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Case Relations of the Two Part Verb in English

Lester Gould Woody

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CASE RELATIONS
OF THE TWO PART VERB
IN ENGLISH

BY

LESTER GOULD WOODY

A THESIS
SUBMITTED TO THE GRADUATE FACULTY
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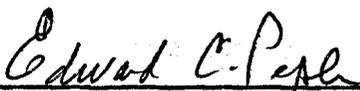

Dean of the Graduate School

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PREFACE

No grammar of a language has ever been either explicit or complete. The more explicit a grammar becomes, the less complete it becomes, and the more complete it appears to be, the less explicit it obviously remains. The path of development of linguistics as a discipline is littered with discarded systems of grammar that have been superseded by yet other systems. Yet each seems in some productive way to derive from those before it and to add some degree of knowledge to that we already have.

Charles Hockett calls language an ill-defined and incomputable system. Explicit grammars are in themselves evidence of this. The more explicit the rules become, the greater the number of exceptions that 'prove the rule.' Like the mountain that was there to climb, for the linguist, language is there to describe and explain. This is the fascinating and continuing lure of language study.

This paper attempts to explore one relatively small phenomenon of language. Linguistics is what might be thought of as a discipline in its infancy. Men have

studied language for thousands of years: Dionysius Thrax of Alexandria codified the grammar of Greek in the second century B.C. But it has been only in the last thirty to forty years that scholars have studied language as it is spoken, as the living tool for symbolization that more than anything else distinguishes man from the lower animals. Linguists try to describe and to explain language, not to prescribe how it should be used. That has been the approach in this paper. What it might contribute to our knowledge of language is certainly limited--by the limited knowledge and experience of the writer if nothing else.

Whatever there is of value here is directly the result of the challenging teaching of Dr. James E. Duckworth, not only in his classes, but also from the invaluable insights gained during many hours of conversation about the many facets of linguistics. I am deeply grateful to Mr. Harry L. Farmer who read this paper and offered valuable suggestions and--perhaps even more valuable--encouragement. To Dean Edward C. Peple of the University of Richmond Graduate School and to Dr. William B. Guthrie, Chairman of the English Department, I am grateful for consistent friendly and scholarly interest in my endeavors.

Lester G. Woody

June 23, 1970

HISTORICAL PERSPECTIVE: THE TWO PART VERB
IN ENGLISH, 1400-1970

STRUCTURE OF THE TWO PART VERB

1.0 The designation 'two part verb' will be used in this paper for the construction in English consisting of a verb + preposition. By orthographic convention these are two or more separate units; grammatically they combine to perform the predicative function.

1.0.1 The term 'preposition' is used in preference to the perhaps equally apt term 'adverb'. The terminological ambiguity of such formatives as in, at, to, above, out, from, below in many English syntactical contexts is still a matter of grammatical speculation. As will be shown below, most of the grammarians cited opt for the term preposition when applied to the two part verb construction.

THE TWO PART VERB IN LITERATURE IN ENGLISH, 1400-1970

1.1 The following chronologically ordered citations constitute a brief survey of the incidence of the two part verb in literature in English from Chaucer to the present.

1.1.1 Geoffrey Chaucer, Canterbury Tales, "The Knight's Tale," lines 1868-69 (1387-1400).

And haried forth by arme, foot and to,
And eke his stede driven forth with staves.

1.1.2 Robert Greene, A Notable Discovery of Cousenage (1592).

The nature of the setter is to draw in any person familiarly to drinke with him.

1.1.3 The Bible, King James Version, (1611).

When a man hath taken a new wife, he shall not go out to war, neither shall he be charged with any business; but he shall be free at home one year, and shall cheer up his wife which he hath taken. (Deuteronomy. 24:5)

1.1.4 Robert Burton, The Anatomy of Melancholy, 6th ed. (1651).

I have lived a silent, sedentary, solitary, private life, mihi et Musis, in the university as long almost as Xenocrates in Athens, ad senectam fere, to learn wisdom as he did, penned up most part in my study.

1.1.5 Sir Thomas Browne, Hydriotaphia; Urn-Burial, 5th ed. (1686).

The relics of many lie like the ruins of Pompeys, in all parts of the earth; and when they arrive at your hands, these may seem to have wandered far.

1.1.6 Cotton Mather, The Diary (1703).

But God is going to build up my family in a far more important and illustrious instance.

1.1.7 Daniel Defoe, Serious Reflections of Robinson Crusoe (1720).

What are the sorrows of other men to us and what their joy? Something we may be touched indeed with by the power of sympathy, and a secret turn of the affections.

1.1.8 Jonathan Edwards, Sinners in the Hands of an Angry God (1741).

It is a great furnace of wrath, a wide and bottomless pit, full of the fire of wrath, that you are held over in the hand of that God.

1.1.9 James Boswell, The Life of Samuel Johnson (1791).

I flatter myself that few biographers have entered upon such a work as this.

1.1.10 William Ellery Channing, The Moral Argument Against Calvinism (1820).

It teaches that the rest of mankind he is pleased to pass over and to ordain them to dishonor and wrath for their sins.

1.1.11 Herman Melville, Typee (1846).

From the verge of the water the land rises uniformly on all sides, with green and sloping acclivities, until from the gently rolling hillside and moderate elevations it insensibly swells into lofty and majestic heights, whose blue outlines, ranged all around, close in the view.

1.1.12 William Dean Howells, A Modern Instance (1882).

Marcia stooped down, and pulled her mother up out of her chair with a hug.

1.1.13 James Branch Cabell, Jurgen (1919).

Then Jurgen was somewhat abashed, and felt that

it did not become him, who had so recently cut off the head of his own wife, to assume the airs of a precisian.

1.1.14 Harold Pinter, The Birthday Party (1958).

He rises, takes the plate from her, sits at the table, props up the paper and begins to eat.

1.1.15 Editorial, "Equal Chance for College," Richmond Times-Dispatch, April 16, 1970 (p. A-14).

Two elementary facts must be kept in view in the effort for wholesome diversification of collegiate student bodies. One is that to seek out one college instead of another is a matter of personal choice.

1.1.16 The above instances of the use of the two part verb in literature in English are evidence that the construction at least dates from the Middle English period. Some language historians are of the opinion that there has been an increasing use of the construction in English. Myers (1966) states,

There has also been a great increase in what are now usually called verb-adverb combinations, such as put away, put by, put down, put in, put off, put out, and put up. (p. 254).

Since Myers is primarily interested in tracing the historical development of the language, he does not comment on the grammatical significance of the construction, nor does he offer reasons for the increase in its use. Sheard (1954) similarly remarks,

To light up leads us to an English construction which is becoming more and more popular. . . . The words are always kept separate, yet, although the adverb is separated from the verb,

it is in very close association with it, and there can be no doubt that the speaker has in mind one process only, not the separate ideas of an action modified by the conditions denoted by the adverb, and the expression of the thought in two words is merely a matter of convenience, to avoid an ugly construction, to uplight, the true English type, with the adverb preceding the verb, but one contrary to present-day usage. (p. 67).

1.1.17 There is no conclusive methodology for ascertaining the idiomatic character of spoken English as it existed at any given point in the history of language, at least prior to the development of modern recording techniques. What has been done here is to show the existence of the two part verb construction in written English prior to the present day.

On certain evidence, however, we can make an a priori assumption that the construction has a remote history as an idiom in English speech, that its distribution was and is of high frequency in spoken English, as against a relatively low frequency in written English. Shakespeare made telling use of dialect in shaping 'low' characters, and he makes frequent use of the two part verb even in dialogue spoken by characters of superior social rank:

Come on
Take up, take up
And make nothing of
To spend upon his haters
I am bound to
As dreams are made on
O Hamlet, what a falling-off was there!

Nist (1966) points out (pp. 257-8) that,

Othello falls into a trance over the terrible difference of meaning between with and on in

the context of Iago's malicious accusations:

Lie with her! lie on her! We say lie on
her, when they belie her. Lie with her!
'Zounds that's fulsome!

With the Latinate expansion of English vocabulary and the development of a purely literary style harking back to ancient classical writers, there was the tendency in the century following Shakespeare to sharply differentiate between written and spoken language. We recall that Dryden rewrote Shakespeare under the impression that he was somehow improving on the Bard by recasting Antony and Cleopatra in more decorous language. Yet the style of Dryden's contemporary, the poor preaching tinker, John Bunyan (1628-1688), abounds in two part verbs, suggesting that his simple, straightforward language more nearly reflects the speech of common men, which the writings of his more erudite contemporaries in the seventeenth century did not do.

The expansion of education and the resulting increase in a reading public endowed with a modicum of education gave rise to journalism at the end of the seventeenth century and the style of writing was designed to coincide with the reading comprehension of the public, taking on more of the idiomatic character of the language as spoken, rather than setting a style to please the literati. Daniel Defoe (1659-1731) was a prolific journalist until turning to fiction in 1719. He makes use of the two part verb in all his work with noticeable frequency. The rise of the novel in the

mid-eighteenth century was the result of the appeal of the genre to a wide reading public. Samuel Richardson does not hesitate to use the two part verb with customary elegance, and it appears quite naturally in Fielding and as a component of the more direct style of Smollett. The use of dialogue in novels, while still in the context of a 'literary' style, would still smack of spoken idiom according to the character's social station. It is also possible that the eighteenth century clergy, though steeped in classical learning and priding themselves on style, would not forget that their sermons were directed to a median of the population. In the writing of Cotton Mather, Jonathan Edwards, and William Ellery Channing (See 1.1.6, 1.1.8, and 1.1.10 above) the two part verb is not only evident, but used with stylistic force.

THE TWO PART VERB IN GRAMMARS OF ENGLISH, 1700-1950

1.2 Aristarchus of Alexandria (c. 217-145 B.C.) isolated the eight parts of speech. The codification of Greek grammar by his pupil, Dionysius Thrax, has served as a model for grammars to our own day. Dykema (1961) outlines the stages by which formal grammar, beginning with Thrax, descended via the Romans to become an integral part of scholarly studies in medieval Europe.

Of these three stages, the third, the medieval, is much the longest; in formal education and scholarship it lasts well into the eighteenth century and therefore has a duration of well over a thousand years. Of course, during the last two or three hundred of those years a great change had come over Europe, due partly to an intimate reacquaintance with the heritage of Greece and Rome. But in the field of philology this meant largely a return to the attitudes of the ancients. It also meant the transference of the whole philological approach--ancient and medieval--to the modern vernacular languages. (p. 464).

This schema, evolved from the 'attitude of the ancients' to which Dykema refers, is that in which the study of grammar consists of learning what is 'correct' and of remedying 'errors' encountered in everyday speech. This prescriptive schema still shackles much teaching of English as a language. Only in the last thirty to forty years have grammarians concentrated on describing language 'like it is' rather than continue to set up standards of 'correctness' which stemmed, among other things, from consciousness of social strata and the failure to recognize the dichotomy of spoken language and written language.

1.2.1 Several consistencies of approach are evident among the following citations.

(a) All the grammarians cited in some way recognize that an affinity exists between the verb and its prepositional affix.

(b) The prepositional affix functions to convert a usually intransitive verb to a transitive verb.

(c) If the two part verb is used in a passive sentence, the object of the verb in the active version of the sentence becomes the subject of the verb in the passive version.

(d) The schema of orthographic units, isolated by Aristarchus as the parts of speech and later more fully defined as grammatical units by Thrax in his Teche Grammatike of the second century B.C., is consistent. (See Dinneen, 1967, p. 98 ff.) As Dykema points out, quoting Thrax (1961, p. 457):

The direct source of most of our widely used grammatical terms is Dionysius Thrax's little Techne Grammatike. . . . This little work will illustrate how close many of our school grammars still are to their source of more than 2000 years ago:

Of discourse there are eight parts: noun, verb, participle, article, pronoun, preposition, adverb, and conjunction.

1.2.2 We suggest that this conceptualization of the orthographic unit (or formative) as a free-standing grammatical unit can blind grammarians to important functional entities such as the two part verb, which certainly functions as a syntactic and semantic entity in English. Furthermore, as we shall see later (1.2.15 below), while formatives undoubtedly contain unique semantic content, when they combine with another formative, whether ordinarily represented orthographically as two formatives or not, they have the grammatical significance of one formative and assume new lexical significance.

1.2.3 Michael Mattaire, The English Grammar: or an Essay on the Art of Grammar (1712):

The Composition of Words with Prepositions.
 . . . The Sense of the word is sometimes altered by composition; as to stand with, to withstand; to stand under, to understand; to run out, to outrun; to give, to give over, to forgive.

The English prepositions may compound words by being put after, without governing a word; as to go on, to go out, to run in, to go by, to get up, to pass over . . .

The particle which compounds the verb by following it, does not always go next to the verb; but the Noun, which is governed by the verb, is often placed between; as, i keep in my breath or i keep my breath in; i call back my word or i call my word back. (p. 110)

Maittaire's reason for considering the verb + preposition construction a 'compound' reflects the prevailing scholarly conviction that the grammar of English should be modeled on that of ancient languages:

This use of particles is by me here called Composition, because when they are rendered into Latin or Greek, it is always expressed by a compounded word.

1.2.4 Bishop Robert Lowth, A Short Introduction to English Grammar, with Critical Notes (1762):

Verbs are often compounded of a Verb and a Preposition; as, to uphold, to outweigh, to overlook, and this composition sometimes gives a new sense to the Verb; as to understand, to withdraw, to forgive. But in English the Preposition is more frequently placed after the Verb, and separate from it like an Adverb; in which situation it is no less apt to affect the sense of it, and to give it a new meaning; and may still be considered as belonging to the Verb, and as a part of it. As, to cast, is to throw; but to cast up, or to compute, an account, is quite a different thing. . . . So that the meaning of the Verb, and the propriety of the phrase, depend on the Preposition subjoined. (Quoted in Tucker, 1961, pp 104-5).

Bishop Lowth's current fame rests on his initiation of the prescriptive approach to the study of grammar which is still so prevalent in the teaching of English. It was he who outlawed the use of the idiomatic double negative on the logical grounds that two negatives make a positive. Of prepositions at the end of a relative clause he had this to say (and his words still echo in schoolrooms two hundred years later):

This is an idiom which our language is strongly inclined to; it prevails in common conversation, and suits very well with the familiar style in writing; but the placing of the Preposition before the Relative is more graceful, as well as more perspicuous; and agrees much better with the solemn and elevated style.

Here is an example of the attitude that written and spoken language existed on different planes, the one 'elevated' and the other 'common.' Dryden, in revising his Of Dramatick Poesie, An Essay in 1688, had carefully rewritten each sentence ending with a preposition. This 'common fault' Dryden criticized in the works of Ben Jonson and remarked that it was a fault 'I have but lately observed in my own writings.' (Potter, 1966, pp. 101-2). Dryden's grammatical taste was guided by the fact that such a construction did not appear in Latin or Greek, the models of ideal, 'correct' English.

1.2.5 Lindlay Murray's English Grammar, Adapted to the Different Classes of Learners first appeared in 1795 and went through hundreds of editions and printings from then

until the final and sixty-fifth edition issued in London in 1871. Murray plagiarizes Lowth with such precision that to quote him here would be superfluous. Without giving Lowth one iota of credit, Murray prints the paragraph on compound verbs, for instance, word for word with the paragraph given above in 1.2.4, with the exception that, for some reason, he changed the second italicized example, to outweigh, to read to invest. As we shall see in 1.2.7 below, Murray was not the only one in the early nineteenth century to plagiarize Lowth. Even if the Bishop's words are not brazenly copied or adapted, his prescriptive schema pervaded grammars of English for generations.

1.2.6 W. Snyder, whose Grammatical Pioneer or Rational Instructor was printed in Winchester, Virginia, in 1834, had probably been trained with a Lowth-inspired grammar. Yet he cannot forget quite, that a preposition is sometimes an adverb and 'modifies' a verb--as Dionysius Thrax propounded 2000 years before:

When prepositions are annexed to verbs, they change the meaning and may be considered as a part of the verb, but they do not coalesce in orthography; as, to sum up, to fall down-- or they may be considered as modifiers. (p. 146).

1.2.7 In 1832 Samuel Kirkham published his English Grammar in Familiar Lectures. Gleason (1965) describes Kirkham's work as,

One of the very popular textbooks in the first half of the nineteenth century. (p. 76n).

This is borne out by William Hall's quoting Kirkham (or

is it Bishop Lowth again?) in his Encyclopedia of English Grammar, printed in Wheeling, Virginia--which it was then--in 1849.

Verbs are often compounded of a verb and a preposition; as, to uphold, to withstand, to overlook; and this composition gives a new meaning to the verb; as, to understand, to withdraw, to forgive. But the preposition is more frequently placed after the verb, and separately from it like an adverb; in which situation it does not less affect the sense of the verb, and gives it a new meaning; and in all instances, whether the preposition is placed either before or after the verb, if it gives a new meaning to the verb, it may be considered a part of the verb. Thus, to cast means to throw; but to cast up an account, signifies to compute it; therefore up is a part of the verb. The phrases to fall on, to bear out, to give over, convey very different meanings from what they would if the prepositions on, out, and over, were not used. Verbs of this kind are called compound verbs. --Kirkham (pp. 197-8).

1.2.8 The Rev. R. W. Bailey, A.M., aptly titled his grammar published in Philadelphia in 1853, English Grammar, a Simple, Concise, and Comprehensive Manual.

Prepositions are sometimes used as component parts of verbs in predication; as, 'He was laughed at;' 'The child was cared for,' &c. (p. 149).

The quotation is typical of the simple and concise statements in the Rev. Bailey's Manual.

1.2.9 Alonzo Reed and Brainard Kellog collaborated on one of the most widely used school grammars in America at the turn of the century and for years afterward. The quotation below is from the 1890 edition; Gleason (1965) used the Reed and Kellog edition of 1913 to describe their system of sentence diagramming. With typical conservatism, Reed

and Kellogg do not recognize the two part verb as a grammatical entity. They point out via numerous examples that prepositions 'usually' accompany certain words. Verbs and adjectives are uncritically mixed:

Abide at, by, with; accomodate to, with; advantage of, over; agree to, with; angry at, with; anxious about, for; argue against, with; arrive at, in; attend on, or upon, to; careless about, in, of; communicate to, with; compare to, with; consists in, of; defend against, from; die by, for, of; different from; familiar to, with; impatient for, of; indulge in, with; influence on, over, with; insensible of, to. (p. 171).

1.2.10 The fact that the prepositional affix transforms a usually intransitive verb to a transitive verb is the point stressed by John Hart in his 1898 Advanced English Grammar, published in Richmond, Virginia. His statement is brief and he does not indicate that the preposition is a part of the verb, although he states that it is 'joined to' the verb.

It also happens frequently that an intransitive verb becomes a transitive verb by having a preposition joined to it; as, The man laughed; The man laughed at the jest. (p. 40).

1.2.11 A typical school grammar of the turn of the century is that of Albert Leroy Bartlett, The Essentials of Language and Grammar (1901). Bartlett is primarily concerned with defining transitive and intransitive verbs. He does note, however, that the particle combines with the verb in a passive sentence, but gives it the attribute of 'an adverbial force' rather than recognizing it as an integral part of the verb.

The hunter shot the deer.
 The hunter shot at the deer.

It will be seen that it is not the verb itself but the use of the verb that determines whether it be transitive or intransitive. The verb shot has a direct object in the first sentence, and is there transitive. It has not a direct object in the second sentence, and is there intransitive.

A verb used intransitively and followed by a preposition in the active voice, when used in the passive voice frequently retains the preposition with an adverbial force, thus:

- a. The men shot at the great moose.
- b. The great moose had been shot at by the men. (p. 252).

1.2.12 The concept that an intransitive verb becomes transitive with the catalytic prepositional affix seems to become central to grammarians at the turn of the century. We saw it in Hart's work (1.2.10 above), and it is also central to Bartlett's statements in 1901 (1.2.11 above). George Lyman Kittredge and Frank Edgar Farley, in their Advanced English Grammar (1913), continue in this vein:

An intransitive verb followed by a preposition is often used in the passive, the object of the preposition becoming the subject of the verb.

Active Voice

Passive Voice

Everybody laughed at him.

He was laughed at by everybody.

The attorney general has not yet passed upon this bill.

This bill has not yet been passed upon.

In this idiom, the preposition is treated like an ending attached to the verb to make it transitive. In other words, laugh at, pass upon, etc., are treated as compound verbs, and the object of the preposition is, in effect, the object of the compound. In the passive, this object becomes the subject and the preposition (now lacking an object) remains attached to the verb. (p. 111).

It is interesting to note that the authors interpret the preposition more or less as an inflectional morpheme that changes the grammatical significance of the verb from transitive to intransitive. They still, however, think in terms of a preposition inherently governing an object, even though the verb + preposition construction is designated as a 'compound.'

1.2.13 Otto Jespersen in his monumental A Modern English Grammar gives an exhaustive taxonomy of the two part verb.

By way of introduction he says, writing in 1924:

A great many verbs can be constructed either with an object or with a preposition (plus its object). In the latter case we may say that the object is governed by the whole composite phrase consisting of the verb and the preposition. The meaning of the two constructions is sometimes identical or nearly so, but in some cases there is a marked difference, and not infrequently the preposition serves to make the whole expression more graphic. (III, p. 252).

1.2.14 In discussing the development of Basic English by C. K. Ogden and I. A. Richards about 1930, Lincoln Barnett in The Treasure of Our Tongue (1962) demonstrates the semantic flexibility given a verb when it is 'merged' with a preposition.

The critical discovery by Richards and Ogden was that their stripped-down lexicon required only eighteen verbs--as against four to ten thousand that may be available in the vocabulary of a college-educated man. The eighteen vital verbs are: be, come, do, get, give, go, have, keep, let, make, may, put, say, see, seem, send, take, and will. The ability of these verbs to do the work of all the others stems from their gift of being able to enter into an astonishing number of mergers with prepositions. Thus a combina-

tion like give out can fulfill the essential purposes of announce, award, bequeath, bestow, dispense, distribute, emit, expend, exude, grant, proclaim. And even more spectacularly, give up can cover the pivotal meanings of abandon, abdicate, abjure, cease, cede, desert, desist, discontinue, forgo, forsake, relinquish, renounce, resign, sacrifice, stop, succumb, surrender, vacate, withdraw, and yield.

Although the lists of verbs for which give out and give up can surrogate seems remarkable at first glance, we suggest that the lists furnished here by Barnett could, without too much difficulty be expanded, in view of the extensive vocabulary of English.

The semantic flexibility of the two part verb construction again suggests that what appears to be an increase in usage is not that at all, but rather the surfacing of a commonly employed idiom as the study of language shifted from emphasis on written language to the description of spoken language. A glance at the verbs for which give out and give up can supply the 'pivotal meanings' will reveal that, while not necessarily unfamiliar words, these verbs for the most part do not ordinarily appear in utterances of even college-educated men. The discovery by Ogden and Richards suggests that the eighteen vital verbs coupled with prepositions are perhaps the most commonly used verbs in spoken English. In 1930, when they were working, prescriptive grammar was consistently the approach to language teaching and learning, with concentration on 'elegant in-diting' as it had been for centuries, still with the over-

tones of social superiority associated with the use of 'correct' grammar. The fact that Basic English centered on spoken and not written language automatically brought to light what may be an important reference to the high-level distribution of the two part verb in spoken English.

1.2.15 In December, 1949, American Speech published M. Bertens Charnley's "The Syntax of Deferred Prepositions." Charnley harks back to school grammars at the turn of the century when he writes,

Grammars speak of intransitive verbs being made into transitives through a preposition being tacked on to the verb, so that the latter must be parsed together with them; this is the case with

The humble calling of her female parent
Miss Sharp never alluded to. (Thackery).

But no such explanation would hold good for the verb in

All this labour I was at the expense of
purely from my apprehensions (Defoe).

Charnley is content to label the construction the result of 'Rhetorical Inversion.' The sentence before inversion would read

I was at the expense of all this labour purely
from my apprehensions.

The possibility of was at the expense of being itself a verb does not occur to Charnley as it did to Chomsky some years later, in 1957 (See 1.3.2 below).

DESCRIPTIVE APPROACHES TO THE TWO PART VERB
IN ENGLISH, 1950-1968

1.3 In the preceding section, we have outlined views of grammarians as they appeared in school grammars from the beginning of the eighteenth century to the mid-twentieth century. Early in the twentieth century another approach to the study of language began to take shape. Emphasis shifted from the correctness of written (and therefore spoken language as well) to the description of spoken language, that is, analysis of language structure in the context of the language as spoken in a given language community. Since World War II, as a further development of descriptive grammars, or 'structural linguistics,' a theoretical approach to grammar has come to the fore. This approach attempts to explicitly describe language, and also attempts to explain why and how we use language --more specifically, to explain how sentences, which conform consistently to the grammatical patterns of the language, are formed and produced as spoken utterances. It is mainly with this last category of grammars that we will be concerned here.

1.3.1 In "Two Models of Grammatical Description" (1954), Charles F. Hockett remarks that 'the bulk of the present paper was written between 1949 and 1951.' One of the two models which Hockett discusses in this article is Item

and Process grammar, in which differences in two partially similar forms in a language stem from the one form having been derived from the other.

A derived form consists of one or more UNDERLYING FORMS to which a PROCESS has been applied. (p. 227).

This is essentially the basis for the theory of generative grammars outlined by Noam Chomsky in "Three Models for the Description of Language" (1956), and then published in a somewhat expanded and revised form in Syntactic Structures in 1957. Since 1957 generative grammar, more familiarly called transformational grammar, has been further developed along theoretical and descriptive lines and is presently the primary context in which linguists approach the study of language.

While school grammars continue to deal with the two part verb, the approach and treatment varies widely, depending on the extent of the cultural lag reflected in a given textbook on grammar. The development of descriptive linguistics after World War II involved a number of analytical systems involving morphophonology, syntactic structure, and semantics in varying degrees. Current textbooks, particularly those used in intermediate and secondary schools, may reflect any one, or a combination of several, of the systems that gained prominence at given times from 1950 to the present.

With this brief background in mind, the fact emerges

that grammarians in the period under consideration have been mostly concerned with general rather than specific description and explanation of grammatical phenomena. Thus the two part verb appears in recent publications not as a 'part of speech' performing certain functions, but as a grammatical unit that has certain relationships to other grammatical units. The strictly traditional approach is still apparent in Svartvik (1966) and Palmer (1968).

1.3.2 In Syntactic Structures (1957) Chomsky illustrates the use of some transformations in English. In so doing he makes use of sentences containing two part verbs and introduces his discussion:

There are a large number of productive subconstructions of V that deserve some mention, since they bring to light some basic points in a rather clear way. Consider first such verb + particle (V + Prt) constructions as "bring in," "call up," "drive away." (p. 75).

Chomsky notes that sentences containing a two part verb can undergo the passive transformation with the preposition retained as part of the verb. In the two sentences,

All the people in the lab consider John a fool.

John is considered a fool by all the people
in the lab.

Chomsky designates consider a fool as the verb; this is an instance of the tendency of modern grammarians to often consider a cluster of formatives as performing a single grammatical function. (See 1.2.15 above).

1.3.3 Robert B. Lees studied under Chomsky and worked with

him at M.I.T. In 1960 Lees published a revised version of his M.I.T. doctoral dissertation (1959) under the title The Grammar of English Nominalizations. He offers this definition of the two part verb:

Since the preposition which follows verbs like look (at), step (on), etc. accompanies the verb under passive transformation, and since the object which follows the preposition is not strongly selected by the verb although the preposition is, we analyze these as verb-preposition transitives. (p. 9).

While Lees does not materially differ from traditional grammarians in his definition, he includes an explanatory element: 'the object which follows the preposition is not strongly selected by the verb although the preposition is.'

1.3.4 By 1964 attention of the majority of linguists was centered on transformational grammar. Among others who had been trained in the 'new' theories of Chomsky and their application were Jerrold Katz and Paul Postal. In that year they published An Integrated Theory of Linguistic Descriptions which offered refinements and extensions of generative grammar theory. Among the transformations they discuss are those involving 'order changing transformations'--the derivational process wherein the word order of given sentences may vary without varying the semantic significance of the sentences. For instance, they give the examples:

He looked the number up.

He looked up the number.

They postulate that both of these sentences have the same 'deep' or underlying structure and that by the process of the particle inversion transformation assume one or the other of the forms shown. The attention they give to the two part verb is an indication that it is still a factor to be considered in contemporary grammatical research.

1.3.5 Jan Svartvik, whose On Voice in the English Verb appeared in 1966, states that,

This book is not primarily intended as a theoretical contribution (which of course does not exclude the possibility that it might be used to such ends); it is a corpus-based discussion of some grammatical categories that seem relevant to problems connected with voice in English. (p. vii).

He devotes an entire section (pp. 19-20) to Phrasal and Prepositional verbs.

Verbs of two or more words consist of the verb proper (the 'nucleus') and adverbs or adjectives or prepositions, with which they form close syntactical units.

He distinguishes three classes of such verbs:

Phrasal Verbs (Vph),

An experiment to test this theory was carried out on January 6, 1959.

Prepositional verbs (Vp),

Indeed, with his own salary and his wife's private income, they were really very comfortably provided for.

Phrasal Prepositional Verbs (Vph-p),

He had in fact recovered for Packford some valuable documents which had been made off with by a rather specialised sort of burglar.

Svartvik distinguishes between phrasal and prepositional verbs on the basis of stress and intonation patterns, but more importantly, on the basis of syntax, pointing out that the particle in a phrasal verb has a 'twofold positional privilege,' either prenominal or postnominal. The particle of a prepositional verb, however, must take a postpronominal position in the sentence.

In another section, Prepositional verbs and prepositional phrases (pp. 20-21), he offers a clear-cut diagnosis to distinguish syntactical differences of occurrence of the two grammatical categories. We have already seen that the two part verb plays a conspicuous role in converting intransitive verbs to transitive verbs and also carries the preposition with the verb when an active sentence is transformed to passive. Svartvik provides, in addition to these, a comprehensive set of identification criteria.

1.3.6 J. R. Firth, the English linguist, whose principal work was done in the decade and a half prior to the mid-century mark, advocated the ad hoc approach to the study of language. Language, according to Firth, should be studied in actual use, without consideration of the underlying processes which result in the terminal form we call speech. Following the ad hoc policy of Firth, J. R. Palmer devotes a chapter on the two part verb in his fairly exhaustive A Linguistic Study of the English Verb (1968).

Beyond pointing out the structural aspects of the two

part verb in English sentences, Palmer does not contribute materially to our knowledge of the construction.

Working strictly from what he sees in the sentences before him, Palmer sheds no light on why such a construction exists in the generation of sentences by a speaker of the language.

1.3.7 Jacobs and Rosenbaum (1968) open their chapter on Prepositions (pp. 136 ff.) with the statement,

To grammarians there seem to be almost as many unanswered questions about prepositions as there are about any other single topic in English syntax.

They are, of course, speaking in the context of transformational grammar which still has roots deep in the traditional groundwork of grammarians from Dionysius Thrax through the Middle Ages to the eighteenth and nineteenth centuries. Transformational grammar is a direct outgrowth of Item and Arrangement grammar which also attempted scientific descriptions of grammar (See Hockett, 1954). The terminology and descriptive content of traditional grammars are still an integral part of transformational grammar. What transformational grammar contributes is the formulation of 'deep structure'--the attempt to explain how language is learned by a native speaker and the internal process that takes place before an utterance is actually produced. It is natural that any and all concepts embodied in traditional grammars be questioned and re-examined. We suggest, however, that zeal for scientific description and concentration on confining description and explanation to

an explicit set of principles, i.e., a system of rules, can blind transformationalists to the obvious and the established.

For instance, in the chapter on prepositions cited above, Jacobs and Rosenbaum ask,

What is "of the city" in the following sentence?

Jones approves of the city.

It is difficult to suppose that "of the city" is a noun phrase. For example, cleft sentences like

*what Johnes approves is of the city
are ungrammatical. In other words, "of the city" simply does not function like an NP. Thus, it seems best to assume that this is a different kind of constituent, in particular a prepositional phrase, abbreviated PP. (p. 140).

We submit that a cursory reading of the section in Chomsky's Syntactic Structures cited above in 1.3.2 would have identified approves of as a two part verb (V + Prt) for Jacobs and Rosenbaum. When we apply the cleft sentence test in the light of this knowledge, the sentence is then properly rendered and grammatical:

What Jones approves of is the city.

The sentence also permits the application of the passive transformation:

The city is approved of by Jones.

Further, the particle remains with the verbal when the process of nominalization takes place:

Jones's approval of the city . . .

While the entity of the two part verb is established by these several tests, we suggest that positive results from any one test is sufficient for establishing the identity of the construction.

SUMMARY

1.4 Historically, the two part verb is a grammatical phenomenon in English, certainly dating from the Middle English of Chaucer, on the basis of literary evidence. It would also appear that it is not a relatively new and increasingly used verb construction in day to day speech. The suggestion here is that the semantic flexibility of the two part verb has always rendered it a high level of distribution in spoken English, particularly in view of the limited vocabulary of the 'man on the street,' resulting from little or no education. Its level of distribution in written English rose as literary style increasingly reflected spoken English during the past two or three centuries.

1.4.1 Grammarians of the English language have recognized the two part verb as a grammatical entity from 1700 to the present, even though the emphasis on its grammatical significance may have varied from one era to another.

1.4.2 The question of distribution of the two part verb in spoken English from a historical standpoint remains an opportunity for further investigation.

DEEP STRUCTURE

The preceding chapter comprised a survey of the two part verb as it appeared in literature in English since 1400, and a somewhat parallel survey of its treatment as a grammatical phenomenon in grammars of English from 1700 to the present. We have thus established the construction as an idiom with a degree of remote history in the English language and its existence as a recognized grammatical entity for the better part of three hundred years. The survey of grammars briefly traced the progression from prescriptive grammar to empirical linguistic description, to theoretical linguistics involving transformational generative grammar. It is largely in the latter theoretical, and basically philosophical, frame of reference that the two part verb will be viewed in this paper.

NOAM CHOMSKY: GENERATIVE GRAMMAR AND DEEP STRUCTURE

2.0 The Role of Theoretical Linguistics. Theoretical

linguistics attempts not only to describe a given language, but also to explain the process by which utterances are formed by a speaker. To effect an explicit structural description and explanation, certain limiting factors establish the operating basis for generative grammar theory. These factors--assumptions of Noam Chomsky--are well-known, having appeared repeatedly and without significant alteration in Chomsky's publications from Syntactic Structures in 1957 through Aspects of the Theory of Syntax in 1965. We will outline certain of Chomsky's assumptions which are pertinent to this paper, along with criticisms which have appeared elsewhere before proceeding to attempt broadening and expanding some of these notions. It should be immediately apparent that what we have chosen to call 'limiting factors' remove generative grammar from a strictly empirical status to that of the hypothetical.

2.01 The ideal speaker-listener. To achieve an explicit structural description of spoken utterances, some norm must be specified if a coherent methodology is to be formulated. In an 'ideal speaker-listener' Chomsky defines the source of the utterances with which his linguistic theory will deal:

Linguistic theory is concerned primarily with an ideal speaker, in a completely homogeneous speech-community, who knows its language perfectly and is unaffected by such grammatically irrelevant conditions, shifts of attention and interest, and errors (random or characteristic) in applying his knowledge of the language in actual performance. (Chomsky, 1965, p. 3).

By rejecting 'grammatically irrelevant conditions'. Chomsky creates an ideal, well-defined, and explicit set of conditions under which the utterances of a speaker are to be described and explained.

Hockett (1968) strenuously objects to this commitment to an ideal speaker-listener. He argues that language is not deterministic and therefore cannot be described by a deterministic model, that is, by any system that purports at any one point in its operation to explicitly describe the future course of the operation of that system. Any system that is not deterministic is by definition ill-defined. It then follows that language, a non-deterministic system, is ill-defined. Yet Chomsky defines his theory of generative grammar:

By a generative grammar I mean simply a system of rules that in some explicit and well-defined way assigns structural descriptions to sentences. (1965, p.8).

Hockett holds, and we concur, that an ill-defined system cannot be described by a well-defined set of rules. Of the ideal speaker-listener, therefore, Hockett says,

There is nothing wrong with employing idealizations in a theory, provided they do the job for which they are intended; no one claims that any ideal speaker-listener actually exists, any more than that there are any truly rigid rods or precisely accurate clocks (in relativity). We must remember what an idealization is. It is not what we are analyzing, not part of our subject-matter; rather, it is part of the terminological apparatus with which we analyze and discuss real objects and systems. Now, once we abandon the notion that a language is well-

defined, this particular idealization becomes useless, like the now outmoded 'economicman.' . . . In the present case, we can do much better by referring in everyday terms to the average or typical user of a language--who has in full measure all the 'faults' of which Chomsky divests his imaginary ideal. (1968, pp. 67-8).

Hockett also objects to the incorporation in the description of the ideal speaker the notion that the speaker 'knows his language perfectly.' This knowledge of his language Chomsky defines as,

The underlying system of rules that has been mastered by the speaker-hearer and that he puts to use in actual performance. (1965, p. 4).

The assumption here is that the ideal speaker-listener knows his language as an explicit set of rules which are employed in the process of formulating utterances. Hockett holds that the speaker does not 'know' his language in this formal sense, but rather 'knows how to use' his language.

In the have knowledge of sense, few users of a language know much in any systematic way about their language, though obviously they can quickly discover any number of odd bits of correct information simply through self-observation--unless even their actual usage is concealed from them, as it often is, by tribal belief. In the same way, the average man has little knowledge of the muscular mechanics of walking . . . and, if he is so unfortunate as to have cancer, is not, merely by virtue of that, an authority on pathology. (1968, p. 63).

As we shall attempt to show later, Hockett's views seem to us more acceptable than Chomsky's assumptions.

2.02 Competence and Performance. Chomsky terms the

underlying knowledge of a speaker as the speaker's 'competence.' The speaker's 'performance' is the manifestation of his competence in the utterances he produces. Thus it is Chomsky's view that a speaker has at his disposal all the resources of his native language, that is, as Chomsky says, he 'knows his language perfectly.' If we think of the speaker in terms of Hockett's 'average' or 'typical' speaker, rather than the 'ideal' speaker-listener, the concept becomes realistic in that the extent of the language resources each native speaker of a given language has internalized will vary with each individual speaker. This is reflected in obvious actual differences in the vocabularies and complexity of the utterances of different speakers of English, for instance.

One assumption of Chomsky's with which Hockett agrees, and which is generally accepted by linguists, is that native language speakers are able to produce an indefinite number of novel sentences.

Fluent speakers both produce and understand sentences that they have never previously encountered, and they can do this for indefinitely many such novel sentences. In the normal use of language, the production and comprehension of new sentences, created on the spot, is the rule rather than the exception. The exceptions are such things as customary greetings, stereotyped exclamations, cliches, direct quotations, and so forth. Normally, what we say and what we hear others say is not intelligible because it is a repetition of some utterance with whose previous occurrences we are already familiar, but because we possess the means of creating new sentences and interpretations of new sentences. (Katz, 1966, p. 100).

For Chomsky, this ability to formulate an infinite number of new sentences and to interpret the like when we listen to another speaker is an aspect of competence:

the most striking aspect of linguistic competence is what we may call the 'creativity of language', that is, the speaker's ability to produce new sentences, sentences that are immediately understood by other speakers although they bear no physical resemblance to sentences which are 'familiar.' (1964, p. 11).

2.03 Competence and Deep Structure. The competence of Chomsky's ideal speaker-listener, his 'ability to produce new sentences,' is an internalized grammatical system, and Chomsky draws a distinction between traditional grammar and generative grammar:

A grammar, in the traditional view, is an account of competence. It describes and attempts to account for the ability of a speaker to understand an arbitrary sentence of his language and to produce an appropriate sentence on a given occasion. If it is a pedagogic grammar, it attempts to provide the student with this ability; if a linguistic grammar, it aims to discover and exhibit the mechanisms that make this achievement possible. The competence of a speaker-hearer can, ideally, be expressed as a system of rules that relate signals to semantic interpretations of these signals. The problem of the grammarian is to discover this system of rules; the problem of linguistic theory is to discover general properties of any system of rules that may serve as the basis for human language. (1964, p. 10).

Chomsky, then, has no basic quarrel with the descriptive properties of traditional grammar. Where traditional grammar falls short is that it does not provide for an analysis of the process through which a speaker-listener formulates and interprets sentences.

Traditional grammars make an essential appeal to the intelligence of the reader. They do not actually formulate the rules of the grammar, but rather give examples and hints that enable the intelligent reader to determine the grammar, in some way that is not at all understood.

Here 'the rules of the grammar' are those internalized rules which are the basis of a speaker-hearer's competence. In order to formulate the rules of the grammar, spoken utterances must be analyzed to determine their 'deep structure,' the underlying sentences, which are sentences in their simplest grammatical form, that by a 'series of transformations' are processed to produce spoken utterances, or 'terminal strings' of words. The terminal string, the final form of the process of sentence generation, the spoken utterance, is the 'surface structure.'

2.04 The Components of a Generative Grammar.

A generative grammar must be a system of rules that can iterate to generate an indefinitely large number of structures. This system of rules can be analyzed into the three major components of a generative grammar: the syntactic, phonological, and semantic components. The syntactic component specifies an infinite set of abstract formal objects, each of which incorporates all information relevant to a single interpretation of a sentence. (Chomsky, 1965, p. 16).

The phonological component 'determines the phonetic form of a sentence generated by the syntactic rules.' Since the phonetic form, the spoken sounds of a sentence is the utterance itself, and therefore the 'surface structure', we will not be concerned with the phonetic aspect of utterances in this paper. Here we are concerned with

deep structure, the process by which utterances are generated by a speaker.

The semantic component 'determines the semantic interpretation of a sentence.'

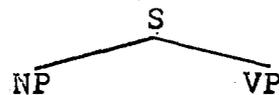
That is, it relates a structure generated by the syntactic component to a certain semantic representation. Both the phonological and semantic components are therefore purely interpretive. Each utilizes information provided by the syntactic component concerning formatives, their inherent properties, and their interrelations in a given sentence. Consequently, the syntactic component of a grammar must specify, for each sentence, a deep structure that determines its semantic interpretation and a surface structure that determines its phonetic interpretation. The first of these is interpreted by the semantic component; the second, by the phonological component. (1965, p. 16).

Syntax is the general basis for deriving a structural description in Chomsky's generative grammar theory. By definition, then, the sentence (or clause) as the structural unit of language is the starting point for deriving the rules of grammar, just as it is in traditional grammar. A given complex sentence--that is, any sentence which contains more than one subject and one verb--can be analyzed as two or more simple sentences which are formed in deep structure and then, by a series of transformations (or in some cases by only a single transformation), are amalgamated to form the terminal string, the surface structure of the sentence.

The base of the syntactic component is a system of rules that generate a highly restricted (perhaps finite) set of basic strings, each with an associated structural description called a

base Phrase-marker. These base Phrase-markers are the elementary units of which deep structures are constituted. . . . Underlying each sentence of the language there is a sequence of base Phrase-markers, each generated by the base of the syntactic component. . . . In addition to its base, the syntactic component of a generative grammar contains a transformational subcomponent. (Chomsky, 1965, p. 17).

Thus in Chomsky's theory, a base Phrase-marker (S) is the simplest binary form of a sentence, consisting of a subject, or Noun Phrase (NP), and a predicate, or Verb Phrase (VP). These symbols, indicating that NP and VP are derived from S, are diagrammed by means of a tree diagram:



Then, via further branching of the tree diagram, the syntactic units of the NP and the VP are indicated, until no further derivation in symbolic form is possible. These symbols are what Chomsky refers to as 'an infinite set of abstract formal objects' in his definition of the syntactic component cited above. The final operation is to substitute lexical items for the symbols that appear in the final derivation, the terminal string of formatives. It is not necessary at this point to demonstrate the detailed use of a tree diagram. In transformational grammar it is the basic graphic means for the structural description of a sentence, and we will have occasion to use such a diagram later in this paper when the work of Charles Fillmore is discussed.

2.05 Syntactic Features. The terminal strings of symbols derived through a tree diagram, as we have said, represent lexical items. Given a terminal string in the form of symbols, then any appropriate lexical item can be substituted for a given symbol. The resulting sentence will be grammatically acceptable, but not necessarily semantically so. We will use a classic example from Chomsky himself. Let the terminal string (here much simplified) be:

Adj. + Adj. + Noun + Verb + Adv.

By substitution of lexical items, it is possible to derive this grammatical sentence:

Colorless green ideas sleep furiously.

It is obvious that unless the lexical items are in some way restricted, sentences generated by Chomsky's system may be semantically unacceptable. In Aspects of the Theory of Syntax (1965) Chomsky introduced the concept of 'syntactic features.' There is a question of terminology here, as we shall see.

Syntactic features are designated in abstract terms, all stemming from traditional grammar. Nouns, for instance, can be described as 'abstract,' 'concrete,' 'animate,' 'inanimate,' 'human,' 'nonhuman,' and so forth. Further, we can describe them by the terms 'singular' or 'plural.' Chomsky reasoned that these features could be assigned to the symbols in the terminal string to limit the selection of the lexical items to be substituted and to a great

extent thus eliminate the derivation of such semantically unacceptable sentences as 'Colorless green ideas sleep furiously.' Thus the noun 'dog' would have the features

- + nonhuman
- + animate
- + concrete
- + count
- plural

The feature [- plural] should be noted. In feature analysis, as this process is called, the features of a lexical item can be indicated by what the item is not as well as what it is.

The question of terminology that arises is whether these features are 'syntactic,' as Chomsky calls them, or whether they are actually semantic in character. If we adhere to Chomsky's explicit division of the components of a generative grammar into syntactic, phonological, and semantic, and if the syntactic component is to provide all the information for interpretation by the phonological and semantic components, then, to avoid confusion, they can be assigned the term 'syntactic.' The fact remains, however, that such designations as human, nonhuman, animate, inanimate, mass, count, proper, concrete, abstract, all incorporate a semantic load rather than a strictly syntactic significance. We hold that the semantic component is importantly active in deep structure, and that any concept of deep structure as a process of sentence generation by a speaker cannot be regarded only in terms of syntax.

PSYCHOLOGICAL ASPECTS OF DEEP STRUCTURE

2.1 Innate Grammar vs. Capacity for Language Learning.

We have referred to Chomsky's linguistic theories as 'basically philosophical', although he attempts to create an explicitly defined system by the use of symbolic notation. Broadly speaking, Chomsky's major contribution to linguistics has been his revival of interest in the process which internally takes place when a speaker produces an utterance. Since he is working for a system that is explicit and well-defined, he does not choose to involve empirical data from psychology. He has instead preferred to deal in terms of epistemology, drawing on the ideas of Wilhelm Von Humbolt (1767-1835), who may be called the originator of modern linguistic analysis, René Descartes (1596-1650), and the Port-Royal Grammaire Générale et Raisonnée of 1660.

From Descartes he draws the concept that humans are born with 'innate mechanisms' of language which are activated by 'appropriate stimulation' to account for a child's acquisition of language (1965, p. 48). Elsewhere Chomsky refers to these 'innate mechanisms' as an 'innate linguistic theory.'

To learn a language, then the child must have a method for devising an appropriate grammar, given primary linguistic data. As a precondition for language learning, he must possess,

first, a linguistic theory that specifies the form of the grammar of a possible human language, and, second, a strategy for selecting a grammar of the appropriate form that is compatible with the primary linguistic data. As a long-range task for general linguistics, we might set the problem of developing an account of this innate linguistic theory that provides the basis for language learning. (1965, p. 25).

Chomsky is careful to state that the innate linguistic theory which humans are born with does not equip them to learn a particular language rather than another, but that it is a universal inherent ability of man.

Hockett emphatically rejects what he calls the 'metaphysics' of Chomsky's assumption and calls it

simply a peculiar formulation of something that we have all known for a long time: that almost any human child can and, if he survives, almost inevitably will learn a language, but that human genes and the human condition are prerequisites. . . . The alternative to his 'rationalist' views is not the eighteenth-century 'scientific naturalism', but twentieth-century empirical science, built on the findings of hundreds of dedicated investigators. Chomsky has heard of genes, but gives no sign that he knows anything of cultural transmission, which is far more widespread than our own species, and which is just as 'biological' a mechanism as are genes. As far as we know, it is by just such mechanisms that 'millions of years of evolution' can transmit results to any specific organism, human or other. (1968, p. 79-80).

What human beings possess at birth, then, is not any sort of universal, unified system of grammatical rules genetically inherited, but rather a genetically inherited and culturally transmitted capacity to learn language.

Norbert Weiner was aware of this before Chomsky published his first exposition of generative grammar in

Syntactic Structures in 1957.

We merely state the fundamental facts by saying that in man, unlike the apes, the impulse to use some sort of language is overwhelming; but that the particular language used is a matter which has to be learned in each special case. It apparently is built into the brain itself, that we are to have a preoccupation with codes and with the sounds of speech, and that the preoccupation with codes can be extended to those that concern themselves with visual stimuli. However, there is not one fragment of these codes which is born into us as a pre-established ritual, like the courting dances of many of the birds, or the system by which ants recognize and exclude intruders into the nest. The gift of speech does not go back to a universal Adamite language disrupted in the Tower of Babel. It is strictly a psychological impulse, and is not the gift of speech, but the gift of the power of speech. (1954, p. 83).

In a review of B. F. Skinner's Verbal Behavior (1959), Chomsky rejected the notion that a simple stimulus-response-reinforcement pattern could account for the acquisition of language by a child. He is seconded by Joseph Church (1961). We regard what Max Black says on the subject as highly pertinent to many of the ideas which we will advance later in this paper.

Chomsky and his followers claim that current stimulus-response theories of learning are helpless to account for [the learning of language]. But it seems premature to assume as Chomsky seems inclined to do, some "innate" capacity for innovation. True though it may be, such an account is hardly illuminating. The secret seems to reside in something no less fundamental than the apprehension of relationships in general.

.....
The requisite generalization and application of novel cases enters at the ground floor, as it were, with the basic understanding of relational words, including those that mark grammatical

rules. It would be wrong to think of words as independent blocks which have, somehow and mysteriously, to be put together again in possibly novel ways to produce unified structures. We start with "structures" (sentences) whose meanings are apprehended as wholes. As we begin to analyze these holophrases into elements that can be rearranged and recombined, we learn at the same time how to organize them. Thus analysis and synthesis are inseparable aspects of the mastery of linguistic structure; to be able to divide is necessarily to know how to connect and vice versa. If there is any residual "mystery," it is the basic one of how we perceive complexity in unity--how we ever manage to see parts related as a whole. (1968, p. 66).

We hold that the 'apprehension of relationships in general' is basic to the internal process, the deep structure, through which utterances are produced by a speaker. Chomsky has stressed that the linguistic structures which undergo transformations to produce surface structures may in many cases be entirely different from the surface structure. Even so, he limits his analysis in such a way that, abstract symbols notwithstanding, words 'as independent blocks' are still the units on which his theory rests, and the traditional syntactic, semantic, and grammatical models of 'complete' sentences still comprise the material for generative grammar structural descriptions. We agree with Longacre:

Until recently American structural linguistics has assumed a model of language in which phonemes built into morphemes which in turn built into syntactic units. As a result, phonology, morphology, and syntax were regarded as successively higher layers of structure. Generative grammar has turned this model upside down and ordered it rule-wise with a cover symbol for sentence as the first rule and phonological rules for transcription

into terminal sentences as the last section of rules. However novel may be certain aspects of generative grammar, it has not challenged the model in any essential way. (1964, p. 7).

What Longacre does not choose to recognize here is, as we have mentioned before, the undeniable importance of the concept of deep structure which Chomsky's theory contributed to modern linguistics.

Chomsky himself has not closed the door to the psychological implications of utterance production. The year following publication of Aspects of the Theory of Syntax, Chomsky published "The current scene in linguistics: present directions" in College English (May, 1966). In this article he says,

The deep structure of a sentence is the abstract underlying form which determines the meaning of the sentence; it is present in the mind but not necessarily represented directly in the physical signal. The surface structure of a sentence is the actual organization of the physical signal into phrases of varying size, into words of various categories, with certain particles, inflections, arrangements, and so on.

This is, of course, a simplified version of the statements which he had made before, and his context is an argument in behalf of 'universal grammar.' The implication, however, is that sentence generation has psychological aspects and is not simply a mechanical restructuring of formatives. In the same article he states,

The idea that the study of language should proceed within the framework of what we might nowadays call "cognitive psychology" is sound. There is much truth in the traditional view that language provides the most effective means for studying

the nature and mechanisms of the human mind, and that only within this context can we perceive the larger issues that determine the directions in which the study of language should develop.

2.1.1 The Role of Perception in Deep Structure. We will rely heavily in this section on Joseph Church's Language and the Discovery of Reality (1961), which is a thoughtful synthesis of the work of many investigators. For Church, the use of language and symbols is 'central to the individual's grasp of reality.'

The emergent principles of mature behavior only partially supersede those of immature behavior. Our thesis is that developmental change can best be accounted for in cognitive terms, that is, in the way the individual perceives, conceptualizes, and thinks about reality. And central to the individual's grasp of reality is the use of language and symbols. (p. 3).

Church subtitles his work 'A Developmental Psychology of Cognition,' but as he himself points out, he does not adhere to a chronological format, but rather outlines the range of human cognitive development from infant to adult in almost every category which he discusses, beginning with preverbal behavior and proceeding through language acquisition to the role of language in thinking. We are suggesting that the deep structure of a mature speaker-listener of a given language is the mediating schema for all other forms of knowledge, the patterns of conceptualization, either real or abstract, by which the individual develops a world-view and operates within it.

2.1.2 Synesthetic Perception. The adult is able to clearly

distinguish between the experiences provided by sight, hearing, smell, taste, and touch. For the child, Church states, 'There are no clear dividing lines among the various sense modalities.'

Most writers assume that synesthetic experience arises by association. This view overlooks both the evolutionary history of the senses, which indicates that specialized modalities have differentiated out of a sensorium commune . . . and the evidence indicating synesthetic effects are far more common in children than in adults. (p. 12).

However, the adult's experience is far from free of synesthetic effects. We certainly associate taste with the color and texture of food, and it goes quite beyond the modality of sight when we perceive that an object is smooth or rough or gritty, or of hearing when we know how the object will sound if struck.

The cross-sensory metaphors of poetry, of artistic criticism, and of everyday parlance play upon our synesthetic capacity, as do the sensory metaphors we use to describe people: warm, cold, bitter, blue, and so forth. (p. 13).

Church here gives only one of a myriad number of examples of sensory perception as it influences and participates in the use of language. We do not need to see an object to detect its movement, for instance. We feel the movement of the wind, hear its effects as a strong current of air moves through trees or around the corners of buildings. Sense of smell can lead us to the source of an odor, just as our hearing can locate for us the source of sound, since both odors and sounds become stronger the closer we

approach their sources. It is immediately apparent that cross-sensory perception establishes relationships of objects in space. The role of visual perception is obvious in this respect, but we can also hear sounds advancing and receding (footsteps approaching our point of observation, passing the point, and receding, for instance) and from the sounds establish a spatial relationship.

Church points out that from an early age a child develops both psychological and physiological time sense. By the age of eight or nine months the infant has usually evolved the kind of eating and sleeping time schedule practiced by the society into which he is born. Observation indicates that an infant, even as early as one month, waits to be fed.

This is, obviously, but a tiny first step toward an orientation to time that comes to include the abstraction of time from space and activity patterns, a massive vocabulary of words with a temporal index, an understanding of the scales which we use to measure time's passage and accumulation, a knowledge first of growing up and then of growing old, a sense of how time slips by at an ever faster rate as one ages, a sense of history and destiny, and the ability to coordinate activities and events in rational sequences and fit them into the larger time scheme. (pp. 43-4).

Both spatial and temporal relationships are thus developed at an early age, abetted by perception through complex variations of cross-sensory experience. As the acquisition of language progresses, the ability to symbolize these relationships increases.

The world as perceived by adults includes not only objects and the space that encloses them but also numerous relationships that bind objects to space, to each other, to past and future and to the observer. (p. 14).

We hold that conceptualization of spatial and temporal relationships are seminal to the process of utterance production we call deep structure.

2.1.3 Concrete and Abstract. It is customary for grammarians to treat these two concepts as separate entities, as absolute factors in language. The classification of nouns into abstract and concrete according to their semantic content is a venerable one in grammar. Yet reification --or, rather, the idea of it--is in itself a recognition that an absolute dichotomy does not always stand up to close inspection. Man's capacity for symbolization of the world in which he lives is in itself an abstract process. Chomsky has repeatedly referred to the process of producing utterances in terms of an 'abstract' process: 'The syntactic component [of a generative grammar] specifies an infinite set of abstract formal objects' (2.04 above); 'The deep structure of a sentence is the abstract underlying form which determines the meaning of the sentence' (2.06 above). But, as Church points out, 'we can recognize many forms and degrees of abstractness and concreteness' (p. 115). To what extent, then, in what form and to what degree, is deep structure abstract?

If, as Church says, 'abstractions are rooted in the

concrete,' it follows that all language, as an abstract, symbolic entity, is rooted in the concrete, and we must look for a concrete basis for language before we can intelligently attempt a structural description of the process by which utterances are formed. We suggest that herein lies an explanation for the objections many linguists have to generative grammar in its present form. We have already noted Charles Hockett's objection based on the evidence that language is an ill-defined system which generative grammar purports to describe and explain via a well-defined system. We would still not claim any greater degree of explicitness for the hypotheses to be presented here.

'Concrete' does not necessarily infer 'explicit.' Also, any internal process can only be described in terms which are perforce general in nature since they are inferences drawn from observation of external phenomena. For instance, in 2.1.2 above we discussed the phenomenon of synesthetic perception. This is a phenomenon which is verifiable through the experience of human beings in general, or the observation of that experience. The degree to which various human beings experience the phenomenon is, however, variable, just as the ability of humans to derive abstractions from concrete situations is variable, depending on many factors in the experience of the individual. We are reminded of Hockett's objections to Chomsky's stipulation of an 'ideal' speaker-listener; that it is removed

from reality too far to provide the basis for realistic language description. Similarly, the use of sentences, the end product of the generative process, what Chomsky calls the surface structure, to derive by purely symbolic notation a syntactical representation of an assumed syntactic deep structure simply does not take advantage of the mass of empirical data available to probe more deeply into the generative process. What we are attempting in this paper is to make only a superficial approach to the wide-ranging concept of deep structure, using the two part verb as the construction by which our hypotheses are derived. In short, we will use the two part verb, a concrete grammatical entity, as the root to feed our abstract concepts of deep structure.

We have stated that concrete does not necessarily mean explicit. Nor does the term at all imply 'unity' or 'singleness.' To quote Church:

Developmentally, abstraction is not merely a movement from the particular to the general, from the abundance of the concrete to the austerity of the abstract. It also is the unification and simplification of experience, the reduction of complexity to orderly, manageable principles. So much stress has been laid on development as differentiation, as increase of complexity, that we must emphasize the complement of differentiation, hierarchic integration, by which differentiated perceptions, knowledge, and processes are brought together in new, higher-order patterns which permit simplicity and directness of action. (1961, p. 118).

It follows that the production of utterances is a process

of simplification in which a multiplicity of concrete perceptions is reduced to an orderly utterance--a grammatical and semantically integrated sentence--and that this process of simplification undergoes a 'hierarchical integration' to produce this higher-order linguistic pattern. This, of course, is analogous to the methodology of generative grammar which employs a series of hierarchially ordered rules to evolve a symbolically represented structural description of a sentence. The descriptive methodology, however, utilizes basic strings to arrive at structural description, the 'base Phrase-marker.' A series of base Phrase-markers is what in generative grammar comprises deep structure, which is first syntactic in nature with the so-called syntactic features incorporated later in the process to aid in the semantic interpretation of the generated sentence. In other words, generative grammar begins with the finished product, the sentence; then, in terms of the sentence itself, it attempts to hierarchially evolve the deep structure from which the sentence is derived. What we will suggest is that there is a concrete and complex perceptual base for deep structure which is semantic in nature and by a process of orderly simplification is conceptualized and verbalized to produce an utterance.

2.1.4 Deep Structure as Schemata. The simplification of complex concrete perception is accomplished by means of linguistic schemata. The schema, according to Church, is

'the most fundamental form of knowledge . . . an implicit principle by which we organize experience.' The concept of linguistic schemata is little more than a broadening of the concept of Chomsky when he defines deep structure as 'the underlying system of rules that has been mastered by the speaker-hearer and that he puts to use in actual performance' (above 2.01). The term 'rules' appears somewhat too stringent a term. One is led to immediately conceive of language learning as some sort of explicit mechanical process rather than the learning of a mode of behavior. Learning language behavior is first a learning of ill-defined patterns with some basic characteristics of speech production.

Before the child has any words at his disposal, and sometimes for a while after he has begun to use single words, he tries to tell people things in a stream of gibberish which has all the expressive intonation of genuine speech, is accompanied by expressive gestures, and often sounds as though it would make sense if only the child wouldn't go so fast. . . . The child is not learning merely to speak, or to understand words, or to build up a stock of words--he is learning a whole mode of behavior, the linguistic, which is prior to any particular symbolic acts in which he may engage. (Church, p. 61).

As we acquire the ability to symbolize and as a stock of words accumulates, this linguistic mode of behavior becomes more fruitful and fixed. The recognition of relationships brings about the development of linguistic schemata which are overlaid on the existing patterns of linguistic behavior. The development of linguistic schemata is also

observable:

The composing of sentences points to the fact that in learning language the child does not merely acquire a stock of words. . . . The child also learns what adults know as the "rules" of grammar and syntax--rules of flexion for tenses and mood and number (and with pronouns, gender and case), of word order, and eventually, of constructing compound and complex sentences.

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The child's learning of rules is by no means flawless. He may initially pick up concretely, for instance, the forms "I bring-I brought." Then, as he begins speaking according to the rules, he shifts to such forms as "I bringed" and even "I broughted." Indeed, affixes may be completely displaced, as in "He pick~~s~~ it ups" (alternatively, "He pick up its") and "I walk homed." . . . Such "errors" are interesting because they show that the child acquires general principles independent of vocabulary and that such learning does not take place by direct imitation. We must stress that what the child learns from other speakers is not ready-made formulations--although he picks up some of these, too--but a way of constructing formulations, a set of schemata. (p. 64-5).

When Church speaks of 'rules' which he puts in quotation marks, he does not use the word in the sense that Chomsky did in defining deep structure. For 'rules' we may read 'semantic patterns.' These are the 'general principles' to which Church refers, and they appear to involve the learning of inflectional morphemes which are analogically associated at times incorrectly with vocabulary items. Brown and Bellugi (1964) have found that parents often imitate what their children say, expanding the child's utterance in the process to a complete, well-formed sentence reflecting proper and additional inflectional morphemes. Although only 30 per cent of what two-year-old

children say are in this way imitated and expanded by parents, it follows that such procedure would contribute appreciably to the formation of acceptable inflectional morphemic schemata.

Linguistic schemata are not to be equated with sentences. Linguistic schemata are underlying general principles that form the lowest order in the hierarchy of deep structure. They are the principles applied to the formation of relationships. True, these principles involve semantic and phonological aspects, but syntax is an overt manifestation of the perception, conceptualization, and, finally, the verbal symbolization of unordered relationships that are not necessarily linguistic in nature. Non-linguistic schemata--derived from sensory perception, for instance, provide the concrete base for the relationships which are abstracted by the speaker's linguistic schemata in a process of ordering and simplification to produce an utterance. What we think of as the semantic significance of a given word is the highest order of abstraction. And meaning--the semantic significance of a word--is of necessity derived from the context in which it is used. We will recall that Hockett said, 'We have to say that an utterance used on a particular occasion means what its speaker means by it.' (1968, p. 73). Church's view, in our opinion, is highly significant:

It is in trying to decipher the semantics of

utterances detached from their behavioral contexts that students of meaning have gone astray. Instead of asking what a statement, considered as an objective entity, means, we might better ask what this individual means (or intends) when he says thus-and-so, and what this statement uttered by so-and-so means to this listener. It is obvious that we have removed meaning from the level of the word to that of the utterance. Words do not have meanings, but functions. The "meanings" assigned to words by dictionaries are abstractions drawn from the ways words function in various contexts. It is true that a single word can constitute an utterance, as in "Yes," "Why?" "Never," and so forth; but again the meaning of the one-word utterance comes from its behavioral context. (p. 127).

We have said that linguistic schemata, among other aspects, are formed in semantic patterns. Here, we might suggest, is an answer to the question that Chomsky (and other transformationalists as well) raise as to why such a sentence as 'Colorless green ideas sleep furiously' is not acceptable, although it is grammatically and syntactically 'normal.' The answer lies in the nature of our semantic schemata.

Our awareness of the strange, the odd, the incongruous, the incredible, the impossible, stems from a lack of fit between phenomenon and schema. (Church, 1961, p. 39).

Various linguistic schemata, that is, generally speaking, the semantic, syntactic, and phonological principles by which we form utterances, must work together to produce sentences which are acceptable and not 'deviant.'

SUMMARY

2.2 Noam Chomsky's concepts of the ideal speaker-listener,

innate linguistic theory, the competence and performance of a speaker, deep and surface structure, and the analyzation of a generative grammar into syntactic, semantic, and phonological components, are all central to his linguistic theories. They are all limited by the emphasis placed on generative grammar as an explicit and well-defined system, however. As Hockett has postulated, language is not explicit or well-defined, and therefore any grammatical system, which purports to describe and explain language in explicit terms, is by definition faulty.

Further, the specification of an ideal speaker-listener immediately removes the system from reality; the specification of a 'typical' or 'average' speaker would provide a more realistic base for describing and explaining a language. While Chomsky retains the term 'syntactic' for the components of feature analysis, it is not possible to exclude the semantic significance of the features used to describe lexical terms. In any consideration of the nature of deep structure, not only the syntactic, but also the semantic, component must play a part.

2.2.1 As recently as 1966, Chomsky has indicated that cognitive psychology can contribute much to a fuller realization of the concept of deep structure. We have postulated that psychological factors such as synesthetic perception and the formation of linguistic schemata which occurs in language acquisition, are integral parts of the process of producing utterances. Also, the interplay of concrete and

abstract conceptualizations are reflected in linguistic realization, since they can, in whatever degree or form they appear, form the basis of the apprehension of relationships in general. Broadly speaking, it is the perception, conceptualization, and linguistic symbolization of relationships that comprise the framework of deep structure, the process of producing utterances.

THE FUNCTION OF THE VERB
AND PREPOSITIONAL ORIENTATION

THE VERB IN TRADITIONAL GRAMMAR

3.0 The definition of the verb in traditional grammar does not differ from that of Dionysius Thrax in the second century B.C.:

The verb is part of a sentence without case inflection, susceptible of tenses, persons, number, activity and passivity as its meaning. (Quoted in Dinneen, 1967, p. 100).

George O. Curme, whose College English Grammar was published in 1925, defines the verb as 'that part of speech by means of which we make an assertion or ask a question: The wind blows. Is the wind blowing? (p. 13). Twenty-five years later, House and Harmon define the verb as 'that part of speech which expresses action (run, walk, steal, kill, jump), being (am, become), or state of being (suffer, rejoice).' (p. 93).

The grammatical aspects of Thrax's definition are immediately familiar since they are still taught as grammatical aspects of the verb in the twentieth century. The definitions of Curme and of House and Harmon are also familiar ones, and can be traced, with minor variations, in grammars of English as far back as two and a half centuries. These definitions are, of course, based on surface structure and are rooted in both syntax and semantics. What we are interested in here is the verb as it functions in deep structure, how perception, conceptualization, and abstraction produce the surface symbol which we call the verb. The preposition and its function in deep structure will also be discussed in the same frame of reference, and its integral relationship with the verb will be posited.

THE VERB IN MODERN GRAMMAR

3.1 Modern grammar by no means discards the basic precepts of traditional grammar. It differs in that its approach is descriptive, rather than prescriptive. It makes no effort to determine correctness, but attempts to describe language as it exists in the utterances of native speakers. Traditional grammar is oriented to written language, and the assumption that 'correct' written language would in turn influence a speaker to produce 'correct' spoken utterances. Generally speaking, one can say that

modern grammar still deals with the 'parts of speech' of traditional grammars and with the binary subject-predicate form of the sentence. Both structural linguistics and the theories of generative grammar presume a knowledge of traditional grammar.

No attempts, to our knowledge, have been made to re-define or further to define the verb. Charles Carpenter Fries (1952) reclassified the parts of speech into four main classes corresponding to the traditional designations of noun, verb, adjective, and adverb, with remaining words assigned to fifteen groups of Function Words, so named because English could not operate as a language without them. Fries's groupings carried important implications of syntactic significance, but dealt with their appearance in surface structure only. The work of modern grammarians dealing exclusively with the verb, as that of Svartvik (1966), Ehrman (1966), and Palmer (1968), contribute detailed information of syntactic and semantic nature, but offer no definitions of the basic character of the verb. Again, the work of these grammarians was concerned with the verb only as it appears in the surface structure of sentences, not with its function in deep structure.

Lees (1960), working in the context of generative grammar, but using terminal strings, or surface structure, for analysis, evolved some twenty-six types of verbs, determined by the construction of the verb phrase in which

they might appear. Although Lees was working within the limits imposed by the syntactical component of a generative grammar as defined by Chomsky, he nevertheless established the interesting fact that the category of the verb was determined by the category of the nouns (animate, inanimate, etc.) related to it. This, of course, involved semantic interpretation. The terms 'transitive' and 'intransitive,' when applied to verbs, have grammatical significance, but also are indicative of the fact that the semantic significance of a verb determines its ability to 'take' an object.

3.1.1 This paper will deal with the verb as a linguistic unit much in the traditional sense. It is an element in English with its own particular characteristics and conceptual forms, varying in many finely shaded degrees from concreteness to abstractness, and it plays a central role in deep structure. What we will consider here is what is commonly termed the 'main verb,' as differentiated from a main verb plus whatever auxiliaries may be used with it. W. F. Twadell (1968) has provided a cogent and comprehensive exposition of verb auxiliaries in English. He posits the auxiliaries be, have, and do, as well as the modal auxiliaries can, could, will, would, shall, should, may, might, must, dare, need, and ought, as modifiers of the main verb. As such, they have no direct relevance to our discussion.

PSYCHOLOGICAL ASPECTS OF THE VERB IN DEEP STRUCTURE

3.2 The traditional definition of the verb as expressing 'action, being, or a state of being' we hold to be an accurate summation, as far as it goes. This definition reduces the semantic classifications of verbs to three categories which, broadly speaking, are related. We will begin with an even broader concept of the overall semantic load of the verb in English. We have already posited that deep structure involves perception, conceptualization, of relationships, and some form or degree of abstraction that is symbolized linguistically and is finally produced as an utterance. We hold that all verbs, in the context in which they occur in utterances, are symbolizations of some form or degree of concrete or abstract motion.

3.2.1 The Concept of Motion. The Oxford English Dictionary lists nineteen definitions of Motion, all of which in some way reflect varying degrees of concrete and abstract concepts of change by process or progression. By 'process' we mean an ordered set of events wherein change begins at a given point and ends at a given point. By 'progression' we mean an open-ended and unordered set of events which result in change. These are the fundamental precepts which we will apply to the verb as a symbol of some form or degree of concrete or abstract motion, dependent on the context in which the verb is used.

The emphasis placed on context here is important. An utterance out of context can be subjected to a surface structural analysis by using any number of systems, including that of generative grammar. As we have pointed out, generative grammar operates on the assumption that all utterances are the synthesis of any number of basic strings and the derivation of these basic strings is accomplished via the application of an ordered series of syntactic rules. The process of feature analysis is regarded as basically a syntactic process in generative grammar, although as we hold, feature analysis strongly partakes of the semantic component as defined by Chomsky. (See above 2.05). If we accept syntactic analysis as a means of revealing the generative process of deep structure, there still remains the problem of semantic interpretation which Chomsky assigns to the semantic component of a generative grammar.

Katz and Postal (1964) have applied the operant principles of the tree diagram to dictionary definitions of a given lexical item with each branch of the diagram purporting to parallel some set of the syntactic features assigned to a given symbol in a terminal string. While such formal manipulation is possible, it soon becomes immensely complex and sinks of its own weight. The number of features necessary to each feature analysis, in order for a specific dictionary definition to be assigned each symbol for purposes of semantic interpretation, quickly

reaches the point of absurdity. If, as we hold, there are infinitely many shades of concrete and abstract meaning to any given lexical item in English, and, as Church holds, 'The "meanings" assigned to words by dictionaries are abstractions drawn from the ways words function in various contexts' (See 2.1.4 above), then any attempt to semantically interpret an utterance out of its context as part of communication between individuals is unjustifiable.

Context, by definition, involves an exchange of utterances between two or more speakers. It includes what Church (1961, p. 128) terms the 'dimensions of an utterance.' Communication involves not only the speaker's choice of words, but his manner, his facial expressions, his bodily positions, gestures, intonation, stresses, and so forth. These features of communication are important to interpretation of a speaker's utterances by a listener. But language is still the basis of such communication between individuals. Context, in this broadened sense, involves psychological factors which have given rise to verbs which express the forms and degrees of abstract motion, as we shall see.

One such psychological factor is relativism. As Church puts it,

True relativism requires the ability to place oneself, by an act of thought, in somebody else's place, to see the world as it looks to him. Relativism can only be attained, then, with the acquisition of language.

The process of putting ourselves in another's place is achieved by the process of mobilization and participation, and is effective according to whatever degree of empathy the speaker-listeners are capable of.

Mobilization is akin to set, except set ordinarily implies a narrowing of the range of action. . . . whereas mobilization can be not only toward a particular stimulus or in preparation for a particular kind of response, but to a whole sphere of activity. For instance, when we shift from speaking English to speaking another language, even one that we know well, we can almost feel the change of mobilization. (Church, p. 28).

In an exchange of utterances we assume the role pertinent to our relationship with the other participants in the act of communication, mobilizing our psychological forces to effect communication. By so doing we are able to participate in the linguistic behavior of the other. Church points out that we participate 'directly and overtly in the behavior of others' (p. 31). In an exchange of utterances we participate in the thoughts of the other, interpreting his utterances as they are produced, perceiving his thought progression, while at the same time formulating them in a continuous empathetic, subjective-objective, internal mental movement, often carried out in a purely abstract analysis and synthesis of concepts.

As we grow older, we find that a decreasing proportion of our time is given to direct dealings with objects and an increasing proportion to dealing with objects by way of symbols or even just with symbols themselves. There are certain occupations, such as teaching, writing, advertising, business management, theology, book-

keeping, data processing, and diplomacy, which are almost entirely a matter of symbols. Practitioners in these fields may talk about concrete realities, but they may have little or no personal contact with the realities they talk about. (Church, p. 114).

The element of participation we regard as the concrete and complex base for deep structure which we suggested in 2.1.3 above. Synesthetic perception and motion, in some form, contribute their properties to this concrete base. Simultaneously, we are operating on another level of perception, which Church calls contemplative perception (p. 49), which is abstract in character and which involves inspection of what we hear another say, judgment of it, and analysis of it. In an exchange of utterances we are mobilized toward a linguistic sphere of activity and bring our linguistic schemata to bear upon the activity. Our linguistic schemata provide the abstract patterns, syntactical, semantic, and phonological, by which our own utterances are formulated and produced as speech. Thus the entire process takes place under the aegis of the immediate context of a series of exchanged utterances.

From this discussion of context and its vital relation to, and participation in, deep structure, it is apparent that except for its base, deep structure is abstract in nature. Since context is responsible for the semantic component of deep structure, and semantic schemata play a major role in the formation of utterances, it follows that

the semantic component is largely abstract in nature. If, as we hold, all verbs carry a semantic load connotative of motion of some sort, this connotation will itself be largely abstract in nature.

THE VERB AS AN EXPRESSION OF MOTION

3.3 The Corpus. The list of verbs in this analysis is taken from Lees (1960, pp 22-3). It was chosen as a corpus because it was conveniently at hand, and because such a ready-made listing precluded the built-in bias that might accompany an arbitrary selection on our part from a dictionary or other lexicon. Also, as lexical items, they were used by Lees to illustrate his classification of verbs by means of the phrase structure rules of a generative grammar, a purpose far removed from that of this paper. The corpus contains 128 lexical items, a quantity sufficient for our demonstration.

3.3.1 The Analysis. We have mentioned that our use of the term motion is the overall interpretation of the term in the OED as some form of change. We are mindful that we have stressed the absolute necessity of a context in pinpointing the meaning of a formative, and that this analysis involves semantic interpretation of formatives out of context. The purpose of the analysis is to demonstrate that verbs carry a semantic load indicative of some form

or degree of concrete or abstract motion. We have agreed with Church that any type of abstraction is rooted in the concrete which leads to the hypothesis that the base of deep structure is concrete perception and conceptualization of some sort. What we will do here to attempt to narrow this hypothesis to the verb itself and to demonstrate as explicitly as possible that the semantic abstractions of the verb are in some way rooted in the concrete.

The definitions of motion in the OED, as we have stated, all in some way infer motion as change. This change is in turn accomplished by means of process or progression. The first step in the analysis was to separate the verbs in the corpus into these two categories. Process we take to be an ordered set of events with a finite beginning and finite end. Progression we take to be an unordered set of events without finite beginning or end. Two definitions of each verb were culled from Webster's Third New International Dictionary, Unabridged. One definition was chosen as the one carrying as concrete a semantic significance as was available; the second definition was chosen as reflecting some form or degree of abstractness. Some of the verbs can be considered almost entirely abstract in semantic load, others permit a fairly clear division of concrete and abstract meaning. For instance, if the term 'abstract' is taken to mean an intangible concept, the verb 'think' to some interpreters

would not carry a concrete semantic load. On the other hand, such verbs as 'see' which denote the physical act of visual perception, a concrete concept, also carry the abstract connotations of intangible internal processes as 'to understand.' Undoubtedly the classifications and definitions will be open to reinterpretation by others. The verb 'think' connotes some form of mental activity, and might conceivably be interpreted as concrete in comparison to feelings or emotions such as love, hate, anger, joy, and so on. This appears to be further support for Hockett's assertion that language is an ill-defined system and that 'an utterance used on a particular occasion means what the speaker means by it.' (1968, p. 73.) It is also interesting to note that in some instances, it was necessary to resort to archaic, obsolete, or even etymological meanings to establish some sort of concrete interpretation of the formative. It will be noted that some of the verbs in the corpus are two part verbs. These are used as they appeared in Lees' original listing. We therefore use the term 'formative' to designate the items in the corpus since such two part verbs comprise a single semantic unit, though they are made up of two or more orthographic units.

If our assumption here is correct, that deep structure is based on some form of concrete perception and conceptualization, it is in order to suggest that formatives which

are now interpreted almost entirely in some form or degree of the abstract were originally concrete in significance. In the discussion of the preposition which is to follow, we use Hockett and Ascher's anthropological-linguistic hypothesis to demonstrate the concrete significance of the preposition, which has become a highly flexible functional formative in present-day English.

3.3.2 Process-Verbs. These carry connotations of motion as process, an ordered set of events with definite beginning and definite end.

<u>Verb</u>	<u>Concrete Interpretation</u>	<u>Abstract Inter.</u>
acknowledge	Act of showing knowledge, as a nod of greeting.	To show knowledge of one's duty.
aim	To point a weapon.	To have as a purpose.
alter	To change the dimensions of an object.	To change one's outlook or attitude.
announce	To point to or indicate in advance.	To give verbal evidence of one's loyalty.
arrange	To set in a row.	To plan in advance.
arrive	To make an appearance.	To achieve success.
astonish	(obs.) To render senseless (as by a blow).	To strike with a sudden sense of wonder.
attest to	To authenticate by signing as a witness.	To bear witness.
bark	To emit a sound like a dog barking.	To advertise.

beckon	To gesture in summons.	To attract or allure.
befall	To be the subject of a specific course of events.	To take place, esp. as if by the prompting or testing of fate.
breathe	To perform the act of breathing.	To make manifest (breathing the true spirit of his religion).
bribe	To give money in exchange for a wanted service.	To influence as if by bribery.
bring	To carry from one place to another	To persuade.
call	To speak loudly to attract attention.	To give a descriptive name to something.
choose	To make a selection from a group of objects.	To be inclined to by preference.
complain about	To beat the breast, lament.	To relate dissatisfaction.
complete	To finish the process of assembling the total parts of an object.	To be whole or perfect (as a complete love.)
consider	To perceive visually, to gaze at.	To think of, judge, classify.
convince	To expose error in the perception of an object.	To persuade someone of the truth of a belief.
cost	To require transfer of money.	To require effort or suffering.
deduce	To trace the course of a series of events.	To infer (something) about a particular case from general principle.
deem	(archaic) To administer.	To form an opinion.

demonstrate	To show the operation of, as an automobile.	To make evident by reasoning processes.
desist	To stop or leave off a physical action.	To give over a way of thinking.
discover	To disclose to actual view.	To disclose a state of mind.
drive	To set in motion.	To oblige to suffer or have recourse to a mood or mental state.
eat	To take in through the mouth.	To destroy, use up, or waste by or as if by eating.
elect	To choose a person, as for an office.	To designate or choose an object of divine mercy or favor.
find	To gain the first sight of an object.	To discover by study or experience.
flirt	To throw with a jerk or quick effort.	To evince superficial liking or interest.
generate	To originate, as by a chemical process.	To be the cause of (as a state of mind), an action or something immaterial or intangible.
glance	To strike a surface obliquely so as to . . . go off at an angle.	To refer briefly to something.
hammer	To strike blows, esp. repeatedly with or as if with a hammer.	To become insistent or urgent.
lie (<u>1</u>)	To be at rest in a horizontal position.	To bide one's time.

lie (2)	To make an untrue statement.	To bring about by lying.
motion	To direct by a motion (as of hand or head).	(archaic) to propose or suggest a plan or action.
pause	To refrain from acting or speaking.	To stop to consider before proceeding.
pay	To give in return for goods or services.	To get even with someone - usu. used with <u>back</u> .
perceive	To take possession of. (etym.)	To become conscious of.
perish	To become destroyed or ruined.	To become spiritually lost.
proclaim	To declare openly or publicly.	To make clearly evident, prove.
pronounce	To utter officially or ceremoniously.	To represent in printed or written characters the spoken counterpart of.
prove	To subject to technical testing process.	To establish the truth of.
read	To see . . . in printed or written form or in some similar form.	To penetrate into (as the thoughts, mind of another).
recall	To call back, summon.	To call or bring back the thought or memory of.
recognize	To acknowledge with a show of approval or appreciation.	To recall knowledge of.
run	To go by moving the legs quickly.	To cause to pass lightly or quickly over (ran his eye down the page).

say	To utter, to pronounce.	To indicate or show (the clock says noon).
sew	To unite, attach, or fasten by stitches.	To secure or assure exclusive control of. [Always with <u>up</u> .]
shiver	To break into many small pieces.	To produce with or as if with a shiver.
shout	To utter a sudden loud cry.	To make a great to-do (the colors shouted at you).
smell	To perceive by excitation of the olfactory nerves.	To be suggestive.
smoke	To emit or exhale smoke.	To rise like or as if like smoke.
stand	To support oneself on the feet in an essentially erect position.	To assume or maintain a particular attitude.
steal	To take the property of another.	To win away, as by persuasion.
step	To move in any direction . . . by moving each foot in succession.	To arrange in or as if in steps (as to compose a set of instructions).
stop	To close up or block off access to.	To take time to consider, to pause.
strike	To deliver, a stroke, blow, thrust.	To make an impression.
surprise	To attack unexpectedly without warning.	To strike with words or argument.
swim	To move or propel oneself progressively in the water by natural means.	To become surrounded or covered or filled with as of a liquid.

talk	To deliver or express in speech.	To speak to the point, carry weight (as, money talks).
throw	To propel through the air with a forward motion of hand or arm.	To give up as by throwing away (threw caution to the wind).
tune	To produce musical tones.	To become . . . receptive (as to an idea).
turn	To execute or perform by rotating (as a wheel).	To lead or cause to dislike, make antagonistic.
vouch for	To summon (a vouchee) into court to warrant or defend a title.	To become surety.
wave	To motion with the hands or with something held in them in signal, greeting, salute.	[Abstract meanings expressed by the verb <u>waver</u> .]
weigh	To ascertain the heaviness of.	To consider . . . for the purpose of forming an opinion.
write	To trace by carving or scoring, to form or trace (a character or a series of characters) on paper . . . with a pen or pencil.	To cause to appear evident or obvious (guilt was written on his face).

3.3.3 Progression-Verbs. These carry connotation of motion as progression, an unordered set of events without definite beginning or end.

<u>Verb</u>	<u>Concrete Interpretation</u>	<u>Abstract Inter.</u>
abstain	To withhold oneself from participation.	To forbear (they pledged to abstain from drinking).
admire	To see and wonder at.	To esteem or regard highly.

appear	To become visible.	To be clear to the mind.
behave	Visual manner of conducting oneself.	To conform to the accepted patterns of society.
believe	To accept the evidence of the senses.	To have a firm conviction of the good quality of something.
care	To perform personal services.	To feel trouble or anxiety.
feel	To perceive by tactile stimulus.	To be conscious of (a subjective state).
find out about	To search deliberately for information on a subject.	To learn by experience, as to find out about love.
forget	To omit or disregard unintentionally.	To lose remembrance of.
get	To gain possession of.	To apprehend the meaning of.
go	To pass from point to point.	To cease to have an effect or influence.
grow	To increase in size.	To obtain an increasing influence or command.
guess	To form an opinion without evidence.	To form a random judgment.
hate	To express . . . extreme enmity or active hostility.	To feel extreme enmity toward.
have	To hold in possession.	To feel compulsion, obligation, or necessity in regard to.

hear about	To be made aware of by ear.	To entertain the idea.
imagine	To form an idea.	To form images or conceptions.
imply	To indicate or call for recognition of as existent, present.	To involve as a necessary concomitant.
infer	(obs.) To bring about, procure.	To derive by reasoning or implication.
inform	(obs.) To give material form to.	To be the formative principle of.
know	To perceive directly, as with the senses.	To have cognizance, consciousness, or awareness of.
lack	To be short, as in height.	To be wanting or missing.
learn of	To become aware.	To develop an ability to or readiness for.
like	To feel attraction toward.	To wish to have.
long	To feel a strong desire or craving.	(archaic) To be suitable or fitting.
look	To ascertain by the use of one's eyes.	To seem.
make	To cause to appear, exist, or occur.	To frame or formulate in the mind.
mean	(obs.) To talk, speak, tell.	To have in mind esp. as a purpose or intention.
notice	To comment or remark upon.	To take notice of with the mind.

object	To oppose something with words or argument - usu. followed by <u>to</u> .	To feel aversion or distaste for something.
persuade	To demonstrate or prove (something) to be true.	To induce by argument, entreaty, ... into some mental position.
plan	To set down the features of in a plan.	To have in mind, intend.
please	(dial. English) To satisfy sexually.	To give pleasure, delight, or agreeable satisfaction.
praise	To express approbation of.	To glorify, as a god or saint.
pretend	To hold out the appearance of being, possessing, or performing.	To presume, to venture.
put	To place or cause to be placed in a specified position or relationship.	To cause to endure or suffer something.
refrain	(archaic) To hold back, put a restraint upon.	To check or inhibit an inclination or impulse.
remember	To convey greetings from.	To hold or bear in mind, retain in the memory.
resemble	(obs.) To make a likeness or image of.	To bear similitude in . . . qualities.
reveal	To make something publicly known, to open up to actual view.	To communicate or make known by superhuman means or agency.
see	To perceive by the eye.	To form a mental picture of.
seem	To be in appearance, give the impression of being.	To appear in one's own mind or opinion.

show	To cause or permit to be seen.	To reveal or display (an inward disposition, feeling or trait.)
signify	To be a sign of.	To bear as an inference or logical consequence.
sleep	To rest in a state of sleep.	To lack awareness.
sneak	To creep or steal as to be unobserved.	To steal in the manner of a sneak thief (as, sneak a smoke).
sound	To produce an audible effect.	To try to find out the views or intentions of.
suggest	To mention something as a possibility.	To serve as an incentive, motive, reason for.
suppose	To lay down as a postulate.	To hold as a belief or opinion.
take	To get hold of with arms, hands, or fingers.	To bring or receive into a relation or connection.
taste	To exercise the sense of taste, distinguish flavors.	To have a particular quality that is perceived as if by taste.
tell	To say, utter.	To have a marked effect.
terrify	To drive or impel by menacing.	To fill with terror, frighten greatly.
testify to	To make a statement based on personal knowledge or belief.	To serve as evidence of, prove (his face testified to the depth of his guilt).

thank	To express gratitude to.	To feel gratitude to.
think	To have or form (as a thought) in the mind.	To have the mind engaged in reflection.
understand	To show a sympathetic or tolerant or indulgent attitude toward something.	To grasp the meaning of.
vanish	To pass altogether out of sight.	To assume the value zero.
wait	To stay in place or remain inactive.	To be ready and available.

3.3.4 Subsummary. We have advanced the notion that all verbs are symbolizations of some form or degree of concrete or abstract motion. The concept of motion as used here is overall in that motion involves change, either by process, an ordered set of events with a definite beginning and a definite end, or by progression, an unordered set of events without definite beginning or end. Semantic interpretation involves the context of the utterance in which the verb is used and evolves from it. Such interpretation begins with some form or degree of concrete motion as perceived and conceptualized in deep structure.

3.3.5 The Verb 'Be'. Traditional grammarians have interpreted be to express that a thing exists. In our opinion, however, the semantic significance of the copula is such that it occupies a place on the borderline between verbs in general that have a less abstract interpretation and what are called 'empty' words. Our surface structure syn-

tactic schemata, which are formed during the acquisition of language as children, demand that in a given utterance the 'verb slot' be filled. In some languages, such as Russian or Chinese, the linguistic schemata of native speakers do not require consistent filling of the verb slot, and no equivalent of the English 'to be' exists in those languages. Similarly, in some dialects of American English the verb be is often omitted, as in

She a good girl.

He not so cool.

However, in English it is usual for the verb slot to be filled, even if no specific 'verb as motion' is present. The verb be fulfills this function. It serves to fill the slot in sentences which involve a surface subject and a modifier or qualifier of the subject, as in

The girl is good.

The meal was delicious.

It is also apparent from these latter sentences that be serves as a tense marker bearer, indicating that the 'existence' of a thing is present or past. However, Twadell (1968) has pointed out that there is no strict dichotomy of present and past. The present tense form may be interpreted as an action begun in the past and presently continuing as in 'He writes well'. Similarly, past tense can express the same current relevance, to use Twadell's term, as in 'My family has bought at this store for years.'

The verb be cannot be truly said to express motion of some sort, except in the very loose context of marking the existence of a thing in an ill-defined time continuum.

3.3.6 The Function of the Verb in a Sentence. The traditional division of the simple English sentence into subject and predicate, as we have noted, has remained the basis for structural analysis of sentences by grammarians. The subject with its modifiers and the verb with its modifiers and complements have always been regarded as separate entities. The syntactical pattern of the subject (or Actor) and the verb (the Action) followed by the direct and indirect objects (the Goal) has been accepted as the 'standard' or 'normal' syntactical sequence of formatives in a sentence. At the same time it has been recognized that the passive form of a given sentence usually reverses this pattern and that interrogatives usually use the same syntactical pattern. In the case of interrogative pronouns, of course, the pattern becomes Goal-Actor-Action with a verb auxiliary interpolated between Goal and Actor. Regardless of the syntactical sequence of the formatives in a sentence, all items (plus their modifiers) are grammatically and semantically related to the verb, and this relationship with the verb establishes whatever semantic interpretation of the utterance is possible. Just as a living biological cell cannot exist without its nucleus, the sentence in English has no significance for speaker

or listener without its verb, the nucleus of a sentence (or clause). The function of the verb as a grammatical unit expressing some form or degree of concrete or abstract motion we thus extend to the function of sentence nucleus, a function which originates in the concrete base of deep structure and is maintained throughout the generation of an utterance to its final form as surface structure. This, of course, has direct bearing on the grammatical concept of 'case' in a language, and we will return to this in the following chapter of this paper.

PREPOSITIONAL ORIENTATION

3.4 The Preposition in Traditional Grammar. Traditional and school grammars of English use the etymology of the word to open discussions of the use of the preposition in English: 'Lat. prae + positus'. It is a word placed before the noun which it 'governs.' (House and Harmon, 1950, p. 181 and p. 219). This does not differ materially from statements in grammars of English dating back more than three hundred years. Ben Jonson offered the same information in 1640 in his English Grammar. Charles Carpenter Fries designated the preposition (when used as a preposition, the head word of a prepositional phrase) as one of the fifteen groups of function words in English (1952).

Traditional grammarians have also recognized the

connective function of the preposition and the fact that it serves to establish relationships between elements in a surface sentence (Harris, 1751; Stoddart, 1854; Milne, 1900; Fernald, 1904; Curme, 1925; House and Harmon, 1950; and others). Essentially this is the function of interest to us here, except that we will attempt to investigate the preposition as a factor in deep structure and to establish its relationship to the verb in the process of sentence generation by a speaker of the language.

3.4.1 Adverbial Aspects of the Preposition. Taking the 'pre-position' definition of the preposition as a rule unto itself, many traditional grammarians distinguished between its use as a connective and its use without an object (the word which it governed) as an indicator of time or place. Semantically the distinction is a narrow one and led to the use of the term 'particle' to refer to simple prepositions as lexical items in the language. The distinction, in our opinion, is unnecessary; basically prepositions are locative in connotation. This is the concrete semantic base of prepositions which we believe to have been established as language itself developed, and via the process of abstraction has expanded the grammatical and semantic functions of the preposition to the point that English, at least, cannot function as a language without them.

3.4.2 Hypothesis for the Source of Prepositions in the

Origins of Language. Hockett and Ascher in "The Human Revolution" suggest a process by which language as we know it developed in prehistory (1964). Man's ancestors, the proto-hominids, did not have the power of speech.

The most that we can validly ascribe to them in this respect is a call system similar to that of modern gibbons. . . . The essential design features of a call system are simple. There is a repertory of a half-dozen or so distinct signals, each the appropriate vocal response--to a recurrent and biologically important type of situation. . . . One such situation is the discovery of food; another is the detection of danger; a third is friendly interest and the desire for company. (p. 139).

The call system, then, is a concise group of vocalizations, each distinct and each in habitual use by the members of a band of subhumans. When a given member of the band emits a given call signal for 'food,' 'danger,' or 'I-like-you,' the call is understood by other members of the band who respond in kind.

3.4.3 Displacement. Communication via a call system gives rise to the notion displacement. If a member A of a subhuman band finds food and gives the appropriate call announcing his find, member B of the band responds, having received the communication and formulated the concept 'food' internally. B has therefore achieved internally a concept of something which he cannot, at a distance, sensorily perceive. This ability to conceptualize an object, situation, or condition which is sensorily not perceived at the instant of conceptualization is that property of vocal

communication called displacement.

3.4.4 Place-Prepositional Orientation. In the call-response situation described above, B would logically place himself in some sort of physical relationship to the source of the call, A. For the moment we will term this relationship the 'get-to' relationship. In short, B conceives that he must 'get-to' A and the desired food. Assuming that A is not visible to B, then B must internally orient himself with regard to the direction from which A's call came in order to physically move toward the desired goal. Similarly, if the call emitted by A is 'danger,' then by the process of displacement and subsequent orientation by B that 'danger' is in the direction of A's call, a 'get-from' relationship is internalized by B, and he physically reacts by fleeing from the danger.

Thus the stimulus of the call emitted by A has produced a process in B for which we adopt the term prepositional orientation, or more precisely, place-prepositional orientation.

3.4.5 Time-Prepositional Orientation. The hypothesis of prepositional orientation is presented here in the simplistic context of the subhuman call system. Hockett and Ascher postulate the evolution of the call system into an open, or productive, system. A proto-hominid, for instance, discovers food and simultaneously a related danger. If the call signaling 'food' is ABCD, and the call signaling

'danger' is EFGH, the caller, faced with the communication of combined signals, uses parts of each call, as ABGH. In this way interchangeable morphemes evolved which were further refined into a distinct set of phonemes which allowed completely flexible patterning and what we call language became a reality. This duality of patterning has permitted the still extant growth and change of language. As the proto-hominids developed into hominoids and then into the genus homo, we can assume a corresponding growth and development of language which, as the basic one, is man's most flexible and useful symbolic system.

We have noted that a sense of time is an early development in the human infant (2.1.2 above), As the concept of time as a continuum grew in man's consciousness, it seems reasonable to assume that the relationships of past, present, and future would, by analogy, have taken on the connotations of place-prepositional orientation to produce the ideas of before, after, in, at a given point (or place) in time, and so forth.

3.4.6 The Abstraction of Prepositional Orientation. The ability to deal with abstract, i.e., intangible, symbols, and the ability to generalize the particular, it is logical to assume, would make use of the same linguistic schemata based in the concrete perceptions of space relationships which gave rise to place-prepositional orientation. Hence we 'fall in love,' are 'faithful unto death,'

and suffer 'through jealousy,' for instance.

3.4.7 The hypothesis of prepositional orientation outlined here proposed the possibility that the concepts residing in the preposition are among those elemental to the formation of language as a human phenomenon. If the hypothesis is correct, then we can assume that such prepositional orientations are an element in the concrete base of deep structure. Nor, except perhaps for the angle of our approach, is the basis of our hypothesis a new one. In 1751, James Harris in his Hermes wrote:

But tho' the original use of Prepositions was to denote the Relations of Place, they could not be confined to this Office only. They by degrees extended themselves to Subjects incorporeal, and came to denote Relations, as well intellectual, as local. Thus because in Place, he who is above has commonly the advantage over him who is below, hence we transfer over and under to Dominion and Obedience; of a King we say, he ruled over his People; of a common soldier, he served under such a General. So too we say, with Thought; without Attention; thinking over a Subject; under Anxiety; from Fear; out of Love; through Jealousy, etc. All which instances, with many others of like kind, shew that the first words of Men, like their first ideas, had an immediate reference to sensible Objects, and that in after Days, when they began to discern with their Intellect, they took those Words, which they found already made, and transferred them by metaphor to intellectual Conceptions. (Quoted in Tucker, 1961, p. 81).

A hundred years later, Sir John Stoddart (1854) echoed what Harris had said:

The corporeal demand our first attention, for as in the opening of our faculties the earliest conceptions which we form are those of bodily existence, so the earliest relations we perceive are those of bodily substance. But bodily sub-

stances exist only in place and time; relations of place and time therefore are the earliest of which we become conscious; and of these we may not unreasonably believe the relations of place to be first perceived by the infant mind; inasmuch as they originate in mere present Sensation, whereas the very conception of Time necessarily involves also Memory of the past and Imagination of the future. (p. 175).

James C. Fernald in his study of English connectives (1904) comments on the progressive development of the preposition from the expression of concrete concepts to the expression of abstract relations.

The first use of prepositions was undoubtedly in the designation of place or space. From this the transition was easy to the idea of time, or various abstract relations. From the thought of what is beyond a certain limit of space, it is easy to pass to the idea of an event beyond a certain limit of time. The thing that is above another is easily thought of as superior, as it is at least in elevation. . . . Such extension of meaning is but a part of that system of unstudied metaphor that pervades all language, making words which at first expressed only material facts or relations to become vehicles of mental and spiritual ideas. (p. 8).

THE VERB AND THE PREPOSITION IN DEEP STRUCTURE

3.5 In this chapter we have attempted to construct two working hypotheses with regard to deep structure.

(i) All verbs can be interpreted as expressing in context some form or degree of concrete or abstract motion, and this conceptualization is based in deep structure on a concrete interpretation and is in some way abstracted and

produced in final symbolic form as an utterance.

(ii) A speaker-listener's prepositional orientation to a given event is an element of the concrete base of deep structure and is the basis for establishing relationships in place and time, as well as relationships in various forms and degrees of abstraction, derived analogously from those of place and time.

3.5.1 Relationship of the Verb and the Preposition. As the nucleus of a sentence, the verb both structurally and semantically dictates the relationships of the other formatives in the sentence. As an expression of some kind of motion within the context of the sentence, the verb is necessarily allied to prepositional orientation which is fundamental in establishing the relationships between the verb and the other elements in the sentence.

It is our hypothesis, then, that all verbs in the concrete base of deep structure, the primitive origin of utterances, are accompanied by as many prepositions as there are relationships of the verb to other elements in the sentence. This statement embodies the concept of grammatical case which has been an integral part of traditional grammar for centuries, but places it within the frame of reference of deep structure. In the following chapter we will examine Charles Fillmore's work in this area and attempt to refine his investigations.

IV

THE CASE RELATIONS OF TWO PART VERBS IN ENGLISH

THE NOTION 'CASE'

4.0 In its broadest sense 'case' is the specification of particular sense relationships of the elements of a sentence to each other. In traditional grammars, which deal with these relationships as they appear in surface structure, specification of the case of a given noun has been derived from semantics. The subject of a sentence is in the Nominative Case in traditional English grammars. The direct object, indirect object, and the object of prepositions have characteristically been given the case designation Objective, and the noun denoting that it is the possessor of something has been termed Possessive in case. Some grammarians resorted to the case designations of Latin and Old English grammar. Curme (1925), for instance, customarily uses Dative for indirect object, Accusative for direct object, and Genitive for possession.

Generative grammar, with syntactic structure as its starting point for linguistic analysis and its concept of deep structure, would, by definition, seek an explanation of the relationships of the constituent elements of a sentence through some sort of syntactical analysis and attempt to explain the source of the notion case within the frame of reference of deep structure. The work of Charles J. Fillmore (1964, 1965, 1967) has been the most productive in this area, and to a great extent much of the theory we will present here is grounded in his hypotheses.

4.0.1 Fillmore's approach in 'The Case for Case' (1967) is from the standpoint that case is a grammatical phenomenon universally present in all languages. The idea of language universals, which was axiomatic to language study of the seventeenth and eighteenth centuries, has been revived by Chomsky and his followers. A fundamental tenet of transformational generative grammar is that it seeks to arrive at general rules for the description and explanation of all languages. Fillmore, for instance, refers to Lyons (1966) who holds that every grammar requires such categories as noun, predication, and sentence, even though other grammatical categories and features may be differently arranged in different languages. Fillmore also refers to Bach (1965) who holds that there is a universal set of transformations which each language draws from in its own way. George A. Miller (1964) gives a lucid summary of the

present-day view of the nature of language universals.

Every human group that anthropologists have studied has spoken a language. The language always has a lexicon and a grammar. The lexicon is not a haphazard collection of vocalizations, but is highly organized; it always has pronouns, means for dealing with time, space, and number, words to represent true and false, the basic concepts necessary for propositional logic. The grammar has distinguishable levels of structure, some phonological, some syntactic. The phonology always contains both vowels and consonants, and the phonemes can always be described in terms of distinctive features drawn from a limited set of possibilities. The syntax always specifies rules for grouping normal intonation, rules for transforming some types of sentences into other types.

In line with this view, Fillmore holds that the grammatical notion case deserves a place in the base component (deep structure) of all languages, and that case relationships are primitive terms of the theory of base structure, not to be restricted to surface structure as such concepts as 'subject' and 'object' are restricted in traditional grammars. The universal aspects of Fillmore's theory are not applicable to this paper since we are restricting our discussion to English. But we do hold with Fillmore that case relationships are 'primitive terms of the theory of base structure', that is, that case relationships are established in deep structure and are constructive aspects of the process by which a speaker internally produces utterances.

4.0.2 It is interesting to note that in 'A Proposal Concerning English Prepositions' (1966) Fillmore questioned Chomsky's incorporation of the grammatical concepts of

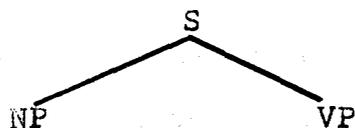
'subject' and 'object' in his description of the aspects of deep structure. (See Chomsky, 1965, pp. 63-73).

My purpose . . . is to question the linguistic validity of the notions 'subject' and 'object' and to raise doubts about the adequacy of Chomsky's proposal for formally reconstructing the distinction between relational and categorical grammatical concepts. (Fillmore, 1966, p. 20).

Chomsky advanced the idea that the binary constituents of a sentence, the noun phrase and the verb phrase, i.e., the subject and predicate, were syntactical categories distinct from such grammatical concepts as subject and object which indicated a unique set of relations devoid of syntactic significance. In 'The Case for Case' Fillmore uses the term case 'to identify underlying syntactic-semantic relationships in a sentence,' thus placing grammatical case on a par with the syntactic categories which held precedence in Chomsky's view. Fillmore further states that each case relationship appears only once in a simple sentence, compound instances of a single case occurring via noun phrase conjunction. However, only noun phrases representing a given case relationship may appear in the same simple sentence. In these general specifications with regard to case, we accept Fillmore's statements as correct.

4.0.3 'Modality' and 'Proposition' in Fillmore. In 2.04 above we showed the initial 'rewrite rule' in a generative grammar sentence diagram where S (Sentence or Clause) is rewritten as NP + VP, symbolizing the traditional division

of a sentence into subject (Noun Phrase) and predicate (Verb Phrase). The rewriting is also indicated if desired by means of a branching 'tree' diagram:



We may then think of S as 'dominating' both NP and VP. In turn, other constituents in a given sentence which are a part of the NP (adjectives, modifying clauses, etc.) and part of the VP (adverbs, modifying clauses or phrases, etc.) are dominated by their higher ranking sentence components and would be shown in successive branchings until the final analysis or terminal string has been derived.

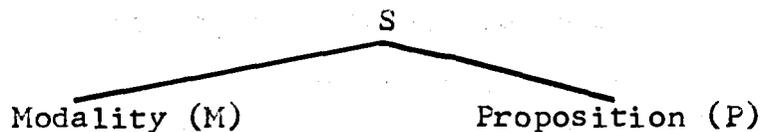
Fillmore retains the operant principles of this system of diagramming, but uses a new approach which does not observe the subject/predicate division of a sentence. He argues that the traditional division between subject and predicate is an importation into linguistic theory from formal logic and is not supported by the facts of language. He feels that such a division 'obscures many structural parallels between subjects and objects.' An immediate and classical example of such a structural parallel is the fact that the subject and object of an active sentence exchange places when the sentence is transformed to a passive sentence. Further, it is accepted among transformationalists that the deep structure of any given sentence may be

entirely different from its surface structure. Fillmore suggests that sentences in deep structure may be 'subjectless' through anaphoric processes wherein the subject may be deleted because it is rendered unnecessary by the context in which it appears, the subject may be replaced by a pronoun, or may not be repeated within the context because it is not necessary for the speaker to place particular stress on it. This relational ambiguity of noun phrases in deep structure leads Fillmore to place all noun phrases under the domination of the verb (V). This constituent Fillmore terms the 'Proposition' (P), and he defines it as:

A tenseless set of relationships involving verbs and nouns (and imbedded sentences if they occur).
(1967, p. 23)

It must be remembered that we are here dealing only with simple sentences in English. In transformational generative grammar 'embedded sentences' are a suborder of simple sentences from which adjectives, adverbs, dependent clauses, and other modifiers and complements in the surface structure are derived.

The second higher order constituent comprising a sentence is 'modality.' This includes question, passive, negation, tense, other moods than passive, perfect and progressive aspects. Thus, rather than rewrite S as NP + VP, under Fillmore's specifications S would be rewritten in diagrammatic form:



It seems pertinent here to reiterate that (1) Fillmore is working in the framework of formal transformational generative grammar, and (2) he regards the notion case as a component of deep structure, and the proposition of a sentence as he defines it is one of the two primitive constituents of a deep structure sentence, modality being the other constituent.

It is obvious that our positing the verb as the nucleus of a sentence (See 3.3.6 above) has its genesis in Fillmore's concept of the proposition. In fact, in terms of language universals, he says:

In their deep structure the propositional nucleus of sentences in all languages consists of a V and one or more NP's, each having a separate relationship to the P [Proposition] (and hence the V). (1967, p. 51).

That the 'one or more NP's' and a V comprise the base component of a deep structure sentence, that each NP has a separate relationship to the V, and that all the elements bear separate relationships to the sentence as a whole, is in itself hardly a new set of statements about the structure of a sentence or the relationships of the constituents that make up a sentence. But using Fillmore's concept of the proposition strips the base component of the modifications included in modality. It reduces them to linguistic integers,

which, while abstract in nature, are inherently representations of the concrete base of the utterance production process. This process involves perception and conceptualization of an event by a speaker-listener and its symbolization through mobilization, participation, and the application of linguistic schemata.

4.0.4 Case as a Feature of Nouns in Deep Structure.

Following the format of generative grammar, Fillmore interprets the case relationship of a noun as a syntactic feature of the noun along with such features as \pm animate, \pm human, \pm plural, and so forth. However, such case relationships result from 'the action or state identified by the verb.' Here Fillmore ceases to be general and attempts to explicitly name and define certain cases. We will quote his summary of these in full (1967, p. 24 ff.). It might be noted that Fillmore tosses in 'presumably innate', a terse acknowledgment of the Chomskyan precept that humans are born with an innate set of grammatical rules which are the basis for the acquisition of language.

The case notions comprise a set of universal, presumably innate, concepts which identify certain types of judgments human beings are capable of making about the events that are going on around them, judgments about such matters as who did it, who it happened to, and what got changed. The cases that appear to be needed include:

Agentive (A), the case of the typically animate perceived instigator of the action identified by the verb.

Instrumental (I), the case of the animate force or object causally involved in the action or

state identified by the verb.

Dative (D), the case of the animate being affected by the state or action identified by the verb.

Factitive (F), the case of the object or being resulting from the action or state identified by the verb, or understood as a part of the meaning of the verb.

Locative (L), the case which identified the location or spatial orientation of the state or action identified by the verb.

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. The term is not to be confused with the name of the surface case synonymous with accusative.

Additional cases will surely be needed.

It immediately becomes apparent that in spite of Fillmore's lip-service to the precedence given the syntactic component of a grammar by Chomsky and his followers, these definitions of case rely on semantic interpretation of the verbs and nouns to ascertain the explicit case to be applied in analysis. Also, Fillmore's statement that 'additional cases will surely be needed' gives rise to reservations about the ultimate practicality of his system. We have referred to the classifications of verbs as related to nouns which Lees made in 1960. Lees' classifications were certainly not exhaustive, and in rapid order he evolved twenty-six of them. We would suggest that it would be difficult to find a terminal point in the nomenclature of cases if the case is determined by the 'state or action

identified by the verb.' We might easily end up with as many named cases as there are semantic interpretations of verbs, or at least with a less and less workable system of cases if some extended, complex, and heirarchally ordered classification of verbs could be devised. This is, of course, the ancient and baffling problem of 'meaning' which seems to rise whenever semantics is incorporated in a formal system such as that with which Fillmore is working. It certainly is further evidence to support Hockett's claim that language is an ill-defined and incomputable system which presents formidable, if not insurmountable, obstacles to attempts to explicitly and completely describe it.

4.0.5 Topicalization Processes. In 4.0.3 above we noted that Fillmore posits that some sentences in deep structure may be 'subjectless', the subject having been deleted by the speaker-listener's anaphoric processes, and we have pointed out that such relations as subject and object can become ambiguous. Under the case system proposed by Fillmore, the speaker-listener exercises a choice from among the nouns in a given proposition.

Sentence subjects or 'topics' can be chosen from any case (A,I, O, etc.).

.....

Topicalization processes [are] devices for isolating one constituent of a sentence as 'topic', of bringing one particular constituent of a sentence into some kind of 'focus'.
(1967, pp. 55 and 57).

Fillmore calls this selection of a 'topic' as subject of a sentence 'primary topicalization.' This concept bears similarity to the psychological factors we have discussed in this paper. Mobilization can be construed to be a 'focusing' of our psychological forces toward a certain event or situation, say, toward another speaker and the context of an exchange of utterances. Our empathetic participation and contemplative perception would lead to a choice of primary topic from those available in the context.

4.0.6 Subsummary.

1. The base component of a simple sentence is made up of the Modality of the sentence and the Proposition of the sentence. The proposition is composed of the verb plus all noun phrases. We interpret this as Main Verb plus one or more Noun Constituents (or their equivalents).

2. The speaker-listener has a choice of cases which are assigned to nouns according to the action or state identified by the verb.

3. Each case relation appears only once in a simple sentence, and only one representative of a given case relationship may appear in a simple sentence.

4. Fillmore posits that the notion case is a syntactic-semantic feature assigned to nouns in deep structure, selected according to the state or action identified by the verb. He attempts to define a number of cases, his

definitions deriving from other syntactic-semantic features of nouns such as animate, inanimate, etc. However, it appears that the more explicit this system of identification and nomenclature becomes, the more complicated and impractical it becomes, presenting problems as to its ultimate workability.

THE PREPOSITION IN DEEP STRUCTURE

4.1 Prepositions with Nouns. In "A Proposal Concerning English Prepositions" in 1966, Fillmore presented a hypothesis that all nouns in deep structure are accompanied by prepositions, or, to be more precise, that all noun phrases begin with a preposition. In the process of formulating a given utterance, the preposition is deleted from noun phrases chosen to fill the subject position in a sentence. To use Fillmore's examples:

In the garden swarms with bees.

The initial preposition would be deleted, resulting in the sentence

The garden swarms with bees.

Or, similarly,

With bees swarm in the garden.

With the preposition deleted:

Bees swarm in the garden.

However, beyond certain assertions Fillmore does not arrive

at an explanation for the origin of the prepositions which, as he terms it 'unarily dominate noun phrases' (p. 23). He assigns the term 'actant' to these dominating prepositions.

Some prepositions are filled in from the lexicon. Location prepositions (over, on, in, etc.) are introduced in this way, with some constraints. These prepositions bring with them semantic information.

Some prepositions are assigned by inherent syntactic features of specific verbs. Thus blame requires the . . . preposition to be for, the dative preposition to be on; depend chooses on, object chooses to, etc.

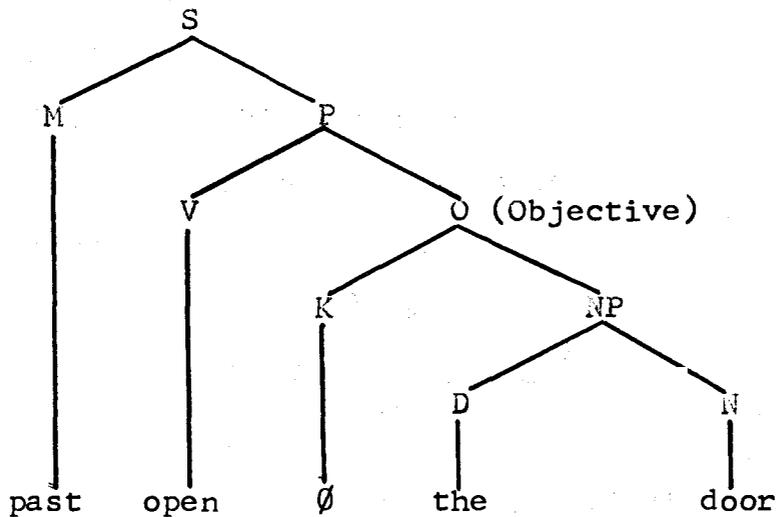
The remaining prepositions are filled in by rules which make use of the information about the actants. Thus . . . the preposition is of if it is the only actant in a proposition or if the proposition contains instrument or agent phrases; it is with otherwise. The instrument preposition is with just in case the proposition contains an agent phrase, otherwise it is by. The agent preposition is by. (1966, p. 23).

Returning to The Case for Case written a year later, we find Fillmore saying essentially the same thing.

Prepositions in English--or the absence of a preposition before a noun phrase, which may be treated as corresponding to a zero or unmarked case affix--are selected on the basis of several types of structural features, and in ways that are exactly analogous to those which determine particular case forms in a language like Latin: identity as (surface) subject or object, occurrence after particular verbs, occurrence in construction with particular nouns, occurrence in particular constructions, and so on. . . . Conditions for choosing prepositions are basically the same type as those for choosing case forms. . . . The determining conditions may simultaneously determine a preposition and a case form. (1967, p. 15).

In accordance with his proposal that all nouns are preceded

by prepositions in deep structure, Fillmore symbolized this construction as K (for Kasus) + NP, and diagrammatically demonstrates his concept:



Here the verb open and the case which its action identifies, Objective, are dominated by the Proposition. The O case dominates K, here a zero, and the NP consisting of the Determiner the and the Noun door. The resulting surface structure is

The door opened.

The Modality past determined the tense of the verb in the surface structure. This illustrates a sentence in which only one noun phrase was present in the proposition. The same diagrammatic format would apply when, let us say, as many as three noun phrases appeared in the proposition.

The P would then show four branches, one for V and one each for the three cases which were assigned to the three noun phrases. Each case would then in turn show branchings to

K (either a zero or a specific lexical form of a preposition) and its NP, consisting of a determiner and a noun, or only a noun if no determiner is present.

We will return to these hypotheses of Fillmore's, but first it might be well to outline some historical aspects of English which tend to support the concept that all nouns are preceded by prepositions in present-day deep structure.

SOME HISTORICAL ASPECTS OF THE PREPOSITION IN ENGLISH

4.2 All Indo-European languages, including the Germanic family from which present-day English is descended, were highly inflected languages. Case relationships of nouns and the person and number of verbs were indicated by inflectional endings affixed to word stems rather than indicated by the order in which words appeared in the surface structure. As changes took place in English, for instance, as word order came more and more to indicate relationships of the words in a sentence, these inflectional endings were dropped.

In sketching the development of Romance languages, Michael Girsdansky (1963) points out that the Romans, identifying case endings notwithstanding, probably used a fairly set word order in speaking, although this was not necessarily the case when writing and developing a literary

style. Thus the 'man on the street' was probably responsible for the loss of inflectional endings which primarily identified case in Latin and the substitution of word order to indicate case relationships. The Romans still used prepositions, however, to clarify the meaning of a sentence.

In addition to a systemized order of words, came the use of prepositions. The very purest of Latin might be: carnefici dabo (I give to the executioner) with carnefici in the proper dative; but Plautus could write ad (to) carnificem dabo, in which carnificem was the accusative; the preceding ad made the meaning quite clear. (p. 48).

Not only did the dative case in Latin convey the indirect object prepositional connotation expressed in English by the prepositions to and for, but also in a single inflected form, the genitive case carried the semantic significance of of as expressed in English to denote possession as in 'the love of God.' The Latin ablative case is often used with only the inflectional ending to convey locative prepositional semantic content, usually expressed in English by a preposition preceding the noun.

With the loss of inflectional endings, prepositions came more and more to be used in the function of case markers. McLaughlin (1970) discusses this process in Old English and particularly points out the accusative and dative cases which had formerly been signaled by appropriate case endings. He gives the following example to show the prepositional signaling of the dative case.

Him [dative] cenlice wid feaht mid lytlum
werode [dative] 'him boldly against he fought
with a small band.' In this last sentence we
should call particular attention to the positions
occupied by wid and mid. Mid occupies the ex-
pected prenominal position, while wid not only
does not precede the noun, but is separated from
it by the adverb cenlice. Such a position is
not at all uncommon in Old English. . . . What
we observe here is a kind of 'embedded' history
of the post Indo-European prepositional system.
. . . In the example above, the preposition is
'preposed' before the verb, rather than the
noun. The suggestion is that at some point in
their pre-history what we now call prepositions
in a prenoun position were particles attached
to verbs, their function being to alter in some
way the force or meaning of the verb. . . .
These gradually became detachable, and in trans-
sitive situations begin to assume an ambiguous
syntactic relationship, being in part related
to their verbs, in part related to the noun
objects of the verbs. (p. 232).

McLaughlin does not point out the difference in semantic
content of wid and mid, however. Both can also be trans-
lated as with, but wid is Old English and mid is Scandi-
navian. Myers (1966) demonstrates the difference thus.

Thus with is common to both languages, but in
Old English it meant against [McLaughlin's
translation], a meaning preserved in the com-
binations withstand and notwithstanding. In
Scandinavian it had the sense of accompaniment,
a meaning expressed in Old English by mid. If
we say, about the two World Wars, that we fought
with the British, we are using the word in its
Scandinavian sense; but if we say that we and
the British fought with the Germans we are using
it in its original English sense. (p. 110).

As McLaughlin suggests, then, in the pre-history of the
languages from which present-day English derives, the pre-
position may well have been a particle attached to the verb
to in some way modify its meaning, just as we ourselves

attach a preposition to a verb to modify its meaning and in many cases, by creating a two part verb, transform an intransitive verb to a transitive verb.

Friedrich Waismann, the philosopher, offers an interesting sidelight (1952). While Waismann is thinking more or less in terms of linguistic relativity, his observations on Greenland Eskimo language serve to point up the preposition-verb relationship in a language which is not Indo-European. We have excluded language universals from our discussion, but what we have here, we suggest, is a rather graphic example of prepositional orientation, a primitive element in deep structure, and, as we will attempt to demonstrate, an integral part of the conceptualization process leading to the determination of case relationships.

Human action . . . when seen through the filter of Eskimo language . . . owing to the lack of transitive verbs, . . . is likely to be perceived as a sort of happening without an active element in it. (In Greenland one cannot say 'I kill him,' 'I shoot the arrow,' but only 'He dies to me,' 'The arrow is flying away from me.' (pp. 107-8)

As long ago as 1846, Noble Butler in his school grammar, A Practical Grammar of the English Language, noted that prepositions are sometimes omitted (in surface structure, of course), but that the preposition could also be 'supplied' in these constructions.

Home, and nouns denoting time, extent of space, and degree of difference, are put in the objective case without a preposition; as "He went home;" "I was there five years;" "He rode forty miles that day;" "The pole is ten feet long;" "This is a great deal better than that."

A preposition may be supplied with some of these; as, "He went [to] home;" "I was there [during] five years;" "He rode forty miles [on] that day." With others it is difficult to say what preposition may be supplied. Some say, "He rode [through] forty miles;" "The pole is long [to] ten feet." (p. 172).

We have not quoted Butler here as an authority. However, considering the prescriptive attitude that ruled grammar in his day, with emphasis on what is 'correct' in speaking and writing rather than emphasis on describing English and how it works, Butler's insight is remarkable. In our survey of grammars of English which we discussed in Chapter I of this paper, we did not encounter another grammarian who sensed that nouns might well be preceded by prepositions, even though the preposition did not appear in what we call the surface sentence.

THE VERB, THE PREPOSITION, AND CASE RELATIONS IN ENGLISH

4.3 The Verb. We have posited the verb as an expression of some form or degree of concrete or abstract motion, and as such it is the symbol of the core of perception, movement. When motion of some sort is perceived, a verbal or 'motional' concept is formed internally by the speaker-listener. Also immediately perceived and conceptualized are one or more 'objects' which are some form or degree of the concrete or the abstract. Within the context of the composite perception of motion and object(s) a process of

establishing relations between the motion (V) and the object(s) (NP's) takes place.

4.3.1 The Preposition. We have pointed out that Fillmore depends on specific lexical prepositions to fill the slots preceding nouns in deep structure, unless, as he says, the preposition is that preceding the subject chosen by the speaker-listener, in which case the preposition is replaced by zero (\emptyset). At this stage we are working on the assumption that the deepest level of the base component is non-verbal, but consists of psychological concepts immediately equated with perception and conceptualization, the first step in the internal conversion of a concrete event to some form or degree of abstractness. If this assumption is correct, then instead of the presence of a preposition in lexical form, there is present an abstract and generalized prepositional indicator radiating from the motion observed to each of the objects observed.

At the instant of perception a speaker-listener has become mobilized toward the situation and participates in it psychologically (as well as physically if this is within the context of the given situation). Through contemplative perception he internally inspects, judges, and analyzes the event perceived, and via prepositional orientation and the formation of abstract prepositional indicators, he establishes relationships between the motion and the objects. These relationships are symbolized by some seman-

tically significant prepositional lexical form in the surface structure.

We would be extremely cautious in assigning semantic significance to any English preposition out of context. Of all the function words in English they are most flexible in this respect. While a preposition in English can be construed to carry some sort of basic semantic significance, even a rapid survey of the multitudinous meanings of the most frequently used ones, such as in, to, from, for, by, at, of, up, down, in the OED reveals how rapidly they can acquire new connotations. Their semantic significance can be twisted and stretched continuously to meet new situations arising from the continuous changing of the language. When Fillmore specifically assigns certain prepositions to each of the cases he defines, he is without doubt helping to explain their most common usage in the language, but we suggest that any exhaustive attempt to follow this procedure would result in a system too vast to serve any practical purpose.

The rules for English prepositions may look something like this: the A [Agentive] preposition is by; the I [Instrumental] preposition is by if there is no A, otherwise it is with; the O [Objective] and F [Factitive] prepositions are typically zero; the B [Benefactive] preposition is for; the D [Dative] preposition is typically to; the L [Locative] and T (for time) prepositions are either semantically non-empty (in which case they are introduced as optional choices from the lexicon), or they are selected by the particular associated noun. . . Specific verbs may have associated with them

certain requirements for preposition choice that are exceptions to the above generalization. (1967, p. 32).

What Fillmore is saying in the final sentence quoted is that such verbs as 'blame' would require for in one given case situation and on in another, or that 'look' would require various prepositions to follow it depending on the specific semantic significance of 'look' in whatever context it appears. Fillmore evidently has some distinction in mind regarding empty and nonempty prepositions, but we are not clear what this distinction is, unless by this he means that prepositions vary in semantic load depending on the context. This is in accord with our argument that the semantic significance of prepositions is highly flexible. We suggest that the semantic load of a preposition possibly increases in proportion to the concreteness of the concepts of motion and object between which it is instrumental in defining relationships.

4.3.2 Case Relationships. Fillmore defines the proposition of a simple sentence as consisting of V plus one or more NP's. We are now prepared, in the light of the foregoing discussion to somewhat expand and modify Fillmore's concept of proposition. In a simple sentence the proposition constituent consists of the verb (V) plus one, two, or three NP's, each in some relation to the verb and to the proposition as a whole, with the relation to the verb established by prepositional indicators. The speaker-

listener has a choice of primary topic, to use Fillmore's term, from among the NP's present in the proposition.

4.3.3 Unavoidable Relationships. We borrow this term from Edward Sapir (1921, p. 94) because it most nearly expresses the case relationships with which we will be concerned here. These are the three cases which finally appear in the surface structure as subject, indirect object, and direct object. Every sentence in English has a subject, whether absent because of anaphoric deletion or not. If there is only one NP in the proposition, it becomes the subject of the surface sentence. If there are two NP's in the proposition, one becomes the subject and one becomes the direct object in the surface sentence. If there are three NP's in the proposition, one becomes the subject, one becomes the direct object, and one becomes the indirect object in a surface sentence. These are the unavoidable relationships. Whatever other elements appear in the surface structure are in the nature of qualifiers or modifiers and are optional choices on the part of the speaker-listener. For the moment we will consider such constructions as appositives, predicate nominatives, and object complements as among these optional choices of the speaker-listener.

The suggestion here is that there are actually two categories of case relations. One is the category of primary, or unavoidable, relationships composed of only

three cases, each identified by the prepositional indicators as having a specific relationship to the motion expressed in the verb and to the proposition as a whole. The second category of case relationships is the lesser category and is comprised of the speaker's modifiers and qualifiers that expand the surface structure but in no way influence or alter the base structure of the proposition. These are independently related to a given constituent of the proposition and only indirectly related to the proposition as a whole. Since we are concerned here with the case relations within the base propositional component of a sentence, this subcategory of secondary case relationships will not be considered in this paper.

4.3.4 The Primary Cases. With one exception the terminology we will use is not new, just as, actually, the concepts we will present of the cases themselves is far from new. We have stated that if only one NP is present in the proposition, it becomes the subject of the surface sentence. In such an instance, the NP, as perceived as some form or degree of a concrete or abstract object, is in some way performing the motion expressed by the verb. Whether the object is concrete or abstract, animate or inanimate, human or nonhuman, has no bearing on the relationship of the object to the motion expressed by the verb. Therefore, when only one NP is present in the proposition, we designate this as the Agent and will refer to it as being in the

Agentive case.

We have said that when two NP's are present in the proposition, one becomes the subject of a surface sentence and one becomes the object of the surface sentence. This does not include such surface structure constructions as appositives, predicate nominatives, or object complements. These are, so to speak, semantic duplicates or particularly placed modifier/qualifiers in the syntax of the surface sentence. As we have mentioned before, for the time being we place them in the category of secondary case relationships. In the instance of two NP's appearing in the proposition, then, the speaker has a choice of which will be the surface structure subject and the surface structure object. However, in the base proposition the Agentive will be dictated by the speaker's perception as the performer of the motion expressed by the verb, and the second NP will perforce be the object affected by that motion. Thus, in the base propositional component, the second NP will always be designated as being in the Objective case.

The indirect object of a surface sentence has been termed as being in the Dative case, the Indirect Object Objective case, and so forth. Fillmore has used Benefactive as a designation for this grammatical construct. All of these carry the implication of 'recipient.' We find such a term as 'Recipientive' to be awkward, if only on aesthetic grounds, and adopt the term 'Receptive' in lieu

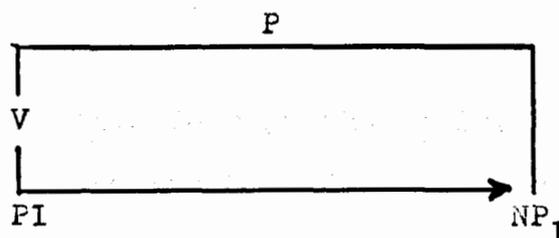
of it. This is applied, of course to the third of the primary cases present in the proposition. If the third NP is present, it means that the Agentive performing the motion expressed by the verb in some way causes the object in the Objective case to be related to the third object, the Receptive, which is the ultimate recipient of the motion expressed by the verb and/or of the Objective.

It is a basic tenet of transformational generative grammar that the surface structure of a sentence may be entirely different from the base component. Fillmore posits that Modality and Proposition are distinct constituents of a sentence. Working with these assumptions and combining them with our own about the proposition, namely, that it consists of a verb plus one to three related NP's, it follows that the base propositional component of all sentences is identical. In the generative process the speaker's mobilization, participation, prepositional orientation, choice of modality and primary topic successively use these base propositional materials present in his perception to generate a sentence. Further, regardless of the syntactical and grammatical aspects of these constituents in the terminal string--aspects whose forms are dictated by the speaker's linguistic schemata associated with the modality constituent--the NP's do not change their case relationships throughout the generative process from base component to surface structure. They retain their

Agentive, Objective, and Receptive case relations to each other and to the verb.

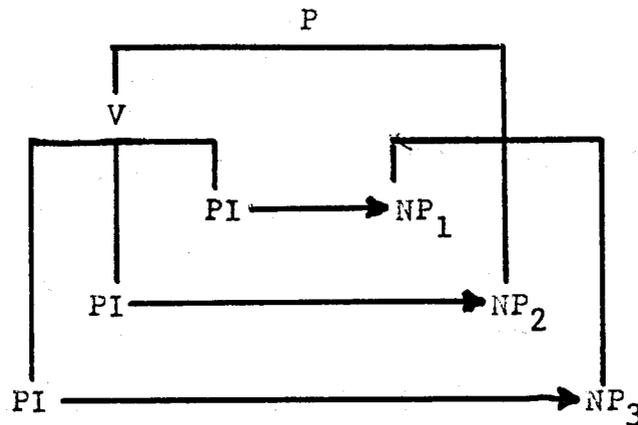
4.3.5 The Base Component as Process. The base component is created by the speaker's perception of some form or degree of concrete or abstract motion and from one to three objects associated with that motion. Explicit relationships of objects to motion are preverbally established by prepositional orientation and abstract prepositional indicators (PI), determined by the motion (V) and the involvement of the objects NP_1 , $[NP_2]$, and $[NP_3]$. The latter NP's are bracketed merely to indicate that they may or may not be present in the situational context. The ordering 1, 2, and 3 indicates that Agentive (1), Objective (2), and Receptive (3) have such an order of incidence in the totality of contextual situations possible for a simple sentence. Thus a proposition involving only V, the PI, and one NP, and the relationships within such a context may be shown:

(I)



If the maximum of three NP's is present in the proposition, the diagram is expanded:

(II)



While symbols have been used here that relate to verbal entities, the process stage diagrammed may be termed non-verbal. For instance, an observer visually perceives an individual in the process of sitting in a chair. The prepositional orientation is from a state of standing to a state of sitting; the prepositional indicator is derived from the motion, the act of moving the body from up to down and completing the action by assuming a bodily position in the chair. If the observer desired to produce an utterance describing his observation of the motion and the relationships between NP₁ (man) and NP₂ (chair), it would take the form

(1) The man sits down in the chair.

Two observations may be made here, one with regard to the inclusion of down in the surface sentence, and one with regard to the entire predicate portion of the surface sentence. The speaker, we suggest, has included down, making sits down, a two part verb, the verb of the sentence, to

remove the ambiguity of

(2) The man sits in the chair.

We reiterate the fact that either of the two surface sentences would not be ambiguous within a given context. The inclusion of down in the sentence, however, assures that it is understood by a listener that a process, an ordered set of events with a definite beginning and a definite end, is taking place rather than progressive motion, an unordered set of events without definite beginning and definite end, as would be indicated by (2). Thus the prepositional affix of the verb can serve to distinguish between motion as process and motion as progression and to convert a verb which fundamentally carries the semantic significance of progression to one with the semantic significance of a process.

The second observation we would make is that if down is an affix which is part of the verb sits, then it may be construed that in is also an affix of the verb. Man is certainly Agentive, according to our hypothesis outlined above. Since chair is the second of the two NP's in the proposition, then it must be the Objective case according to our hypothesis. We have posited that prepositional indicators are associated first with verbs in the base component, and serve to establish the relationships of NP's with the verb. The suggestion here is that sits down in is indeed the verb and that chair is the

Objective which is affected by the motion expressed in the verb. Further, as we have shown, there is evidence that, in the past history of English and its predecessors, prepositions were associated with verbs rather than nouns. It has been a long-ingrained schema that we think of such series of orthographic units as in the chair as a syntactic unit in the surface structure and we have long called it a 'prepositional phrase.' In a sentence such as the one we have used, we would posit that chair is the surface direct object of sits down in.

In (1) and (2) only two NP's were present. What is the situation when the maximum of three unavoidable relationships is present? For instance,

(3) The police locked the man in the cell.

Traditionally we would regard in the cell as a locative prepositional phrase, police would be the surface subject, and man the surface direct object. Under the specifications of our propositional hypothesis, police would be Agentive, performing the motion expressed by the verb. But what is actually the NP affected by the motion expressed in the verb? Cell is the object which is affected by the motion of locked, not man. In is the prepositional indicator that is the connecting link between locked and cell. It would be our assumption, then, that locked in is actually the verb and cell is the Objective. Man, according to our hypothesis of a maximum of three case relation-

ships, is perforce the Receptive. Certainly, it is the cell and not the man which the police lock. This view is substantially that of Fillmore as defined in his case designation Objective (See 4.0.4 above). This is the case of 'anything representable by a noun whose role in the action or state identified by the verb is identified by the semantic interpretations of the verb itself,' to use Fillmore's words.

4.3.6 The Role of Modality in the Base Component. Since it is the modality constituent of the base component which, if we follow Fillmore's hypothesis, determines tense, mood, voice, and so forth of the surface structure, we will at this point consider its relation to its sister component, the proposition. We are attempting here to present some sort of orderly sequence of occurrences in which the proposition constituent becomes the elements of a surface structure. We would posit that modality is not consistent either as a hierarchally ordered constituent or predictable in the nature of its components in the process of producing utterances. Fillmore equates it hierarchally with the proposition, yet in his demonstrations the modality constituent does not enter into an active role until the derivation of the terminal string and the application of lexical rules.

We think of modality in terms of Hockett's overt and covert editing (1968, p. 89 ff.). Overt editing is that

situation in which a speaker begins a sentence, stops in the midst of the utterance, and either corrects what has already been uttered or begins the utterance anew. Overt editing can be perceived as an aspect of sentence generation by a listener, something of an 'audible transformation' taking place in the form of the sentence. Covert editing is internal editing, somewhat analogous to the syntactical transformational subcomponent of Chomsky's generative grammar. At any given point the mobilization of a speaker can cause a shift from one tense to another, one voice to another, one mood to another. It should be remembered that in an exchange of utterances, the speaker-listeners participate in each other's thought processes. Even as a listener hears and interprets a speaker's utterance, linguistic processes are underway, and particularly through contemplative perception, the listener is himself in the process of generating an utterance. Whether modality, which is certainly to a great extent influenced by contemplative perception, enters the generative process at the same point that the elements of the proposition are perceived, or whether it begins at some later point in the generative process, are incomputable considerations. It is not possible to say that this or that utterance began as a question or a statement, as active or passive, as an expression of present or past time. The suggestion is that a given utterance could actually have involved any and all of these modalistic

aspects during the generative process, and at any given point in the generative process could have shifted among the various aspects of modality. The surface structure is the speaker's final choice of modalistic aspects, and even then, in the phenomenon of overt editing, can be seen to involve continuing choice at the phonological level.

Unless it is arbitrarily assigned a formal role in the generation of a sentence, then, modality cannot be explicitly described as a constituent except according to whatever aspects are the final choice of the speaker and appear in the surface structure. This leaves us with the assumption that $S = P +$ an ill-defined, unordered, and non-computable modality. Holding this view of modality and confining the scope of this paper to the case relationships empirically derived from our hypothesis of the proposition, we will accordingly not consider modality further in the discussion or demonstrations, except as a surface phenomenon.

4.3.7 Propositional Case Relations as an Aspect of Surface

Structure. If propositional case relations, established in the base component, retain their case significance throughout the process of generating a sentence, then they should be identifiable in the surface structure. The linguistic schemata of a speaker permit his choice of a number of arrangements of the lexical items which form the surface sentence. The base component consists of

- (4) Motion (V) + Agentive (NP₁) + [Objective (NP₂)]
+ [Receptive (NP₃)]

The most directly derived surface structure would be represented as

(5) A + V + [O] + [R]

(6) The police (A) blamed (V) the crime (O) on him (R).

A and V are always present. Bracketed symbols indicate only that these cases may be present if the contextual situation includes them. In this form of the sentence only one of the prepositions has been retained from deep structure. We do not agree with Fillmore that, 'All prepositions are deleted in subject position' (1966, p. 24). In such sentences as

(7) In the house is out of bounds

we can assume that the context has caused the speaker to anaphorically delete a portion of the utterance, but what we have is still a surface sentence in which the subject has, for whatever reason, retained the preposition associated with it in deep structure. Our argument is that the 'subject' of a surface sentence can be any one of the three base component cases and that regardless of the surface arrangement of the lexical items, it retains that case relationship. The analysis of a surface sentence according to our hypothesis is therefore semantically ordered, beginning with identification and interpretation of the motion expressed by the verb, determination of the Agentive who performs the motion, the Objective affected by the motion, and, finally, the recipient (Receptive) of the

Objective affected by the motion. It is interesting that when the motion is nominalized, that is, the action is interpreted as an act, the three NP's, as in (6) automatically become prepositionalized in the surface structure:

(8) The blaming of the crime on him by the police.

This is not to say that nominalization can be construed as a test of our hypothesis. It does show, however, that the nominalization process suggests to what extent the deep structure prepositions may be retained. This is one of the numbers of linguistic schemata employed by speakers of English, just as (6) represents one such a linguistic schema.

Another surface ordering of propositional cases would be

(9) The police blamed him for the crime.

(10) A V R O

This is the same ordering of lexical units as (3) and would respond to the same analysis as that sentence.

(11) The crime was blamed on him by the police.

(12) O V R A

In the passive version of the sentence, only the preposition for the noun in the 'subject' slot has been deleted. in (9) we posit that the verb is blamed for, and by analogy the verb in (11) is blamed on. This change from for to on is idiomatic in character and is actually not relevant to the problem of case. Although certain prepositions are

customarily used with given cases, the semantic flexibility of prepositions, in our opinion, precludes their specific designation as case markers.

In (11) by is also associated with blamed, signaling that police is the Agentive, through semantic interpretation. In Fillmore's definition by is the preposition usually associated with the Agentive case in his system. However, through and with can also signal Agentive in passive surface structure. We suggest that all prepositions associated with primary cases are in reality part of the verb, though separated by one or more lexical items from the verb proper. The verb in (11) would be blamed on by. It is not unusual for more than one preposition to immediately follow the verb:

(13) The boy ran up to the girl.

(14) The woman got up out of her chair.

The Receptive can be chosen by a speaker for the subject slot of a surface sentence:

(15) He was blamed for by the crime by the police.

(16) R V O A

In this version of the sentence the same verb type as (11), blamed for by, with multiple prepositions, results from the retention of the deep structure prepositions.

The speaker's choice of prepositions from the lexicon is guided to a great extent by prepositional orientation. For instance, the verb blame, as Fillmore points out,

usually takes on or for as prepositional adjuncts. The abstract semantic content of blame does not deny its conception by speakers as a concrete object via reification. The noun blame is put or placed, both verbs usually followed by on. To put the blame on someone is analogous to putting the burden on someone. Blame has the same unwanted connotations as burden, and the prepositional orientation is therefore derived from motion originating above the object. In effect, what we are saying here is the same thing that James Harris said in 1751, and whom we quoted above in 3.4.7.

4.3.8 The Verb Plus Particle. At the very beginning of this paper (See 1.0 above), we described the two part verb as the construction in English consisting of a verb + particle, or preposition. The construction is obvious in the surface structure of many English sentences. In the light of our subsequent investigations, particularly those involving case relationships as developed in the propositional base component, we hold that all prepositions associated with nouns in a simple sentence are derived from the verb in deep structure and serve as linguistic signaling devices to establish case relationships between the verb and the nouns for which it forms the nucleus of motion, and also to the proposition as a whole. Thus, in a simple sentence, all prepositions are affixes of the verb when they are associated with nouns in the three primary cases

in a simple sentence. This places a new construct on our original definition of the two part verb. When the preposition in the surface structure of an English sentence is patently an affix of the verb as in

(17) The boy gave up the fight.

the preposition up has certainly been retained from deep structure, while the Agentive preposition has been deleted by the speaker. The retention of ~~the~~ preposition up in conjunction with the verb is the result of the speaker's desire, within the context of the utterance, to modify and enhance the motion expressed by the verb.

CONCLUSIONS

5.0 In spite of the opinion of some linguistic scholars that the two part verb construction as it appears in the surface structure of English sentences is a relatively recent or growing aspect of the language, our investigation of grammars of English and the incidence of the construction in literature in English tends to refute this. It appears that it is historically as old as the language itself and may have its origins in the structure of pre-historic post-Indo-European predecessors of English. The discovery by Ogden and Richards that only eighteen of the most commonly used English verbs could be combined with prepositional affixes to convey efficiently a multitude of meanings usually associated with more 'literary' verbs, we construe as evidence that 'the man on the street' has made use of verb + prepositional affixes in day to day speech for centuries. Two part verbs began to appear with increasing frequency in written English with the spread of education and the rise of journalism and the novel which stylistically

reflected the language usages of a broader and less discriminating reading public. A diachronic survey of the construction would be a fruitful field for further investigation.

5.1 One of the most seminal contributions of transformational generative grammar as developed by Noam Chomsky and his followers is the concept of deep structure, the internal process by which utterances are produced. The concept of deep structure as already opened the door of linguistics as a discipline to the use of investigations by psychologists. We hold that psychological considerations are inseparable from any realistic explanation of the nature of the process of sentence formation. In simple terms, language is a symbolization of a speaker's perception, and whatever is discoverable about the human mind must in turn reflect important information on how language is acquired and used by native speakers. The development of linguistic schemata is, in our opinion, analogous to the formal rules of generative grammar, but places the study of language on a far more realistic and empirical plane than Chomsky's symbolic system which is primarily rooted in philosophy.

5.2 All verbs are an expression of the perception of some form or degree of concrete or abstract motion. When a speaker perceives a given event, he perceives the motion involved in the event and the performer, or instigator, of

that motion. He also perceives, if the object is present, the object that is affected by that motion. If a third object is present, it is perceived as the recipient of the second object affected by the motion. We follow Fillmore closely when we define the proposition of a sentence as the verb plus one to three objects perceived by a speaker.

These three objects and their relationships to the verb we term, after Sapir, the unavoidable relationships in a sentence and assign them as specific case relationships. The Agentive performs or instigates the motion expressed by the verb which affects the Objective. The affect and/or the Objective then devolve on the Receptive if present in the proposition. Other elements in the deep structure of a sentence are modifiers or qualifiers of the verb or of any one, or all, of the primary cases and do not relate to the proposition as a whole, which each of the primary cases does.

5.3 The case relationships of nouns to the verb and to the proposition as a whole are established by prepositional indicators which originate with the verb and signal the relationship linguistically. Lexical items in the form of prepositions are selected from the lexicon by the speaker. These may be deleted or retained in the surface structure of a sentence according to the linguistic schemata of the speaker and also by anaphoric deletion omitted when the judgment of the speaker deems them unnecessary within the context of the utterance.

5.4 All prepositions retained in the surface sentence are affixes of the verb and signal the relationships of Agentive, Objective, and Receptive to the verb and to the proposition as a whole. This means that all prepositions we have been accustomed to associate with nouns in any one of the three primary cases are still associated with the verb when they appear in the surface sentence. On the strength of the fact that the two part verb in English has been recognized as a grammatical construction in grammars of English dating at least from 1712 to the present, we hold that all prepositions signaling primary case relationships are part of the verb, and instead of being a two part verb, may just as well be termed a three or four part verb.

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