables, FL: U of Miami P, 1971.
- Irmscher, William F. Teaching Expository Writing. New York: Holt, 1979.
- Jackendoff, Ray S. "A Deep Structure Projection Rule." Linguistic Inquiry 5 (1974): 481-506.
- . "Morphological and Semantic Regularities in the Lexicon." Language 51 (1975): 639-71.

- . Semantic Interpretation in Generative Grammar.
Cambridge, MA: MIT P, 1972.
- . "Tough and the Trace Theory of Movement Rules."
Linguistic Inquiry 6 (1975): 437-46.
- . "Toward an Explanatory Semantic Representation."
Linguistic Inquiry 7 (1976): 89-150.
- . X Syntax: A Study of Phrase Structure. Cambridge,
MA: MIT P, 1981.
- Jacobs, Roderick A., and Peter S. Rosenbaum. English
Transformational Grammar. Waltham, MA: Xerox, 1968.
- . Grammar 2: An Introduction to Transformational
Grammar. New York: Ginn, 1970.
- Katz, Jerrold J. "Generative Semantics is Interpretive
Semantics." Linguistic Inquiry 2 (1971): 313-31.
- Keenan, Edward L. "On Semantically Based Grammar."
Linguistic Inquiry 3 (1972): 413-61.
- Keyser, Samuel Jay. "Wallace Stevens: Form and Meaning in
Four Poems." Linguistic Perspectives on Literature.
Ed. Marvin K. L. Ching, Michael C. Haley, and Ronald F.
Lunsford. Boston: Routledge, 1980. 257-82.
- Kimball, John P. The Formal Theory of Grammar. Englewood
Cliffs: Prentice, 1973.
- Krashen, Stephen A. "Cerebral Asymmetry." Studies in
Neurolinguistics. Vol. 2. Ed. Haiganoosh Whitaker
and Harry A. Whitaker. New York: Academic, 1976.

- Laird, Charlton. The Miracle of Language. Greenwich, CT: Fawcett, 1953.
- Lakoff, George. "Pronominalization, Negation, and the Analysis of Adverbs." Readings in English Transformational Grammar. Ed. Roderick A. Jacobs and Peter S. Rosenbaum. Waltham, MA: Ginn, 1970. 145-65.
- Langendoen, D. Terrence. Essentials of English Grammar. New York: Holt, 1970.
- LaPalombara, Lyda E. "Transformational-Generative Grammar." Language: Introductory Readings. Ed. Virginia P. Clark, Paul A. Eschholz, and Alfred F. Rosa. New York: St. Martin's, 1977. 304-326.
- Lasnik, Howard, and Robert Fiengo. "Complement Object Deletion." Linguistic Inquiry 5 (1974): 535-72.
- Lauer, Janice Marie. "Invention in Contemporary Rhetoric: Heuristic Procedures." Diss. U of Michigan, 1967.
- Laycock, Thomas. Mind and Brain. 1860. New York: Arno, 1976.
- Lee, David A. "Stative and Case Grammar." Foundations of Language 10 (1973): 545-68.
- Lees, R. B. "On Very Deep Grammatical Structure." Readings in English Transformational Grammar. Ed. Roderick A. Jacobs and Peter S. Rosenbaum. Waltham, MA: Ginn, 1970. 134-42.

Leggett, Glen, C. David Mead, and William Charvat.

Prentice-Hall Handbook for Writers. 8th ed. Englewood Cliffs: Prentice, 1982.

Lehmann, Winfred P. Descriptive Linguistics: An Introduction. New York: Random, 1972.

---. Language: An Introduction. New York: Random, 1983.

Leonard, Mary Hall. Grammar and Its Reasons: For Students and Teachers of the English Tongue. New York: Barnes, 1907.

Liles, Bruce L. An Introduction to Linguistics. Englewood Cliffs: Prentice, 1975.

---. Linguistics and the English Language: A Transformational-Generative Approach. Pacific Palisades, CA: Goodyear, 1972.

Lyons, John. Introduction to Theoretical Linguistics. Cambridge, Eng.: Cambridge UP, 1968.

McCawley, James D. "How Far Can You Trust a Linguist?" Language, Mind, and Brain. Ed. Thomas W. Simon and Robert J. Scholes. Hillsdale, NJ: Lawrence Erlbaum, 1982. 75-87.

---. "The Role of Semantics in a Grammar." Universals in Linguistic Theory. Ed. Emmon Bach and Robert T. Harms. New York: Holt, 1968. 124-69.

---. "Where Do Noun Phrases Come From?" Readings in English Transformational Grammar. Ed. Roderick A.

- Jacobs and Peter S. Rosenbaum. Waltham, MA: Ginn, 1970. 166-83.
- Mackenzie, J. Lachlan. "Ablative-Locative Transfers and Their Relevance for the Theory of Case Grammar." Journal of Linguistics 14 (1978): 129-375.
- Marckwardt, Albert H. Introduction to the English Language. New York: Oxford UP, 1942.
- Mellema, Paul. "A Brief Against Case Grammar." Foundations of Language 11 (1974): 39-76.
- Moulton, Janice, and George M. Robinson. The Organization of Language. Cambridge, Eng.: Cambridge UP, 1981.
- Nilsen, Don Lee Fred. Toward a Semantic Specification of Deep Case. The Hague: Mouton, 1972.
- O'Banion, John D. "A Theory of Discourse: A Retrospective." College Composition and Communication 33 (1982): 196-201.
- O'Grady, William D. "Foundations of a Theory of Case." Studies in Language 4 (1980): 229-48.
- . "The Universal Characterization of Passivization." Linguistic Analysis 6 (1980): 393-405.
- Palmer, F. R. Semantics: A New Outline. 1976. Cambridge, Eng.: Cambridge UP, 1979.
- Parker, Robert. "Language, Schools and the Growth of Mind." CEA Critic 44.2 (1982): 6-13.
- Pei, Mario, and Frank Gaynor. Dictionary of Linguistics. New York: Philosophical Library, 1954.

- Perlmutter, David M. Deep and Surface Structure Constraints in Syntax. New York: Holt, 1971.
- Peterson, Thomas H. "Semantic Structure." Journal of Linguistics 19 (1983): 79-114.
- Raisman, Neal A. "The Effects of Transient Cognitive Dysfunctions on Writing." CEA Critic 44.2 (1982): 14-19.
- Rawlins, Jack P. "What's So Wrong With 'In My Opinion'?" College English 41 (1980): 670-74.
- Roberts, Paul. English Syntax. Alt. ed. New York: Harcourt, 1964.
- Robinson, Jane J. "Case, Category, and Configuration." Journal of Linguistics 6 (1969): 57-90.
- Saksean, Anuradha. "The Affected Agent." Language 56 (1980): 812-26.
- Scott, Charles T., and John L. Erickson. Readings for the History of the English Language. Boston: Allyn, 1968.
- Shopen, Timothy, and Joseph M. Williams, eds. Style and Variables in English. Cambridge, MA: Winthrop, 1981.
- Skinner, B. F. Verbal Behavior. New York: Appleton, 1957.
- Somers, H. L. "The Use of Verb Features in Arriving at a 'Meaning Representation.'" Linguistics 20 (1982): 237-65.
- Southworth, Franklin C., and C. J. Daswani. Foundations of Linguistics. New York: Macmillan, 1974.
- Stageberg, Norman C. An Introductory English Grammar. New York: Holt, 1965.

- Steinman, Martin. "Rhetorical Research." New Rhetorics.
Ed. Martin Steinman. New York: Scribner's, 1967.
16-32.
- Stockwell, Robert P. Foundations of Syntactic Theory.
Englewood Cliffs: Prentice, 1977.
- Tasaku, Tsunoda. "Split Case-Marking Patterns in Verb-
Types and Tense/Aspect/Mood." Linguistics 19 (1981):
389-438.
- Teng Shou-hsin. "Comitative vs. Phrasal Conjunction."
Papers in Linguistics 2 (1970): 315-58.
- Traugott, Elizabeth Closs. "Toward a Grammar of Syntactic
Change." Lingua 23 (1969): 1-27.
- Ullman, B. L., and Norman E. Henry. Second Latin Book.
Rev. ed. New York: Macmillan, 1931.
- Vallins, G. H. The Pattern of English. London: Andre
Deutsch, 1956.
- Velten, H. V. "The Accusative Case and Its Substitutes
in Various Types of Languages." Language 8 (1932):
255-70.
- Walmsey, John B. "The English Comitative Case and the
Concept of Deep Structure." Foundations of Language
7 (1971): 493-507.
- Wardhaugh, Ronald. Introduction to Linguistics. New York:
McGraw, 1972.

- Weis, Monica R. "Current Brain Research and the Composing Process: A Call for Interaction." CEA Critic 44.2 (1982): 22-28.
- Wiener, Harvey S. "The Single Narrative Paragraph and College Remediation." Ideas for English 101: Teaching Writing in College. Ed. Richard Ohman and W. B. Coley. Urbana, IL: NCTE, 1975. 172-81.
- Winterowd, W. Ross. Rhetoric: A Synthesis. New York: Holt, 1968.
- . "'Topics' and Levels in the Composing Process." Ideas for English 101: Teaching Writing in College. Ed. Richard Ohman and W. B. Coley. Urbana, IL: NCTE, 1975. 132-40.
- Woolley, Edwin C., and Franklin W. Scott. College Handbook of Composition. 3rd ed. Boston: Heath, 1937.
- Wunderlich, Dieter. Foundations of Linguistics. Trans. Roger Lass. Cambridge, Eng.: Cambridge UP, 1974.
- Yarnoff, Charles. "Contemporary Theories of Invention in the Rhetorical Tradition." College English 41 (1980): 552-60.
- Young, Richard E., and Alton L. Becker. "Toward a Modern Theory of Rhetoric: A Tagmemic Contribution." New Rhetorics. Ed. Martin Steinmann. New York: Scribner's, 1967. 77-107.