

OPTIONAL AND OBLIGATORY
VERBAL COMPLEMENTS
IN ENGLISH

Thesis submitted
for the degree of Doctor of Philosophy
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by
Anita Mittwoch

Department of Phonetics and Linguistics
School of Oriental and African Studies
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A C K N O W L E D G E M E N T S

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A B S T R A C T

This thesis investigates the factors that determine whether complements marked in the subcategorization of verbs are obligatory or optional. The model used is that of Chomsky (1965).

In 1.1. the notion of verbal complement is defined and is limited to direct objects, indirect objects, prepositional objects, directionals and some locatives; 1.2. consists largely of a resume of past discussions that have a bearing on the main topic of this investigation. It emerges that a distinction must be drawn between the absence of unspecified and specified complements.

Chapter 2 deals with the omission of unspecified complements, 3 with the omission of specified complements that consist of simple noun phrases. Chapter 4 opens with a discussion of the status of sentential complements and the structure of sentences containing such complements; the rest of the chapter deals with the omission of the various types of sentential complements. Chapter 5 deals with the omission of reflexive and reciprocal pronouns.

Chapter 6 discusses how the phenomena described in Chapters 2-5 should be handled by a grammar. The conclusion is reached that verbs that can be used without specified complements should be subcategorized as taking optional complements, so that there is no need to account for the absence of unspecified complements by a deletion transformation.

Such a transformation is, however, necessary to account for the absence of specified complements.

The main body of the thesis is followed by three Appendixes.

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CHAPTER 1

INTRODUCTION

1.1. Criteria for Verbal Complements

Verbs are subcategorised primarily according to the number of noun phrases with which they enter into construction and which have to be marked in their dictionary entries. All English verbs require at least one noun phrase to yield a grammatical sentence.¹ This noun phrase typically appears to the left of the verb when the verb is in an active declarative sentence. I shall call it the verbal subject. Some verbs require one or more additional noun phrases — with or without prepositions — which typically appear to the right of the verb. These will be called the complements of the verb.² The most characteristic of these complements is the one traditionally known as the direct object; verbs which require a direct object have long been singled out by grammarians as transitive verbs. The question I wish to pose is this: which of the various noun phrases that can occur to the right of the verb are to be counted as verbal complements?³

1.1.1. I shall begin with a résumé of recent discussions which have a bearing on this problem. Some of these take the phrase structure rules as their point of departure while others are concerned with lexical theory. Nevertheless the two lines of approach seem to converge to produce very similar answers to the problem I have posed.

According to Chomsky's model (1965, pp. 101, 102) the set of verbal complements includes all nominal and adverbial

elements except 'Time' and 'Place'. These are regarded as complements not of the verb but of the Verb Phrase as a whole. The Phrase Structure rules are as follows:

- (i) S \rightarrow NP \wedge Predicate Phrase
- (ii) Predicate Phrase \rightarrow Aux \wedge VP (Place) (Time)
- (iii) VP \rightarrow V (NP) (Prep. Phrase) (Prep. Phrase)
(Manner)

N.B. This is only one of the five expansions of VP as given by Chomsky.

- (iv) Prep. Phrase \rightarrow

}	Direction
	Duration
	Place
	Frequency
	etc.

Verbs are "subcategorised with respect to Verbal Complements but not with respect to Verb Phrase Complements".

The second part of this statement has been questioned by Lakoff and Ross (1966) on the strength of such sentences as the following:

- (1) a. *John ran four miles at that instant.
- b. *John was dead in Bayonne.

They have suggested an alternative model whereby only direct objects, indirect objects, directionals and some place adverbials are inside the Verb Phrase. The criterion for establishing Verb Phrase constituency is the possibility for

substituting do so: elements that may occur after do so are outside the Verb Phrase, the rest inside, e.g.

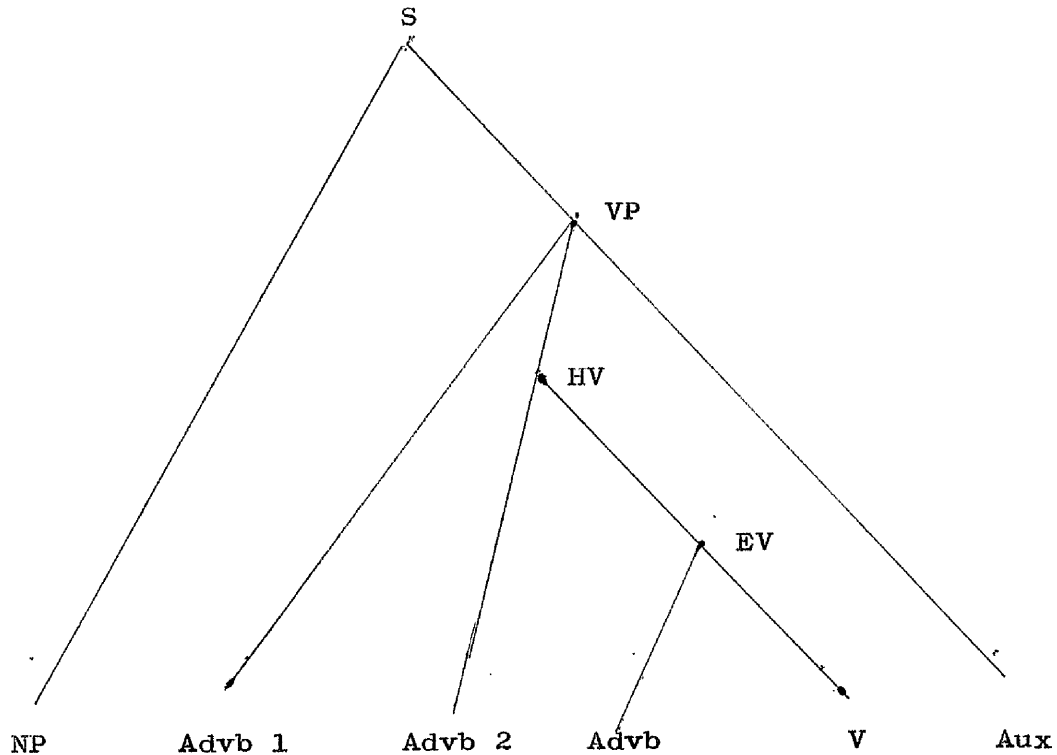
- (2) a. John bought flowers for Mary and Peter
did so for Jane (benefactive)
- b. *John gave flowers to Mary and Peter did
so to Jane (indirect object).

Furthermore, Lakoff (1968) has argued that adverbials outside the Verb Phrase are derived from underlying sentences. He also holds, with McCawley (1968) and others, that co-occurrence restrictions are purely semantic and are not to be handled by the Phrase Structure rules. These would be confined to what Chomsky calls strict subcategorisation.

Matthews (1967) in his review of 'Aspects' criticizes Chomsky's Phrase Structure rules for not distinguishing between optional choices in deep structure, such as manner adverbs, and obligatory choices like the direct objects of transitive verbs.

A similar criticism is made by Steinitz (1969). She divides adverbials according to whether they are purely optional or potentially obligatory constituents of sentences. The set of obligatory adverbials includes directionals and 'pure' locatives as well as manner adverbs with certain verbs. All these are attached to the same node as V and the object NP, optional adverbials being attached to a higher node. Thus, using a different criterion, she arrives at virtually the same conclusion as Lakoff and Ross regarding VP constituency. Optional adverbials are later subdivided

into two classes, which necessitate the introduction of an intermediate node. Her PS rules yield the following tree:



(HV = Hauptverb; EV = enge Verbalgruppe which would correspond to VP as defined by Lakoff and Ross; Advb.1 consists of causal, durational, time and frequency adverbials; Advb.2 of manner, instrumental and locative. The object NP, dominated by EV, is omitted from this tree.)

Next I shall consider a paper by Fillmore (1968) entitled "Lexical Entries for Verbs". His aim is to enquire into the relevance for the lexical description of English verbs of certain well understood concepts from the so-called predicate

calculus of symbolic logic". Just as the logician classifies predicates according to the number of arguments associated with them, so the linguist may classify predicate words in natural languages "according to the number of nouns they require in a syntactically complete expression". The concluding section of the paper sets out to "itemize the various facts about verbs that a complete theory of lexical information will have to account for". One of these is "to specify the number and nature of roles ... that are conceptually inherent in the basic sense of the verb". Another, with which I shall be largely concerned in later chapters of this study, is to specify which cases need to be expressed and which can be suppressed.

Unfortunately, the criteria of "a syntactically complete expression" and "roles conceptually inherent in the basic sense of the verb" do not yield the same results for our question. This is because some cases or roles need never be expressed, whatever the verb chosen, whilst others must always be expressed with certain verbs. There are verbs that cannot stand in a grammatical sentence unless they are accompanied by Fillmore's 'object' case, which in a transitive sentence usually corresponds to the direct object in the usual grammarian's sense. Thus we might say that this role in many cases satisfies both criteria. The same applies, to a lesser extent, to the use of the 'dative' case, corresponding to the indirect object, and to the directional. But there is no verb which requires an instrumental to produce a

grammatical sentence. Yet the role of instrumental, according to Fillmore, is inherent to some verbs (e.g. hit).

Fillmore's treatment of verbs is in part anticipated by the concept of 'valence' as developed by Tesnière. The valence of a verb is the number of participants or 'actants' with which it enters into construction, including the verbal subject: from the structural as opposed to the semantic point of view "le sujet est un complément comme les autres". It is le prime actant while the direct and indirect objects are called second and tiers actant respectively. The possible valencies of verbs range from 0 to 3 and verbs are classified accordingly. Adverbials are distinguished from actants and are called circonstants. Tesnière recognizes, however, that the line between them may be blurred. " ... le tiers actant présente déjà quelques caractéristiques de circonstant. Inversement, certains circonstants présentent avec les actants quelques analogies ..." The criteria then given for distinguishing the two seem to turn largely on the preposition used.⁴

1.1.2. In what follows I shall take Steinitz's criteria as basic: the fact that a constituent may be obligatory with some verbs will qualify it as complement. This criterion seems to have a high correlation with another property of the constituents concerned. When they are shifted to the head of the sentence the result is gross distortion of the normal pattern.

(3) a. This man I have met before.

- b. This plan I don't approve of
- c. To this man I sold my house
- d. To this place we went by car
- e. With this knife he stabbed John

Instrumentals cause slightly less distortion in this position:

- e. With that stuff you'll never get it clean.

Benefactives, however, seem not to differ from indirect objects in this respect. For the other adverbials front position is much less restricted.

As a further criterion one might mention the possibility of these constituents becoming the subjects of passive sentences. Most direct and indirect objects would satisfy this test. So would many, but not, all, prepositional objects occurring as first complements.

- (4) a. The letter of the law was adhered to
- b. *This job will not be applied for.

Those occurring as second complements can never occur as the subjects of passive sentences.

- (5) *Treason was accused him of.

Neither can directionals, but this seems to be connected with the fact that, like other expressions of time and place, they cannot be questioned in what and do not appear as predicates of pseudo-cleft sentences.

- (6) a. We drove to London
- b. *London was driven to
- c. *What did you drive to?
- d. *What we drove to was London.

On the other hand many speakers accept benefactives as subjects of passive sentences

- (7) a. John has been found a new job
- b. I was prescribed some medicine⁵,

and instrumentals may also occur in this position

- (8) ?This knife has never been cut with.

On the balance of the evidence, I shall recognize four main categories of verbal complements: (i) direct objects (DO), (ii) indirect objects (IO), (iii) prepositional objects (Prep O), (iv) locatives inherent in the verb and directionals (L/D).

The category of prepositional objects is set up for the complements of such verbs as approve (of) and dispense (with). These share some of the properties of direct objects, most noticeably passivization. Locatives and directionals have been put into one category because they have similar functions. This class also includes some temporal phrases, as in the sentence,

- (9) The meeting took place on Monday.

Directionals may be positive or negative, corresponding to the prepositions to and from respectively.

The following is a rough scheme setting out the commonest patterns:⁶

	<u>DO</u>	<u>IO</u>	<u>Prep O</u>	<u>L/D</u>	
A	-	-	-	-	die
B	+	-	-	-	kill

	<u>DO</u>	<u>IO</u>	<u>Prep O</u>	<u>L/D</u>	
C	-	-	+	-	approve of
D	-	-	-	+	remain, go
E	+	+	-	-	give
F	+	-	+	-	accuse of
G	+	-	-	+	put, send

In addition one should perhaps allow for two further possibilities:

H Two prepositional objects in

(10) a. John talked to Mary about politics,

Though the second prepositional phrase is never obligatory its status as a verbal complement is indicated by the unnaturalness of

b. About politics John talked to Mary,
by the passive,

c. This subject was never talked about

and by the do so test:

d. *John talked about his holidays and Mary
did so about the theatre.

Similarly there are, I think, two prepositional objects in

(11) John appealed to the tribunal against the rent
increase.

I Three complements in

(12) a. John paid Mary £3 for the book ;

Here the prepositional phrase may be regarded as a complement because of

b. John paid for the book

with both the direct and the indirect objects omitted, and the passive

c. The book has been paid for.⁷

1.1.3. The distinction between the categories rests on purely formal grounds. In particular, direct objects are defined solely by the property that they do not take a preposition and occur immediately after the verb (except when an indirect object intervenes); indirect objects are defined by the fact that they occur either without preposition before the direct object or with preposition after it. The question which of these structures is more basic will be taken up below.

Two of the complements, indirect objects and locative/directionals, form semantically homogeneous classes. The former would all be included in Fillmore's 'dative' case. But apart from excluding those instances of 'dative' which occur in subject position - e.g. before know, see, love - I would also exclude on formal grounds (a) the human complements of explain to, contribute to, donate to, suggest to, etc., which cannot lose their preposition, precede the direct object or occur as persuade subjects of passive sentences; (b) the human complements of persuade, order, convince, etc., which never have a preposition and must precede the sentential complement (cf.4).

Similarly I would exclude from locative/directionals, which belong to Fillmore's 'locative' case, the complements of inhabit and reach (a place) since they never take a preposition and can occur as the subjects of passive sentences; for enter and leave cf. 3, 4.

The distinction between indirect objects and directionals may be somewhat blurred, e.g. in

- (13) a. I sent him a letter
b. I wrote him a letter.

The order of the complements, the absence of a preposition and the feature [human] indicate that the pronoun is an indirect object but passiviation is less natural than for other indirect objects.

- (14) a. He was sent a letter
b. ?*He was written a letter⁸.

The relationship between indirect objects and directionals is also shown by the fact that both can commute with the same particle:

- (15) a. I went back (directional)
b. I put it back (directional)
c. I gave it back (indirect object).

In contrast to these two categories, direct and prepositional objects are purely formal though for some prepositional objects, particularly those that function as second complements, it is

possible to find semantic correlates for particular prepositions, e.g. accuse, acquit, convict ... of.

Direct objects have a variety of functions, some of which are distinguished by particular syntactic manifestations. Thus objects denoting phrases of measure (after cost, weigh, grow, last)⁹ and the objects of relational verbs like contain and possess exclude passivization. The distinction between affected and effected (or factitive) objects, which has been discussed by Jespersen (1924, p.159; 1927, p.232 ff) and Fillmore (1968), is relevant to the degree of cohesion between verb and object and will be taken up again in this connection (cf.2.1.1.1). Direct and prepositional objects may also be sentential and this again involves special syntactic properties. Where a verb takes a human and a sentential complement, e.g. convince, the question arises whether the latter has an underlying preposition or not; if not there would be two direct objects and thus a further class would have to be added to the scheme set out earlier in this section.

1.1.4. When a verb takes two complements I shall assume that the direct object always comes first in deep structure. This position requires justification, particularly for verbs that take indirect objects, where in surface structure we find both

(16) a. He gave the book to Mary

and

b. He gave Mary the book

and the question therefore arises which of these sentences preserves the basic order.

Jespersen (1927, p.279), who discussed this question most fully, argued for the order V+DO+IO: "the direct object is more essential to the verb and more closely connected with it than the indirect object in spite of the latter's seemingly privileged position ^{close} to the verb." Among transformational grammarians who have dealt with this question Lees (1936, p.26 note 14) suggested the same order, accounting for sentences like (16 b) by an optional transformation deleting the preposition and, if this has applied, an obligatory transformation permuting the two complements. According to Fillmore (1965), if I understand him correctly, both sentences are the result of transformations. The basic structure is

(17) He gave to Mary the book

from which (15 a) is derived by deletion of the preposition and (15 b) by permutation of the two complements. However, in his more recent work on case grammar the 'objective' precedes the 'dative'.¹⁰

My reasons for adopting the order V+DO+IO are as follows:

(i) The very fact that the indirect object may have a preposition in surface structure suggests that it is less close to the verb than the direct object, which never has a preposition. And when the preposition is present the indirect object always comes second in surface structure. It is intuitively improbable that the preposition should be

deleted in its natural deep structure position. Moreover, it seems easier to suppose that deletion of the preposition is conditional on the shifting of the indirect object.

Accordingly I would reverse the order of the transformations as formulated by Lees: the first transformation permutes the two complements and the second, usually obligatory if the first^{ka} applied, deletes the preposition.¹¹ It may be added that in case languages, which do not use a preposition for the indirect object, the dative is marked vis-a-vis the accusative among the oblique cases.

(ii) The retention of the preposition is obligatory in questions and relative clauses:

- (18) a. *The man whom I gave the book
b. *Who(m) did you give the book?

and for many dialects in sentences where both complements are personal pronouns

19 . *Give him it.

(iii) The direct object permits action nominalization, the indirect object does not:

- (20) a. The selling of alcohol to children
- b. *The selling of children alcohol.

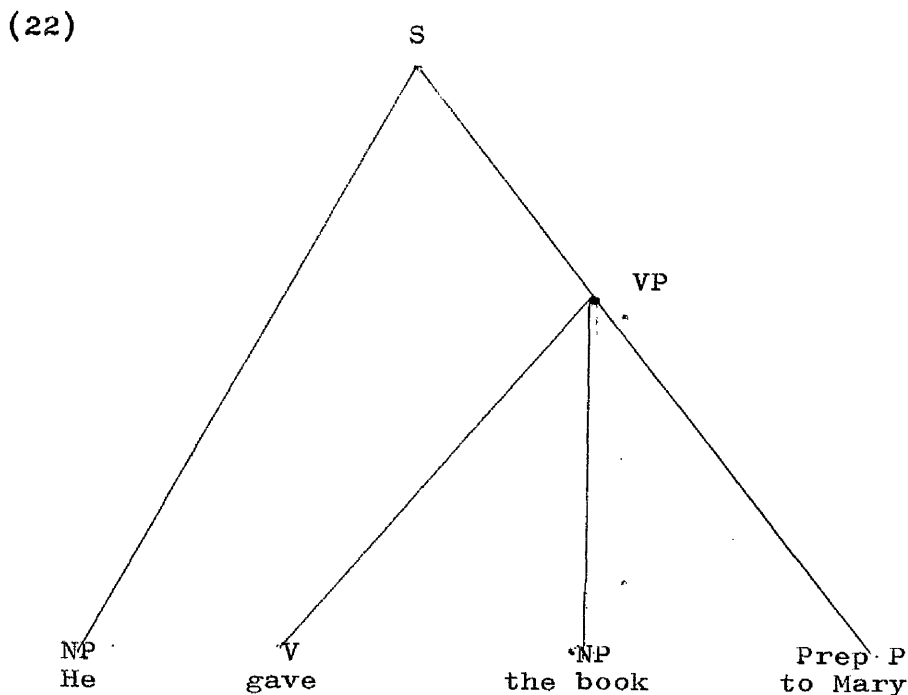
(iv) In many cases the indirect object can more easily be dispensed with (cf. 2.2)¹²

Similarly, for

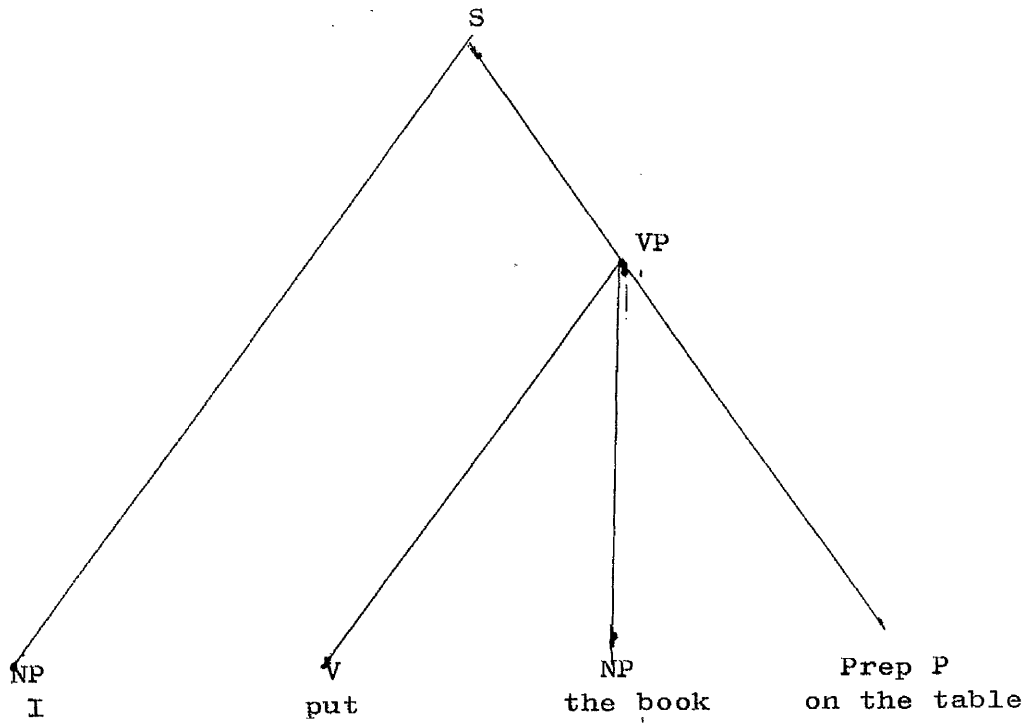
- (21) I put the book on the table

I shall assume that the underlying order corresponds to that in surface structure, i.e. V+DO+directional. (The alternative, viz. V+directional+DO is adopted by Fillmore (1965, p.27) and, for German, by Steinitz (1969, p.40).

The structure of sentences like (16) and (21) is usually represented as



(23)



in which the two complements as well as the verb are dominated by the same node. I shall provisionally adopt this analysis but modify it in Appendix C.

1.2. Verbs that may be used with or without Complements

I have based the distinction between verbal complements and other post-verbal NP elements largely on the consideration that the former as distinct from the latter are potentially obligatory, i.e. obligatory with some verbs in some sentences. I shall now pass on to the question how we determine what complements are obligatory with what verbs.

Some verbs always require one or two complements in a fully grammatical sentence, whilst many verbs may be used both with and without a complement. The verb use may be taken as an example of verbs requiring one obligatory complement, put as an example of verbs requiring two. By contrast, eat may be used with or without a direct object.

In addition, there are verbs which are intransitive with an inanimate subject, but transitive with an animate subject, e.g. burn, boil. Here the relationship between the two uses is a different one, which I shall not deal with. Nor shall I deal with cases where the normal object of a verb is shifted to subject position without the verb changing to passive form (the book did not sell). I shall restrict myself to cases where the selection restriction between verb and subject remains constant. This means that the notion of subject introduced on p.1 needs to be sharpened: the verbal subject is not just the noun phrase which appears to the left of the verb but which in that position has certain selection restrictions with the verb. Accordingly, I shall for the purpose of this study regard a verb like burn as at least

two lexical items, and I shall be concerned only with the one that takes a direct object.¹³ For sell I shall assume that the normal subject will be human, and that the other use will be derived transformationally.

What syntactic and semantic factors determine whether complements are obligatory or optional? And how should this matter be dealt with in a grammar of English?

Although the general phenomenon has been discussed for a long time, the first question has been neglected so far. The greater part of this study will be taken up with an attempt to answer it. My own proposals for answering the second question will be the subject of the concluding chapter. For the rest of this chapter I shall consider different ways in which it has been treated up till now. On the whole, the discussion in the literature has been confined to the traditional notion of transitivity, i.e. to verbs which occur with or without a direct object. The fact that indirect objects, etc., can be omitted in certain circumstances has received comparatively little attention.

1.2.1. Sweet (1891, p.90) begins by defining transitive verbs as those requiring "a noun word ... in the direct object relation to serve as complement to them" and intransitive verbs as those that "do not take a direct-object noun-word after them". He then continues: "It is easier to form a complete sentence with an intransitive than with a transitive verb ... But transitive verbs can also stand without any object-noun, not only when the object noun may be understood

from the context, as in I see, meaning 'I see what you mean', but also when the object idea is so vague or uncertain that it is not necessary or easy so to express it, as in blind men saw, where saw means 'saw things in general', that is, 'received the power of sight'. In I see - 'I see what you mean', the verb is fully transitive — the omission of the object-word or word-group being only an ellipse — while in blind men saw it may be regarded as half intransitive."

The distinction here drawn between what are called "fully transitive" and "half intransitive" uses seems to me a very important one. It has often been lost sight of in more recent discussions.

This distinction is reflected in the Oxford English Dictionary, though it is treated differently, with a different terminology. The usual practice of lexicographers is to mark each use of a verb, i.e. each definition, as either transitive or intransitive. For eat the O.E.D. has the following subheadings:

trans.: to masticate and swallow as food

intrans.: to consume food, take a meal.

For visit, on the other hand, the entries are:

trans.: to go to see (a person) ...

absol.: to make a call or calls.

That is to say, where a specified object is to be understood, the uses is termed 'absolute'; where this is not the case, it is termed 'intransitive'. For many entries, however, we

find "absolute or intransitive". The term 'absolutely' itself is the subject of the following entry: "Gram. Without the usual construction, as when an adjective is used without a substantive, or transitive verb without an object expressed." American dictionaries (e.g. Webster's, Funck and Wagnall and The Random House Dictionary) call all object-less uses intransitive.

Jespersen (1927, pp. 310-20) rejects the validity of the transitive-intransitive distinction for verbs. "In English at any rate it is impossible to make a sharp distinction between two classes and we should rather speak of a transitive and intransitive use of verbs, for many verbs which are generally transitive, i.e. take an object (or two objects) are very often used without an object, and other verbs, which are as a whole intransitive, may at times be connected with an object." What is more, he dismisses the distinction between intransitive and absolute uses of a verb with the remark: "it is not necessary to multiply grammatical terms". Thus his view seems to correspond to the practice of American lexicographers. In the chapter that follows the above remarks Jespersen in fact adheres fairly closely to the traditional distinction between verb classes. The first section begins: "The omission of an obvious object probably produces more intransitive uses of transitive verbs than anything else". Then follows a section on the omission of reflexive and reciprocal pronouns. After these, Jespersen goes on to those uses which I have excluded from consideration (boil, burn, etc.) Jespersen does not make a distinction according to whether a

specified object is implied or not.

The same applies to Tesnière (1959, pp.238-9). The general phenomenon is described in these terms: "Notons d'ailleurs qu'il n'est jamais nécessaire que les valences d'un verbe soient toutes pourvues de leur actant et que le verbe soit, pour ainsi dire, saturé. Certaines valences peuvent rester inemployées ou libres". As examples we are given Alfred chante and Alfred donne la main.

Hockett (1958, p.249) only discusses the case where the object of a verb is to be supplied by the context, *also* expressing this by the metaphor of a valence being 'unsaturated'. When a "sentence contains no element anywhere fit to be the object of a morpheme with a 'positive' valence, "the valence of that morpheme reaches out into the non-speech environment".

In the literature of Transformational Grammar this problem is first raised, so far as I know, in Lees's Grammar of English Nominalizations (1963). The first chapter contains elaborate subcategorization rules for verbs. These begin by splitting off be and copulative verbs. Then comes a rule expanding the remainder into V in(transitive), V tr(ansitive) and V mid(dle). Later V tr undergoes further subdivision until we reach a category labelled V tn. "V tn ... will be expanded later into the various smaller and more particular classes of verbs required, such as, e.g. Vt 32, ordinary transitives whose objects may be deleted but which may be distinguished from intransitives by their ability to form prenominal gerundive modifiers (arriving guests, but not: *cooking women)" (p.11). The class of 'pseudo-intransitives'

(Vt 32) is opposed to strictly transitive verbs (V t 31), which do not permit object deletion. The ability to form pre-nominal modifiers is regarded as a cast-iron text for distinguishing verb classes. The optional deletion of the object of V^t 32 verbs is accounted for by a transformational rule (p.33) ("All deletions must be considered transformational in complexity, for the constituent structure of the generated string is not recoverable after ellipsis".) It is not clear whether we should envisage similar deletion transformation for other constituents utilized in the subcategorization of verbs, e.g. prepositional objects and directionals.¹⁴

In Aspects (1965, pp.93, 94) transitivity is introduced by a rule of strict subcategorization which has the effect of making certain verbs positively specified for the contextual feature $\langle -NP \rangle$. Thus the lexical entry for eat would read $\langle +V, + -NP \rangle$. Later on, object deletion is introduced as part of the feature specification of particular verbs. This feature, we are told, is idiosyncratic and purely lexical (pp. 107, 220). To ensure full recoverability the NP which is later to be deleted has to be represented in the deep structure by a dummy element.¹⁵ Again, this procedure is only mentioned for object NPs. We are not told whether it should be extended to any of the other constituents which are inside the Verb Phrase.

Both Lees and Chomsky refer only to cases where the deleted element is unspecified. We are not told how the grammar would handle sentences like Sweet's first example, where the object may be supplied from the context.¹⁶

Gruber (1965), who works in the general framework of transformational grammar, proposes a solution which dispenses with the object deletion transformation, replacing it by a process of 'incorporation'. He postulates a level "deeper than Chomsky's deep structure" and calls it the 'prelexical' level. It is not specified as either syntactic or semantic. At the prelexical level, a verb will be accompanied by a certain formative.¹⁷ In the surface structure, this formative may either be realized by an actual lexical item or it may be optionally incorporated by the verb.¹⁸ Thus eat occurs in the environment of an abstract formative or prelexical item 'food' and may optionally incorporate this item to produce the sentence the baby is eating. "While incorporation is reserved for items which are idiosyncratically absent for that particular element, deletion should be regarded as a rule which effects the absence of some item with considerable regularity e.g. by someone in passive sentences." (p.31)

Halliday defines transitivity "in terms of paradigmatic and syntagmatic relations in the clause, not by classification of verbs as 'transitive' or 'intransitive'". He continues, however: "This does not mean that such a classification is irrelevant; the verb classes represent the potentiality on the part of each verb of entering into each of the sets of relations involved." He then goes on to specify three verb classes, corresponding to the traditional 'transitive', 'intransitive' and 'copulative' verbs. Earlier he outlines the "system network" of the clause and assigns clauses to

nine types. The difference between a clause with an intransitive verb and a clause with a transitive verb without specified object is exemplified by these two sentences: the prisoners marched and she washed (sc. clothes). The first is termed '(middle) descriptive', the second 'goal-intransitive (operative) effective'. The first is an unmarked type, the second (viii) a marked type. The restrictions on this type are discussed as follows: "Here we are not dealing with absolute restrictions such that certain verbs cannot occur in, say, type (viii), but with restrictions in the sense that a verb will only occur in type (viii) in highly specific contexts (and therefore with low relative frequency). Given such a context, however, it is likely that any verb of the class could occur: for example ... I do that because it encourages, he demands all the time."¹⁹

Leech (1969, pp.40, 48) draws a clear distinction between cases where no specified object is implied and cases where a specified object is implied. The first is called the empty cluster or null symbol \emptyset , the second is called the definite formator or Θ . The null symbol is described as capable of being roughly expressed as 'something/one or other' or 'anyone/thing or other' ... "Strictly speaking, however, the empty formula \emptyset always has zero expression, and its presence explains the effect of ellipsis in sentences such as: You've been fighting again ('You've been fighting SOMEONE or SOMETHING again') ... Those animals bite ('Those animals bite PEOPLE')." On omission of the definite formator Leech

writes as follows: "Many cases traditionally described as ellipsis can be explained by postulating that in certain grammatically determined conditions a cluster consisting of the definite formator alone has 'zero expression', i.e. has no formal or phonological manifestation, like the empty cluster. We interpret the sentences below, for example, as if some expression of definite meaning, such as the one added in capitals ... is to be understood' from the context: He's arrived: He's arrived HERE (or THERE) I object: I object TO THAT (viz. THAT REMARK). He's winning: He's winning IT (viz. THE RACE, etc.)."

CHAPTER 2

OMISSION OF UNSPECIFIED COMPLEMENTS

The subject matter of this chapter corresponds to the term Unspecified NP deletion as used in TG grammar and to Leech's use of the term "empty cluster" or "null symbol"; it also has a rough correspondence to Sweet's "semi-intransitive verbs". The term "unspecified" means that the NP in question cannot be inferred either from the preceding discourse or from the physical context of the speech situation.

TG grammarians have discussed this process only in relation to two positions that NPs can occupy, direct objects as in John is reading and agent phrases in passive sentences as in Caesar was killed. Since the second type does not involve a verbal complement in the sense in which I define this term I shall not deal with it here; I shall, however, take it up in Appendix A. On the other hand, though the bulk of this chapter will deal with the omission of unspecified direct objects, I shall also inquire to what extent this phenomenon occurs in relation to the other verbal complements.

2.1. Direct Object Unspecified

The omission of unspecified objects is not a homogeneous phenomenon. With some verbs it is found in modal uses and nominalizations only, e.g.

- (1) a. He can't add
b. Adding is easier than subtracting

but not

- c. He adds
d. He is adding.

With others it is found in addition in habitual uses, e.g.

(2) a. As a boy he often stole

but not

b. He stole yesterday.

Finally a fairly small number of verbs can be used without specified objects to refer to unique or specified occasions:

(3) He was reading when I came in.

Verbs which permit this use also permit habitual uses. Hence the omission of the object in habitual contexts is the more wide-spread phenomenon; if it regarded as a process one could say that it is also more productive, though this depends largely on judgments of grammaticality. I shall devote most of the discussion to verbs like read which present the most typical or nuclear instances of this phenomenon.

2.1.1. Non-habitual Uses

I have found the following examples:

- (4) a. read, study, revise (what has been learnt),
rehearse, practise, teach
- b. sing, dance, play (music), act
- c. write, compose (music), paint (a picture),
draw, etch, sew, knit, crochet, weave, spin,
cook, bake, type, dictate, record
- d. eat, drink, chew, smoke
- e. snow, plough, harvest, weed, hunt, shoot
- f. wash, iron, mend, clean, sweep, dust, Hoover,
paint (apply paint to), embroider, wash up, tidy up.

2.1.1.1. The arrangement follows rough semantic criteria connected with the type of object normally taken by these verbs. Those in (a) take abstract objects;¹ so do those in (b) with this difference that the referents of the objects are re-created through the process denoted by the verb.² The objects of (c) are brought into being through the process denoted by the verb (factitive or effected objects).³ They may be concrete or abstract and the same verb may take both. The object of compose must be abstract; that of write can be an abstract entity or the physical letters (or figures or musical notes) made on a piece of paper, and the two are not always distinguished. He is writing can be understood in a predominantly abstract or concrete sense according to the context. Cook according to the O.E.D. started as an intransitive verb with the sense of "act as cook", the verb being derived from the noun; its contemporary use without object is described as an 'absolute' variant of the transitive use, i.e. the verb is considered to be predominantly transitive today. I have classed it with verbs taking factitive objects because its use without an object corresponds to the sense of producing a meal or a dish rather than processing a raw material, where cook is the hyperonym of verbs like boil, fry, etc.⁴ In other words, the emphasis is on "making something" rather than on "doing something to something". Similarly with bake; she is baking cannot include senses like "she is baking potatoes/fish, etc." but only "she is baking bread, pastries, etc.". The rest of the verbs normally take concrete objects, which in some contexts may be regarded as 'affected'. Those in (d) comprise bodily processes, the rest agricultural (or kindred) and domestic processes.

The objects normally taken by these verbs usually fall into fairly homogeneous semantic classes and there tends to be a close reciprocal relationship between verb and object. Where this is not so, especially with some of the examples in (f), the unspecified object that is 'understood' is more restricted than the full range of possible objects of the verb.

It would be tedious to discuss all the verbs listed and I shall confine myself to a few obvious examples. Possible objects of eat and drink belong under the hyperonyms food and drink respectively. Gruber (1965, p.43 ff.) points out that the baby is eating cannot include senses like "the baby is eating a marble"; however this sentence seems to me semantically deviant anyway (i.e. it violates the selection restrictions on eat.) Any normal object of eat i.e. any article of food, can be understood. With drink there is often a contextual restriction to alcoholic beverages, especially in habitual uses, and this usage must somehow be incorporated in the lexical entry of the verb. With smoke the usual object is tobacco in a pipe, cigar, etc. (I do not know whether a reefer would qualify as unspecified object.)

For read there is no available hyperonym to cover possible objects but there is a reciprocal relationship with write (print, etc.) in the sense that only what is written can be read. (Uses such as he is reading the stars or my teacup are clearly metaphorical extensions.) Moreover nuclear objects of read represent language; I doubt whether he is reading can mean "he is reading a score".

Teach takes two objects, a human and an abstract one, and is unique in permitting both to be left unspecified.⁵ Nuclear instances of the abstract object can be subsumed under such terms as science, art or one of the recognized branches of learning, and this is a matter of social convention especially when it comes to practical skills. Insofar as these are school subjects, e.g. cookery, they may be understood as unspecified object of he is teaching; by contrast driving a car, which usually comes under 'instruction', cannot normally be understood. (Note that the verb instruct normally requires both the direct (human) and the prepositional object to be specified.) Moreover, in the case of he is teaching the specific use seems to presuppose the generic one in the sense that the sentence is only appropriate if the person described is a professional teacher; contexts where teaching goes on as a sporadic or casual activity are excluded.

With the factitive group the semantic connection between verb and object is obvious inasmuch as only what can be brought into being by the process denoted by a particular verb can function as the object of that verb. In fact the vast majority of verbs taking factitive objects can be used without specified objects. Exceptions are make, the most basic member of the group and a semantic component of the others, and produce, create and construct, which like make do not specify the manner of "bringing into being". I am not sure whether build should be included in the list; sentences such as

(5) a. They are building next door to us

are found but

b. He is building

is unlikely. In the case of some factitive verbs the objects can be subsumed under a hyperonym, e.g. cloth for weave.

The semantic factor is also evident in the verbs listed under (e) and (f), all of which may be regarded as hyponyms of the category 'work'. In this group wash, mend and clean are particularly striking in that there is considerable restriction in the possible objects that can be understood: for wash, clothes or linen rather than cars, babies, floors, etc; for mend, likewise clothes or linen rather than, for example, a fuse; for clean, something like 'the house' (floors, furniture, etc.) but not typewriters or other machines. Wash up and tidy up are the only phrasal verbs that behave in this way (tidy by itself does not occur without object in my speech).

2.1.1.2. The main semantic generalization that one can make about all the verbs in the list is that the process denoted by the verb is viewed as a recognized 'activity', particularly a regularly recurring one, and also one that is visible. I shall try to formalize the notion of activity as far as possible in syntactic terms.⁶

The verbs in question all take animate subjects, usually human — only those of the (d) verbs can be animals. The relationship between subject and verb is agentive. In semantic terms this means that the action is voluntary, i.e. one over which the subject can exercise control and which he can

initiate. Syntactically agentiveness, which I take to be a feature on the verb, correlates with the occurrence of the imperative, or, to be more precise, the non-negative imperative. This automatically excludes (1) verbs which denote a relational predication or state rather than a process, action or event, e.g. own, know, love, want. Syntactically these are also distinguished by the absence of progressive verb forms. (2) Certain verbs that denote involuntary processes, e.g. lose, spill, stammer. These sometimes occur in negative imperative sentences, e.g. don't spill it.⁷

Exclusion of non-agentives still leaves us with the majority of transitive verbs. As the next criterion for 'activity' I shall try to isolate the set of verbs which, alone or with a complement, can furnish appropriate answers to the question what is he doing? As it stands this question is actually multiply ambiguous. When used with future reference it may mean something like "how is he going to behave or react?" (cf. what is he doing about it?) In such uses do is a pro-verb that can replace all (or almost all) VPs with agentive verbs; the range of such questions seems to correspond fairly closely to those verbs (or VPs) which can be replaced by do so, a phrase used by Lakoff and Ross (1966) as one of the tests for non-stative VPs. On the other hand with present reference, restricted to the time of utterance — what is he doing at this moment? — the range of the question is more restricted and has a closer correspondence to the notion of activity that I have in mind. Purely abstract, i.e. non-observable, processes seem to be ruled out as answers.

Compare

(6) What is John doing? (future reference) He is obeying the order

(7) What is John doing at the moment? ^(*) He is obeying the order.

(The circled asterisk denotes a sentence that is inappropriate or, in Bar-Hillel's phrase, 'token-odd'.) So ~~s~~ usually are verbs of communication with abstract objects:

(8) a. ^(*) He is warning the children not to play in the street

b. ^(*) He is telling the guests where to put their coats.

c. ^(*) He is explaining to Bill how to get to the station.

By contrast he is talking to Bill is a perfectly acceptable answer.

In a slightly different category there are actions like buying and selling. These may certainly have observable manifestations; yet sentences with these verbs do not seem to provide appropriate answers:

(9) a. ^(*) He is buying groceries

b. ^(*) He is selling his car.

For the first there is a distinct lexical item, an intransitive verb, to denote an 'activity':

c. He is shopping (for groceries).

It should also be observed that if the person referred to was a professional salesman or buyer one might well come across he is selling / buying with unspecified object. Such sentences are not uncommon in the sub-language of particular professional groups, but for standard English they are deviant; the explanation is, I think, that buying and selling are considered as basically abstract processes and therefore not as activities.

However, actions that are entirely observable and physical may also furnish inappropriate answers:

- (10) a. He is laughing / crying / smiling
- b. He is sitting on his desk / lying on the floor
- c. He is holding the baby
- d. He is keeping the money
- e. He is wearing jeans
- f. He is using a pair of scissors.

Laugh and cry are perhaps not fully agentive; the imperatives are only likely to occur in rather artificial situations (smile! when taking a photograph; note also the expression I couldn't help laughing). The distinction between agentive and non-agentive does not seem to be a cut-and-dried one; I don't know how features are to be assigned to borderline cases. Sit, lie, hold, carry, keep, wear (and others) are semantically close to non-agentive verbs. Compare with the above examples

- (11) a. He is prone on the floor
- b. He has the baby in his arms

- c. He is walking with the baby in his arms
- d. He has jeans on
- e. He intends to continue having the money.

One might account for the use of the imperative of these verbs by the assumption that unlike purely stative verbs they incorporate an ingressive element that is agentive.⁸ Thus sit on that chair incorporates sit down, hold and carry something like pick up, wear something like put on; keep seems to incorporate a negative element (not to part with). Use is a ^{dummy}~~pro~~-verb to replace a contextually given verb in the presence of an instrumental.⁹

Sometimes the appropriateness of a sentence as answer to what is he doing (at this moment) depends on the context in which the question is asked. I shall consider just two examples:

- (12) a. He is throwing a ball
- b. He is switching on the light.

These are possible answers in special contexts, as when one is watching a person from a distance or describing a picture. In other contexts they would be inappropriate because the actions involved are 'momentary' or 'punctual' ones; normally an activity has duration. Hence also the same verbs with plural subjects would be more appropriate:

- (13) a. He is throwing paper pellets
- b. He is switching on all the lights (cf. below).

Finally an appropriate answer must denote a purposeful action. Thus he is biting his nails would be inappropriate. Perhaps

this is again a matter of agentiveness; the corresponding imperative sentence would sound equally odd.

The verbs listed in (4) all provide appropriate answers, whether used alone or with a specified object. For example

- (14) a. He is reading (the paper)
- b. He is painting (the shed)
- c. He is cooking (a stew).

Only the verbs in (4 d) would be restricted as answers according to context. He is eating would be appropriate in the sense of "he is having lunch / dinner, etc." but he is eating an apple (while doing something else) would be less likely. The notion of 'activity' seems usually to correspond to that of exclusive occupation for the time being.

Other appropriate answers would be provided by a number of intransitive verbs:

- (15) He is working / swimming / resting / ? sleeping

and by reflexive uses of transitive verbs:

- (16) He is washing / shaving / dressing.

But there are also possible answers involving transitive verbs (or verbs taking prepositional objects) whose objects cannot be left unspecified, e.g.

- (17) a. He is slicing a loaf of bread
- b. He is peeling the potatoes
- c. He is chopping wood
- d. He is listening to music / watching television.

These seem to form a residue which cannot be accounted for by any syntactic criteria. But unlike the majority of the verbs listed on p.1 they do not take objects that fall into a homogeneous semantic class, and unlike clean, wash, mend, etc., they are not regarded as fixed subcategories of 'work'.

2.1.1.3. The process denoted by these verbs (which I shall henceforth call 'activity' verbs) has duration, i.e. it may be thought of as unfolding over a span of time. When an object is present the temporal relationship between verb and object is such that at the beginning the process applies to only part of the object and not till the process is complete does it embrace the whole of the object. Thus he is writing a book is understood as meaning that at the time of utterance part of the book has been written and it is expected that the remainder will be written in the future. Hence also one gets such expressions as he has started writing the book and he has written about half the book, which carries the implication that he will write the other half. With non-activity verbs the temporal relationship between verb and object is quite different. He is buying a book does not carry the same implications; he has started buying the book is bizarre though just conceivable in the sense that he has set negotiations for the purchase in motion; he has bought half the book (or half a loaf of bread) would not be interpreted as implying that he is going to buy the other half. Similarly with he started killing the prisoner or he has broken half the chair. With plural objects such sentences are normal: he started killing the prisoners, he has bought half the pictures so far. But it is only activity verbs that can exhibit this particular temporal relationship with

singular objects.

Completion of the process is only possible when the object is definite or has a specified quantity marker, i.e. a numeral or the so-called indefinite article. The process of eating an apple is complete when the whole of the apple has been eaten; but the process of eating peanuts is not capable of completion in the same way. This is brought out most clearly by putting these expressions in the frames he finished — and he stopped —. For eating an / one / the apple both are possible and carry different meanings; for eating peanuts only the latter is possible. When these verbs occur after finish and without an object the reference is always to a definite, contextually given object rather than an unspecified one; e.g. he finished eating in a context where a meal or a particular dish has been mentioned, he finished writing if we know what he has been writing.

Notice also that in expressions like he finished the book it is always an activity verb that is contextually understood. The meaning cannot be "he finished buying / lending / posting the book." Most commonly it is verbs that can be used without specified objects that are understood. I've finished this book (with demonstrative determiner) may mean "I've finished binding" or packing it"; but with the definite article the reference is much more likely to be to "reading" or "writing" or "studying" it. (Similarly I've finished the cucumber is more likely to refer to the process of eating than of slicing.)

This difference in the potential for completion of process has a number of consequences the discussion of which will involve considerable digression from the main topic of this chapter. The first consequence, for which I am indebted to Garey, is purely semantic and concerns the implication to be drawn from a sentence with a verb in progressive aspect to one with a non-progressive verb.¹⁰ John was eating an apple does not necessarily imply John ate an apple; the latter includes the meaning that the whole apple was eaten, the former at most the expectation that the whole apple would be eaten; it would be compatible with the sequel when the bullet hit him (where it may be presumed that the process was not completed). On the other hand John was eating or John was eating porridge necessarily implies John ate or John ate porridge. In this respect transitive activity verbs differ from transitive non-activity verbs. He was buying a hat when I met him implies he bought a hat (unless the progressive is used in the sense of "he was going to ..."); similarly with he was killing the prisoner / breaking the chair, etc. (always provided that the object NP is singular). The only verb phrase that behave in this respect like activity verbs with definite or specified quantity objects (henceforth $\langle +\text{definite} \rangle$, $\langle +\text{specified quantity} \rangle$) are (1) verbs of motion with directional phrases; he was walking to the station does not imply he walked to the station; similarly with he carried his luggage to the station.¹¹ If no directional phrase is present the implication holds: he was walking implies he walked. So also if the directional has the preposition towards; he was walking towards the

station implies he walked towards the station. (2) Intransitive verbs of 'becoming' (so-called inchoatives) like mature, ripen, thicken, etc. and their causative counterparts, e.g. the corn was ripening when the floods engulfed it. These verbs seem to incorporate in their semantic make-up the abstract equivalent of a verb of motion and a destination, e.g. "come to maturity".

A second consequence of the property I have called 'potential for completion' concerns co-occurrence with various adverbial phrases of duration. Consider

- (18) a. He wrote (letters) for two hours.
b. *He wrote a / the letter for two hours
c. *He wrote (letters) in two hours
d. He wrote a / the letter in two hours.

A process that is not capable of completion can co-occur with an adverbial phrase with for but not with in; the reverse holds for a process that is capable of completion.¹² I shall call the two kinds of adverbial 'summative' and 'integral' duration.¹³ The first corresponds to a question beginning how long; the second has no corresponding question phrase but is related to how long did it take him to ... and the corresponding declarative sentence it took him two hours to ...

Notice that unspecified quantifiers do not seem to fit into either category:

- (19) a. *He wrote some letters for two hours
b. *He wrote some letters in two hours.

The second is worse than the first, but both are anomalous.
I shall return to this question below.

Again there is striking correspondence between activity verbs with objects that are $\bar{[+definite]}$ or $\bar{[+specified\ quantity]}$ and verbs of motion with directionals. Compare

- (20) a. He walked to the station in (*for) half an hour.
b. He walked (towards the station) for (*in) half an hour.¹⁴

With verbs of 'becoming' both kinds of adverbial seem to be possible:

- (21) The corn ripened in / for two months.

This indicates that the underlying meaning of these verbs can be something like "come towards ..." as well as "come to ...".

If we examine non-activity verbs we find the following cases:

- A. Most intransitive verbs occur with summative but not with integral duration, e.g. sit, laugh, sleep, work, burn, boil.
- B. Transitive verbs that are stative occur with summative duration whatever the features of the object (i.e. even when the object is $\bar{[+definite]}$ or $\bar{[+specified\ quantity]}$, as is usually the case with these verbs:

- (22) a. This fact has been known for a long time
b. I owned a car for six months.

The same applies to some non-stative verbs that are partially agentive (cf. above):

- c. She wore the dress all day.

Integral duration is ruled out in both cases.

C. Many verbs are severely restricted for both kinds of duration; these are 'punctual' or 'momentary' verbs, i.e. verbs denoting events that are not regarded as having extension in time. They may be further subdivided into (i) ingressive verbs, which may be intransitive (wake up, sit down) or transitive (pick up, put on). Summative duration appears to occur in

- (23) a. Let's sit down for five minutes
b. I've been waking up at seven for the last five days.

Note, however, that in (a) the adverbial refers to a time that is future in relation to the event denoted by the verb,) and in (b) the verb is understood as occurring repeatedly. True summative duration in relation to a single event is ruled out, and so is integral duration.

(ii) Transitive verbs denoting change of possession (give, lend, sell and their converses). Summative duration is restricted as for the verbs in (i):

- (24) a. He lent me the book for one week
b. I bought my clothes in that shop for years.

Integral duration is confined to certain emphatic expressions:

- (25) He bought that car in five minutes flat.

(iii) Communication verbs (say, tell, ask, inform, order, suggest, etc). Most of these are compatible with neither type.¹⁵

(iv) Transitive verbs denoting change of state and some denoting change of position¹⁶ (kill, smash, burn; throw ...)

These behave in some ways like activity verbs; when they have objects that are [-delimited quantity], [-definite] they can occur with summative duration:

- (26) a. He smashed crockery for five minutes
b. He threw paper pellets for five minutes.

Such sentences are, however, less natural than corresponding sentences with activity verbs. Moreover, these verbs are severely restricted in their occurrence after he started / continued, etc.

- (27) a. He started breaking the furniture

but not

- b. *He started breaking the chair.

Integral duration is restricted as for give, buy, etc.

- (28) a. ?He broke the chair in ten seconds
b. He broke all the tea-cups in five minutes.

The explanation for the occurrence of summative duration is that when a series of 'punctual' events occur in quick succession they can be regarded as coalescing, so-to-speak, so that action is considered as quasi-continuous. The effect often seems to be to convert these verbs into activity verbs.

There are various other subdivisions in this category which I have not explored fully; I shall give just one illustration:

(29) He boiled the potatoes for half an hour.

Here boil functions rather like an ingressive verb; the potatoes boil for half an hour but the action of boiling them is 'punctual'.

(v) Certain verbs of 'contact' can be 'iterative', i.e. the action denoted by the verb can be performed repeatedly in relation to the same object (kick, smack, hit, knock ...) ¹⁷ These permit summative duration with objects that are [+delimited quantity] or [+definite]:

(3) John hit Bill for five minutes.

The third consequence is best introduced by the following quotation from Jespersen (1932, p.194): "It would be impossible to use the perfect of a transitive verb without an object (I have read). But the expanded perfect may well stand alone because of the idea of incompleteness attached to it: I have been reading all afternoon) ... This applies only in the perfect, for in the habitual present and future the unexpanded verb may be used without an object."

This statement needs a slight qualification. The non-progressive perfect can also occur in habitual uses and in these verbs without (specified) objects are not excluded:

- (31) a. I haven't read on the bus since the doctor told me it was bad for my eyes
b. I haven't smoked since Christmas
c. I haven't knitted / cooked / acted since I left school.
d. I haven't eaten since last night (in some dialects)

e. Have you ever smoked?

Such examples seem to be confined to negative and interrogative sentences. The 'habitual' nature of the (a) to (d) examples is evident from their occurrence with since; I also regard uses of ever as habitual since this adverb does not occur with the present progressive (*Are you ever smoking?) For the sentences in (c) an alternative and perhaps more common expression would be by means of a pro-verb and nominalization of the main verb: I haven't done any knitting / cooking / acting. Instead of (d) many speakers would use I haven't eaten anything or I haven't had anything to eat. In affirmative sentences this use sometimes occurs with heavy stress on the auxiliary:

(32) I have smoked but I never enjoyed it.

Notice also

(33) He has taught, acted and worked for a newspaper where the first two verbs are equivalent to "worked as teacher, actor".

Non-habitual uses of the perfect may be isolated by co-occurrence with already, yet or just and sentences such as the following do not occur:

(34) a. *Have you drunk yet?

b. *I have just typed.

There are a number of apparent counter-examples:

(35) a. Have you eaten yet?

b. I have swept / dusted / washed up (already)

c. (Go and practise) I have practised already.

These seem to imply a contextually specified object, however, though it may be rather nebulous; with eat it is lunch or dinner according to the time of day; in the other cases some sort of regular or allotted task seems to be involved. The non-occurrence of sentences such as (34) is connected with the fact that the question what has he done is not a question about an activity but rather about a completed action. This indicates that the feature $\overline{\text{activity}}$ is suppressed (or neutralized) in non-progressive perfect aspect (cf. below).

Again, however, the restriction noticed by Jespersen is not confined to transitive verbs without specified objects. It also applies to

A. these and many other transitive verbs when their objects are $\overline{\text{definite}}$ $\overline{\text{specified quantity}}$:

(36) *I've just broken crockery / read reports / thrown balls / bought clothes / drunk whisky.

(Compare I have drunk whisky)

B. Verbs of motion without directionals

(37) a. *I've walked / I've carried the cases already
b. I've walked / carried the cases to the station.

C. Most other intransitives:

(38) *I've sat / laughed / slept already

D. Sentences with non-agentive or partially agentive verbs:

(39) *I've just owned a car/liked Mary/wanted to go home/worn my new shoes.

(The last example becomes acceptable if expanded to

(40) a. I've just worn my new shoes for the first time.

So also

- b. Have you worn them yet?
- c. I've worn them already.

The explanation seems to be that with wear there is an expectation of the process being repeated, i.e. this is a quasi-habitual use.)

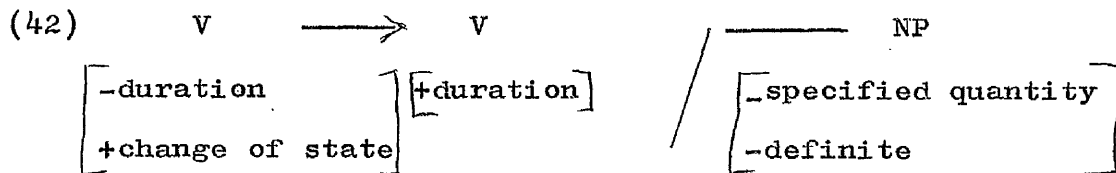
2.1.1.4. I shall conclude this section with some suggestions on how the facts described above could be handled in a grammar.

First, verbs can be subcategorised according to a feature $\langle \bar{+}duration \rangle$, which, as we have seen, is linked redundantly with other features like $\langle \bar{+}stative \rangle$, $\langle \bar{+}activity \rangle$, etc. Punctual verbs are $\langle \bar{-}duration \rangle$, all others $\langle \bar{+}duration \rangle$. For all except stative verbs the feature $\langle \bar{+}duration \rangle$ would be neutralized by the aspectual features $\langle \bar{+}perfect, -progressive \rangle$. The feature $\langle \bar{+}activity \rangle$ would be neutralized at the same time.

Second, to allow for sentences like

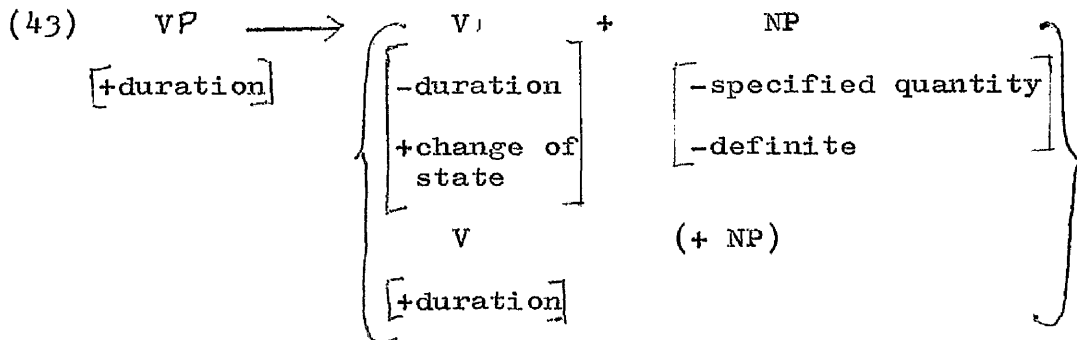
(41) He smashed crockery for five minutes

there might be a rule permitting feature change:



Alternatively one might say that the feature $\langle \bar{+}duration \rangle$ should always be assigned to the VP node as a whole, either redundantly from the verb alone or from a combination of the feature of verb and object.¹⁸ In that case the rule

for assigning this feature to the VP node would have to be something like



Third, verbs like hit would have to be assigned a feature $\left[\begin{array}{c} + \\ -iterative \end{array} \right]$ and by a general convention $\left[+duration \right]$ would be attached redundantly to $\left[+iterative \right]$.

Fourth, a feature $\left[\begin{array}{c} + \\ -frequentative \end{array} \right]$ is needed to distinguish repeated from single events for non-stative verbs. This feature is related to the occurrence of frequency adverbs and belongs to a higher node than VP. Any constituent that is $\left[+frequentative \right]$ becomes $\left[+duration \right]$. In this way we can account for sentences like

- (44) a. I woke up early for five days in a row
- b. I bought my clothes in that shop for years.

(Notice that in the following sentence there are two sources for duration:

- (45) He sleeps for two hours every afternoon
throughout the summer.)

Fifth, a feature $\left[-completion \right]$ is attached to VPs consisting of

A. Verbs of 'becoming'

c. He is playing tennis for two hours

is, I think, only possible when the reference is future.

2.1.1.5. The absence of specified objects does not seem to have any appreciable effect on co-occurrence with manner adverbials:

- (50) a. He is eating greedily / noisily
- b. He is reading with great concentration
- c. Yesterday she sang beautifully
- d. Today Mary is typing very well.

With instrumentals, however, there seem to be some restrictions:

- (51) a. She is typing with two fingers
- b. He is eating with chopsticks
- c. ?She is sewing with a blunt needle
- d. ?What did you paint with?

In the queried cases sentences with the verb use would seem to be more appropriate. With benefactives the restrictions are more obvious. We find sentences like

- (52) a. Will you sing / play for us
- b. Yesterday she cooked, washed and cleaned for us;

but the following are unacceptable (the second is worse than the first):

- (53) a. Who are you knitting for?
- b. This morning he wrote for the 'Guardian'.

In habitual uses such sentences are normal:

- (54) a. She knits for the whole family
- b. He writes for the 'Guardian'.

The only reason I can suggest for the restrictions in non-habitual sentences is that in some cases the feature activity is incompatible with these adverbials.

2.1.1.6. It is often claimed that the omitted or deleted element with verbs like eat, write, etc. corresponds to the pronoun something^{18a}. On purely semantic grounds this claim seems counter-intuitive; Mary is eating does not seem to be equivalent to Mary is eating something. I shall now present evidence to show that they are not syntactically equivalent and that the pronoun something contains a positive feature which is lacking both in Mary is eating and in Mary is eating porridge.

A. As indicated above the non-habitual perfect is ruled out for these verbs when they are used without an object or with one that is [-specified quantity, -definite]. But with something or anything in object position this restriction does not apply. For example, if a person has embarked on a book one may ask him:

(55) a. Have you written anything yet?

but not

b. Have you written yet,
though it is possible to say

c. Have you started writing yet?

B. Sentences like

(56) a. He wrote for the 'Guardian'

are only possible with habitual interpretation, as we have seen; on the other hand

b. He wrote something for the 'Guardian'

~~the contrary,~~^{is} only possible with non-habitual interpretation.
Since I take 'habitual' to be a feature on the VP node
I regard the difference as syntactic.

C. Compare

- (57) a. Did Mary sing?
- b. Did Mary sing anything?

(57 a) is appropriate whether the reference is to an individual performance or to Mary's singing in a choir; (57 b) can only be used in the former sense. Here the distinction is less easy to describe in syntactic terms.

D. Consider

- (58) a. John wrote something and Mary read it
- b. John wrote something, which Mary read
- c. *John wrote and Mary read it
- d. *John wrote which Mary read.

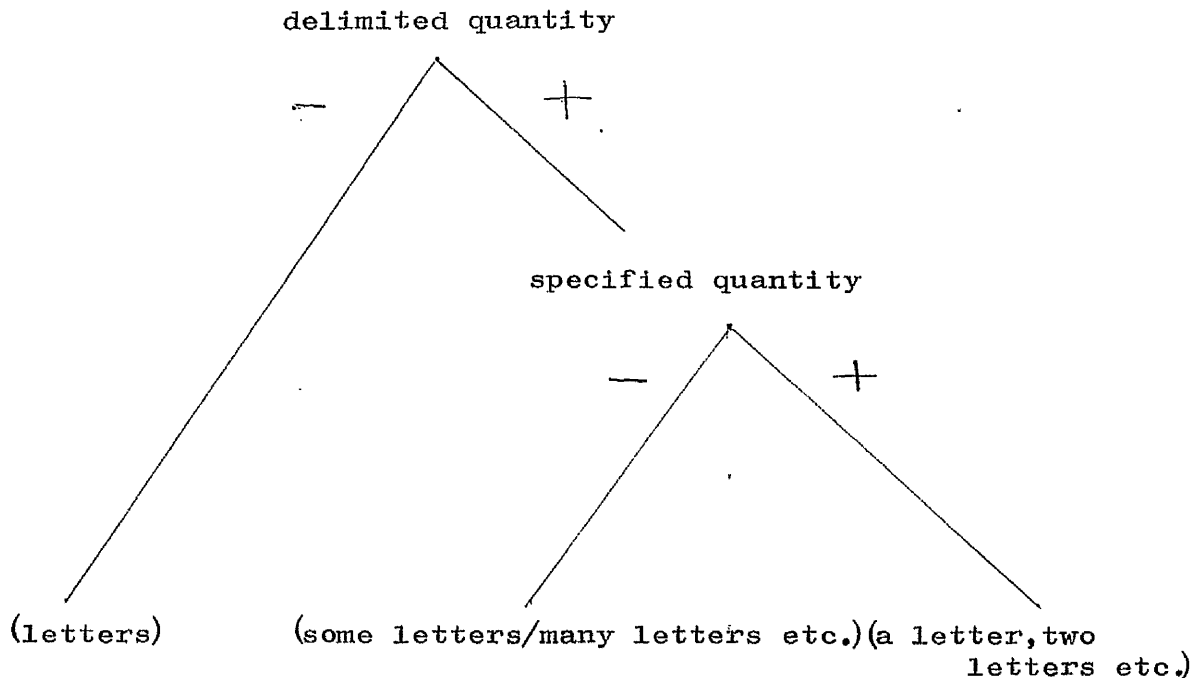
This example merely shows that if a formative has been deleted, deletion must precede pronominalization. But rule ordering seems to be connected with feature assignment; a deleted element that has been assigned certain features can be pronominalized, e.g. the subject of imperative sentences: just look at yourself. Moreover, a specified object NP that has no determiner cannot be pronominalized either. Compare

- (59) a. John wrote some letters and Mary typed them
- b. John wrote some letter, which Mary typed
- c. *John wrote letters and Mary typed them
- d. *John wrote letters, which Mary typed.

If the object noun is preceded by a determiner, including some (sm) it can be pronominalized; if it has no determiner

it cannot be pronominalized.¹⁹

Hence the determiner some must add a feature to the NP. Above I distinguished between he wrote a letter and he wrote letters by assigning to the former the feature $\overline{[+specified\ quantity]}$ and to the latter $\overline{[-specified\ quantity]}$. I pointed out that the determiner some did not fit into either category since it is incompatible with both summative and integral duration. It now appears that on other grounds too a more delicate distinction is needed. I propose an initial feature $\overline{[delimited\ quantity]}$, the positive value of which is subdivided into plus or minus $\overline{[specified\ quantity]}$. The resulting feature complex can be set out schematically as follows:



Thus the determiner some indicates the presence of a feature which is absent from an NP without any determiner. The same feature is present in the pronoun something. If there is a deleted NP node in John is writing this NP lacks the feature $\overline{[+delimited}$

quantity/ and cannot therefore correspond to something or any other lexical pronoun.

It should also be pointed out that if, as many scholars believe, the feature [+definite] always arises from relativization it would follow that any NP that is [+definite] would automatically be [+specified quantity].²⁰ Intuitively I would say that the feature [+definite] is associated with [+specified quantity] even if it is not formally derived by relativization. Hence the rules for [completion] (p.49) could be simplified by the omission of [+definite]. It would be sufficient to specify that the object NP in completive VPs with transitive verbs must be [+specified quantity].

2.1.2. Habitual Uses

It was pointed out in the introduction to this section that verbs occur more freely without specified objects in habitual than in non-habitual uses. In the following examples (a) to (c) contain verbs occurring in both uses, the rest contain verbs occurring only in habitual uses:

- (60) a. He eats all the time
b. She cooks well
c. We plough in summer
d. He steals whenever he gets the chance
e. This dog bites
f. We export to three continents
g. ?I often buy in that shop
h. ?We sell only for cash
i. ?In spite of its manifest faults the film impresses.²¹

2.1.2.1. In such sentences also the object that is understood must be $\langle \text{-delimited quantity} \rangle$ and cannot therefore correspond to something or some things. In most of the examples the pronoun some or the determiner something could not occur at all:

- (61) a. *He eats something / some food all the time
b. *She cooks something / some meals well.

Similarly with examples (60c, e, f, h, i). For some reason which is not clear to me these forms are acceptable with frequency adverbs

- c. He steals something / some food whenever
he can (cf.60d)
d. I often buy something / some cheese in that
shop.²² (cf.60g)

Moreover, a specified object in habitual sentences, if $\langle \text{-delimited quantity} \rangle$ would also be $\langle \text{-specific} \rangle$, i.e. it would not refer to particular, identifiable members of the class denoted by the noun. This type of NP is termed 'part-generic'; it differs from *true* generics in that it refers to only part of the class concerned.

Syntactically the difference between specific and non-specific NPs is reflected in their different potential for pronominalization. We have seen that NPs which are $\langle \text{-delimited quantity} \rangle$ cannot be pronominalized in sentences like (59 c), which I repeat here

*John wrote letters and Mary typed them.

But if the object is ~~parti-generic~~ pronominalization is possible. ?

- (62) a. John writes poetry and Mary reads it
b. John fries chops and Mary grills them
c. John buys records and / but Mary borrows them.

Notice, however, that in these examples the pronoun is not necessarily co-referential with the NP that is pronominalized. (62 a and c) are ambiguous in this respect (and suggests co-reference, but different reference); in (62(b)) co-reference is clearly ruled out.²³ In fact co-reference is never more than an accidental possibility in such cases. The explanation seems to be that generic and parti-generic NPs differ from others in some fundamental property, possibly absence of reference, as a result of which the process of pronominalization in their case is entirely different from the normal one. This emerges most clearly from a comparison of the feature $\langle \text{definite} \rangle$ in sentences with non-generic and generic or parti-generic objects.

- (63) a. John wrote some poems and Mary read them
(non-habitual)
b. John wrote poems and Mary read them (habitual).

In (a) some poems is $\langle -\text{definite} \rangle$ whilst them is $\langle +\text{definite} \rangle$; in (b) the two objects NPs must be identical for this feature. Apparently the personal pronoun is not an indication of definiteness in such cases.²⁴

2.1.2.2. Habitual uses of eat, write, etc. as well as of bite, steal, etc. exhibit an interesting resemblance to intransitive

verbs in the way they combine with indefinite quantifiers like a lot, little, too much, enough, more than .., less than ... etc. Thus

- (64) a. He reads a lot
b. He eats too much
c. She knits less than she used to.

All agentive or semi-agentive intransitive verbs occur readily with these phrases:

- (65) He sleeps / laughs / coughs / swims / works /
sins / talks a lot.

Notice that in such sentences the quantifier can refer both to duration and to frequency; John sleeps a lot can mean that he sleeps for long stretches of time and that he sleeps frequently. (On the other hand in a non-habitual sentence — last night he slept a lot — the reference can only be to duration.) Since frequency implies duration (cf. p.48) the ambiguity, or rather indeterminacy, is readily accounted for. With the transitive verbs a further element of indeterminacy may be introduced. John writes a lot may mean that he spends much time writing (duration and/or frequency) and that he is very productive. Once more the indeterminacy is not hard to explain: the verb-object relationship with these verbs is inherently durational and in the normal course of things the time spent on writing bears a direct relationship to the amount produced. With specified objects such sentences are not possible in standard English:

- (66) *John writes poems a lot.

It is of course possible to say

(67) John writes a lot of poems

but here the quantifier can only refer to the object. This indeterminacy does not apply to verbs like sell; in

(68) This factory sells / produces / exports a lot
the quantifier can only fill the object position, i.e. it
is equivalent to a lot of goods, machines, etc.²⁵

2.1.3. Other Uses

2.1.3.1. A few verbs occur without specified objects only after the modal can or embedded after adjectives like easy, possible, etc.

- (69) a. He can't spell / add
b. I can see better with these glasses
c. It's impossible to see in this light
d. I can't hear in this din.

The understood object is always generic or parti-generic.

2.1.3.2. Some verbs occur with an instrumental in subject position and suppression of both the object and the normal verbal subject (i.e. the human agent):

- (70) a. This knife doesn't cut
b. This pen won't write
c. Their machine washes better than ours.

Such sentences are conditional on either a manner adverb (well, properly, etc.) or a negative or interrogative.

Progressive aspect is ruled out and both subject and object are understood generically. The meaning is something like

"one can't cut with this knife", etc., which indicates that such sentences may be related to those in 2.1.3.1.

2.1.3.3. The verbs ride, drive, sail and fly can be used with or without a specified object in the sense of managing a horse, car, boat or aeroplane. When the object is unspecified the verbs are 'activity' verbs in the sense that they yield appropriate answers to the question what is he doing at the moment? The temporal relationship between verb and object is, however, quite different from that obtaining in the case of eat, read, etc. This is most easily seen from the absurdity of he has flown half a plane.

2.1.3.4. Sometimes unspecified objects may be understood contextually. I have already mentioned he is buying in the sub-language of commerce. Another example is the transitive reading of

(71) He is registering / enrolling tonight,

which in the context of an academic institution can only refer to "students" or synonymous expressions. Similarly the notice displayed by a chemist's shop

(72) We dispense with accuracy.

One might also include here

(73) He is packing (viz. some of his belongings)

as said of a person going on a journey. These examples differ from normal contextual ellipsis in that the object is not mentioned in the preceding discourse or physically present in the extra-linguistic setting (cf. chapter 3).

2.1.3.5. Sometimes the direct object is contextually understood from a prepositional object:

(74) He contributed to many learned journals.

A somewhat different example is

(75) I wrote to him last week,

where the effect of the prepositional phrase is to restrict the possible objects that can be understood to "a letter, post-card", etc.

2.1.3.6. In the following examples a partitive prepositional phrase takes the place of an abstract, sentential object:

- (76) a. I read about it in the paper
b. He told us about his plans
c. I asked him about his plans
d. I heard / knew about that
e. I shall explain about that in a moment.

The prepositional phrases are analogous to those with intransitive verbs like talk and think.

2.1.3.7. In the following examples the unspecified object can only correspond to 'money':

- (77) a. He gives to charity
b. Give generously
c. He is collecting for the blind
d. Have you paid the milkman
e. Have you paid for the milk
f. He is saving

- g. He earns well
- h. He spends very freely
- i. I don't want you to lose on the transaction.

Notice that in (77 b, g, h) an adverb of manner or intensity takes the place of a pronominal quantifier (a lot, etc.)

2.1.3.8. Contrastive uses are illustrated by

- (78) a. He observes but doesn't comment
- b. He only takes, he never gives
- c. John came to buy, Mary just to look
- d. She prefers frying to boiling.

Such sentences are, I think, intentionally deviant; the stylistic device consists of throwing into relief the contrasted semantic components of the verb by suppressing the object, which is common to both verbs.

2.1.3.9. Non-finite verbs whose subjects have been removed by Equi-NP deletion:

- (79) a. He does it to provoke
- b. He wants to experience
- c. He tries to please.

These examples, though deviant, are much more acceptable than corresponding sentences with finite verbs.

2.1.3.10. Non-finite verbs with generic subjects:

- (80) a. Killing is always wrong
- b. Collecting is fun
- c. Finding is not keeping

~~It is exhausting to stand on one's head
for a long time.~~

These verbal nouns are related to derived abstract nominals (murder, destruction) agent nominals (collector, ruler) and derived adjectives (destructive, interesting), which seem to be, at least in part, a device for permitting the omission of unspecified participants in the process.²⁶ Compare

- (81) a. The boy is destructive
b. *The boy destroys.

Abstract nominals with dummy verbs often replace transitive verbs, a process which seems to be gaining ground in contemporary English. Thus in the New English Bible the Sixth Commandment is rendered you shall not commit murder.

2.2. Indirect Object Unspecified

I shall consider the following verbs:

- (82) give, lend, sell, bequeathe, hand, pass, grant,
allow, show, offer, pay, let, ²⁷rent, hire, tell
(a story).

2.2.1. In non-habitual uses the indirect object must usually be expressed. Thus in reply to what happened to John's car?

- (83) a. He gave / lent it to somebody
but not
b. *He gave / lent it.²⁸

We do however find

- (84) He sold it.

The difference between sell and the other two verbs is not easy to account for syntactically; but there is a striking parallel between sell and other verbs involving a financial transaction:

- (85) a. He has let the room
b. He paid (£500) for the car
c. He charged (£10) for expenses.

Sometimes the indirect object can commute with a directional particle:

- (86) a. He gave his old suit away.
b. He handed the cigars round
c. Pass it along / down / round.

Notice that in the last two examples the unspecified indirect object must be understood as plural. The indirect object may also commute with a prepositional or distributive phrase:

- (87) a. He offered a prize for the best essay
b. He allowed £3 per person.

2.2.2. In habitual uses the indirect object can be omitted more readily:

- (88) a. I never give Christmas presents
b. We give long glasses
c. They don't lend periodicals
d. They offer free trips to Paris
e. They allow travel expenses.

In such sentences the direct object is non-specific (part-generic) and the indirect object must also be understood non-specifically.

2.3. Prepositional Objects Unspecified

2.3.1. Prepositional phrases vary greatly in their degree of cohesion with the verb. Cohesion is greatest in such examples as approve of and dispense with (first complement) and accuse of, convict of, etc. (second complement). These can never be left unspecified in non-habitual sentences though they are often contextually omitted (cf.3.5.). There is less cohesion in the case of die of, receive / borrow / steal / inherit ... from precisely because a specified prepositional phrase is never obligatory. But by two of the criteria discussed in Chapter I they function as verbal complements. Their fronting causes distortion of the sentence structure

(89)a. *Of a stroke John died

b. From John I borrowed £3,

and the do so test (only applicable to agentive verbs) yields an unacceptable sentence:

(90) *John borrowed a fiver from his father and Bill
did so from me.

For talk about cf. 1.1.2. ; the same arguments apply to write/think about. In that section I also mentioned the possibility of a third complement with pay. Similar arguments apply to charge (somebody) (money) (for something) and sell (something) (to a person) (for money).

2.3.2. In habitual sentences we find, as we would expect, that this process goes much further; in other words, elements that must normally be specified (explicitly or contextually)

can be left unspecified in such sentences:

- (91) a. He acquiesc_h^ces too easily (first complement)
b. This judge convicts most people (second complement)
c. He always pays promptly (second and third complements; the first i.e. the human complement is contextually omitted).

2.4. Locative and Directional Complements

Specified locative complements are obligatory with live (=dwell) and stay, remain. Sit, stand and lie occur with or without a specified locative complement.²⁹ Specified directional complements are obligatory with come, go, arrive, depart, etc., as well as with put, place, send. The majority of verbs of motion can occur with or without them.

Steinitz (1969, p.20 ff.) treats these cases as exactly parallel to that of transitive verbs without specified objects. The verbs are subcategorized for locative or directional complements (Adv in her terminology) and appear in the lexicon with the feature $\langle +\text{optional deletion of Adv} \rangle$. The analogy seems to me to be fully justified. In particular it may be pointed out that there are many parallels regarding co-occurrence with durational and other time expressions between the use of verbs like eat and write without specified objects or with specified objects that are $\langle -\text{delimited quantity} \rangle$ and the use of verbs of motion without specified directionals in to. Furthermore, most intransitive verbs of motion function like activity verbs when they have animate subjects; so do some transitive ones like move, drive, sail, fly.

It might be objected that in some cases it would be difficult to supply a directional phrase. Thus John is eating may be followed up with what is he eating?; but after John is swimming it is not always appropriate to ask where is he swimming to? The activities denoted by these verbs may be engaged in for pleasure, and a person may swim (drive, ride, etc.) round in circles. This objection is not very serious, however. Even when there is no definite intended destination, motion necessarily implies direction, however often this may change. Note also that when engaged in for pleasure these activities are often expressed by nominalizations: go for a swim, drive, etc.

This argument can be carried a stage further; verbs of motion can occur not only with 'positive' directionals, i.e. those with to but also with negative ones, i.e. those with from. Just like the prepositional phrases in borrow, buy from ... these are probably part of the VP, though less closely linked to the verb than positive directional phrases. Hence it may be said that either or both may be left unspecified.

CHAPTER 3

OMISSION OF SPECIFIED COMPLEMENTS I ----

SIMPLE NOUN PHRASES

In certain circumstances fully specified complements can be omitted when they are contextually determined. This phenomenon corresponds broadly to what Sweet called fully transitive uses without an object noun and what Leech referred to as the omission of the definite formator. (cf. Chapter 1.2.1.) I shall use the traditional term 'ellipsis' to refer to it.

The context which determines the omitted NP may be either linguistic, i.e. a preceding sentence, or extra-linguistic, i.e. the physical setting of the utterance. Most typically, elements recoverable from the context are represented by pronouns, noun phrases in the linguistic context being represented anaphorically by personal or demonstrative pronouns, elements in the physical setting 'homophorically', usually by demonstratives. In cases of ellipsis, however, complements that are contextually given have no overt realization in the sentence. This raises problems with which transformational studies have not dealt so far.

The distinction between the linguistic and the physical setting is closely paralleled by another distinction viz. whether the complement under ellipsis is concrete or abstract. Concrete complements may be inferred from the physical or the linguistic setting, and sentences containing this type of ellipsis may therefore occur initially in discourse.

Abstract complements can usually be inferred from the linguistic setting only, so that ellipsis is not likely to occur in initial sentences. In English contextual ellipsis of abstract complements is much commoner than that of concrete ones. (It is particularly common for sentential complements, which will form the subject of the next chapter.)

In theory contextual ellipsis could apply to definite or indefinite NPs but in standard English it is confined to the former i.e. the omitted NP corresponds to a personal or demonstrative pronoun. In some dialects the indefinite pronouns one and some can be dropped. The following exchange, at which I was present, may serve as an illustration.

I've just made some coffee. Will you have?

No thanks, I've just had.¹

The arrangement of the subsections of this Chapter will be based partly on the type of complement under ellipsis and partly on the features of the complements, viz. concrete, human, place and abstract.

3.1. Concrete Non-human Direct Object

This is of marginal importance in English and European languages in general.² It is found most often in the imperative, but even there it is limited to certain registers and any judgment as regards acceptability is bound to be subjective. The following examples illustrate this type of ellipsis:

- (1) a. Catch (when throwing a ball)
- b. Drink up
- c. Open (as used by dentists)
- d. Hold tight (as used by bus conductors)
- e. Show me
- f. Give me

Example (e) belongs to very informal speech; (f) is mainly used by small children (compare mustn't touch addressed to small children).

The imperatives exemplified by (2) are a regular feature of the language of written or printed instructions, such as is used on public notices, labels of manufactured products, cookery books, etc.

- (2) a. push / pull (on doors)
- b. use sparingly
- c. handle with care
- d. do not boil
- e. serve with mashed potatoes
- f. stir over low heat.

In this connection one might also mention the stereotyped phrase letter to follow.

The only verbs with which ellipsis is common are open and close, (and shut), e.g.

- (3) a. What time do you open?
- b. We never closed.

These are not however straightforward cases of the ellipsis of an inanimate concrete object. The object understood

must be an establishment (shop, theatre, library, pub, etc.) rather than an artifact (suitcase, tin of sardines); and it implies a possessive element identical in reference to the subject. Such sentences therefore seem to have something in common with those in which a reflexive pronoun is dropped (cf. 5.1.)

3.2. Concrete Non-human Prepositional Object

The verb look (and stare) always implies a prepositional object (at something) i.e. the action is semantically goal-directed in Halliday's terminology (I am, of course, excluding the copulative sense as in he looks well). The prepositional object is frequently omitted when it can be supplied by the context. This usage is most obviously exemplified by imperative sentences but it is not confined to these, as shown by the following example from the O.E.D:

(4) At the most critical moment he was afraid to look.

The same type of ellipsis also occurs with aim and listen (the complement of listen to is not strictly speaking concrete but it is of a different order of abstractness from the examples discussed in 3.5 and I am including the verb here on account of the analogy with look):

(5) a. He aimed and fired

b. The audience listened in rapture.

The naturalness with which ellipsis occurs after these verbs is presumably related to the fact that the prepositional

objects are rather like directionals, which are particularly liable to contextual ellipsis (cf. 3.4). Unlike true directionals, however, the complements of these verbs can be isolated by the pseudo-cleft transformation and can become the subjects of passive sentences:

- (6) a. What he looked at was the engine
- b. The speech was listened to in silence
- c. *What he arrived at was the station
- d. *The station was arrived at.

Moreover, when look is followed by a preposition other than at, at is, I think, always deleted. Thus (7 a) would derive from (7 b).

- (7) a. He looked from one to the other
- b. He looked from at one to at the other.

Look cannot, I think, occur without the implication of a specified complement with at, though this may be nebulous e.g.

- (8) He looked out of the window.

Ellipsis of prepositional objects also occurs with let go and hold on.

3.3. Human Objects, Direct and Indirect

3.3.1. With human objects contextual ellipsis is slightly commoner than with concrete inanimates, e.g.

- (9) a. The enemy attacked at dawn
- b. He phoned / rang last night

- c. You go first, we'll follow later
- d. They visit every Sunday.

In some cases it is not easy to decide whether a specified object is implied or not. (9.d) can only mean, I think, "they visit me (us, them, etc.) every Sunday" and I have therefore assumed that there is contextual ellipsis, similarly in

(10) Visiting relatives are a nuisance

the implied object is "you" or "me", i.e. the person(s) that the visitors are relatives of. But in (11) there is no specified object.

(11) They go visiting every Sunday.

This is not possible when the verb is finite, however.

Sometimes the difference depends on whether the subject is generic or definite. Compare

- (12) a. Noise annoys
- b. The noise disturbs.

(12 a) is most naturally interpreted as "noise annoys people in general" whereas (12 b) might well be intended as "the noise disturbs me"; such a use is less acceptable, however.

There is a striking difference as regards ellipsis between the semantically close verbs fit and suit. Compare

- (13) a. The coat doesn't fit
- b.*The coat doesn't suit.

In other respects these verbs have similar syntactic properties, neither permit passivization or progressive aspect.

We find an ill-fitting dress but not *an ill-suiting dress;
I do not know whether this difference is related to the
other. The verb fit, according to the O.E.D., developed
out of the adjective but one would not expect this diachronic
fact to be alive in the minds of present-day speakers of
English. On the other hand fit is commonly used with
prepositional complements:

(14) The book-case fits into the alcove.

This may have something to do with the ease with which
ellipsis occurs after fit, but the difference remains
puzzling.³

3.3.2. Examples of indirect objects under contextual ellipsis
are

- (15) a. He offered compensation
 b. The picture was lent by John Smith
 c. He showed slides of the Antarctic.

In (16 a) the definite element is located in the particle
whilst in (16 b) it belongs to the whole verb:

- (16) a. He gave / paid back the money
 b. He returned the money.

3.4. Directional and Place Complements

Verbs of motion may be divided into two classes. The
first, including move, walk, swim, fly, drive, etc. can be
used without specified directional phrase. Except for move,
the neutral member of the class, they specify the manner of

movement and may be used in contexts where there is ellipsis of a specified goal:

(17) How did you get there? I walked.

But ellipsis with these verbs is less important than it is with verbs of the second class, like come, go, arrive, depart, etc. With these verbs the manner of movement is not specified but a specified directional complement is obligatory and for that reason particularly liable to contextual ellipsis.

The difference between come and go has been discussed largely in terms of the deictic factors of the speech situation.⁴ A further difference is that come requires a directional with to (positive) whereas the conditions for go are satisfied by a directional with from (negative). Hence the ambiguity of

(18) Are you going?

which can mean either "are you going from here (now)" or "are you going to there (in the future)?"⁵

Apart from these deictically determined verbs arrive implies a positive directional, set out and depart a negative one. Closely analogous are the verbs enter and leave. These differ from other verbs of motion in not taking an overt preposition before their complements; enter permits limited passivization, leave does not:

(19) a. The park is entered from the back of the house

b. *The park was entered / left in the morning.

Thus it is doubtful whether enter and leave should be classified among verbs taking direct objects or among verbs taking

directional complements, with deletion of a preposition.

On the other hand reach is a clear case of a verb taking a direct object. It differs from arrive (at) in not permitting ellipsis of the goal and it readily permits passivization provided that the object is not a place name:

- (20) a. We arrived at noon
b. *We reached at noon
c. *The camp was arrived at after nightfall
d. The camp was reached after nightfall.⁶

There are a few verbs that imply a definite directional (positive or negative) as well as specifying the manner of movement, viz. put in, touch down, sail, take off.

A definite directional may also be implied by certain particles with other verbs of motion: move down / away / out tend to imply from whilst move in / up / back imply to. In

- (21) He came out

there is contextual ellipsis of a positive and a negative directional.

Where a directional occurs as second complement it cannot usually undergo contextual ellipsis. But in the presence of the particle back the directional may be omitted:

- (22) a. Put it back (on the table)
b. Take it back (to the kitchen).

The verbs remain and stay always imply a specified locative complement, which frequently undergoes ellipsis.

3.5. Abstract Objects, Direct and Prepositional

Abstract nouns occur as direct and prepositional objects and it is sometimes difficult to establish whether a preposition has been deleted or not. I shall therefore treat both kinds together, starting with those which have no preposition in surface structure. Abstract complements that undergo contextual ellipsis are most commonly sentential (cf. chapter 4); sometimes a simple noun can be analyzed as a nominalization of an underlying sentence, but in many cases this would be far-fetched.

The following is a list of verbs which permit ellipsis of a simple noun; the type of noun omitted is indicated after the dash. The symbol (Nom) indicates that the noun can plausibly be regarded as a nominalization. The symbol (S) after an entry indicates that the verb in question also takes a sentential complement.

(23) win, lose — a war, game, bet.

A less abstract noun like "£100" cannot be omitted. Since it is possible to say he won £100 in a bet one could regard win a bet as containing a deleted preposition. With other possible objects win and lose are not converses in modern English; he won a prize but not he lost a prize, and such objects cannot be omitted. It should also be pointed out that since a game has visible manifestations who is winning? can occur initially in discourse.

(24) pass, fail — an examination.

There may be an underlying preposition; compare he passed in French.

(25) join — a club, society.

The object must be an institution rather than a group of people.

(26) produce, direct — a film, play; conduct — an orchestra

(27) watch — anything in motion.

The object must have duration and is an event rather than a concrete noun as with look at. For some speakers it has a specialized use with "television" as implied object.

(28) accept — an offer, invitation (Noun)

(29) refuse, decline — an offer, invitation (Noun) (S)

(30) agree — to a plan, proposal (Noun)

(31) acquiesce — in a decision

(32) apply — to a case, example, e.g. The rule does not apply.

This is the only verb in the list which does not take a human subject

(33) apply — for a job

(34) approve — of a choice, plan (Noun) (S)

(35) benefit — from a course of study, treatment (S)

(36) comply — with a regulation, order (Noun)

(37) confess — to a crime (S)

(38) enlarge — on a topic

(39) interfere — in someone else's affairs

(40) insist — on a demand (S)

(41) object — to a statement, behaviour, etc. (S)

(42) apologize — for an error, etc. (S)

Since contextual ellipsis of abstract prepositional objects in such a common phenomenon it is worth pointing out that it does not occur with all verbs taking such complements. It is impossible, I think, with accede to (a request), account for (a phenomenon) and adhere to (a rule, principle). It is also, though less surprisingly, impossible with consist of and depend on,⁷ which are stative verbs and take non-human subjects.

It is less easy to compile a list of verbs permitting ellipsis of abstract nouns as second complements (i.e. after a human complement) since one may often hesitate whether the prepositional phrases concerned are verbal complements or not. In the following cases the prepositional phrase is clearly a verbal complement and subject to ellipsis:

(43) accuse ... of, acquit ... of, blame ... for,
charge ... with, convict ... of.

On the other hand, the prepositional phrase in criticize ... for seems to have less ^{cohesion} ~~coherence~~ with the verb so that it is doubtful whether one can speak of ellipsis of a verbal complement in

(44) He criticized me.

In (45) there seems to be ellipsis of two prepositional phrases:

(45) He appealed (viz. to the court against the sentence).

CHAPTER 4

OMISSION OF SPECIFIED COMPLEMENTS II -----

SENTENTIAL COMPLEMENTS

4.1. Introduction

Sentences embedded as complements appear with both finite and non-finite verbs; the latter can be infinitives, gerunds, present participles or past participles.¹

For finite-verb and gerund sentences embedded as complements NP domination can be established by three tests:²

A. The pseudo-cleft sentence transformation:

- (1) a. What John doubted was that Peter had spoken
the truth
b. What I object to is his leaving without permission
c. What John asked was whether Peter had spoken
the truth.

B. Pronominalization in that (and sometimes it):

- (2) a. I doubt that
b. I object to that.

C. The passive transformation:

- (3) a. That Peter had spoken the truth was never doubted
b. His leaving without permission was not noticed.³
c. Whether Peter had spoken the truth was never
established.

For embedded sentences with infinitive verbs these tests yield doubtful or negative results. (cf. 4.1.2.)

The cleft sentence transformation is possible only for embedded sentences with gerunds:

- (4) a. It's his leaving early that I object to
b. *It's that Peter had spoken the truth that John doubted.

Compare the analogous constraint on the question transformation:

- (5) a. Was his leaving early noticed?
b. *Was that Peter had spoken the truth doubted?

In the last sentence extraposition is obligatory.

It appears that embedded sentences with gerunds are the most clear-cut cases of NP domination, but for those with finite verbs the balance of the evidence also favours this analysis. I shall assume it henceforth.

It has been widely accepted that all sentential NPs are attached to the pronoun it functioning as head of the NP in the underlying structure. The evidence that has been adduced for this assumption is rather slender. It should be noted in particular that many sentential complements cannot be pronominalized in it (cf. below). I therefore regard the it that appears in extraposition as a mere dummy or 'place-holder' in the surface structure.⁴ For gerunds the -ing morpheme that is attached to the verbal stem can be regarded as the nominal head; embedded sentences with finite verbs lack a nominal head.

Sentential NPs differ from others in that the ordinary feature distinctions such as $\left[\begin{smallmatrix} \text{#} \\ \text{-specific} \end{smallmatrix} \right] / \left[\begin{smallmatrix} \text{#} \\ \text{-indefinite} \end{smallmatrix} \right]$ do not apply to them.⁵ If they can be said to have reference, their

reference is unique, like that of proper nouns; and like these they do not have determiners and permit non-restrictive relative clauses, e.g.

(6) He said that he was ill, which I don't believe but not restrictive ones. They differ from all other NPs in the fact that they must be singular and cannot be conjoined to produce NPs with the surface characteristics of plurals. Hence when in subject position they cannot impose plural concord on verbs:

(7) *That John got a first and that Mary failed were equally unexpected.

Neither can they give rise to plural pronominalization:

(8) a. He doubted it
b. *He doubted them.

Sentential complements may occur alone or in addition to another complement which must be $\langle \bar{+}human \rangle$.

4.1.1. The Structure of Sentences with Human and Finite Sentential Complements

Sentences containing a finite sentential complement in addition to a human complement can have two structures, as exemplified by

(9) He informed me that he could not come
(10) He explained to me why he could not come.

The difference between the two types is apparent from the following criteria:

(i) For inform the human complement cannot take a preposition, for explain it must

(ii) For inform the order of the complements cannot be reversed even if the sentential complement is pronominalized:

- (11) a. *He informed that me
b. He explained that to me.

(iii) For inform a sentential complement that is pronominalized or reduced to an abstract noun has a preposition:

- (12) a. He informed me of that
b. He informed me of the meeting.

With explain there is no preposition.

(iv) For inform the sentential complement cannot become the subject of a passive sentence, even if it is extraposed or pronominalized:

- (13) a. *That he could not come was informed me
b. *It was informed me that he could not come
c. *That was informed me

whereas the human complement can:

- d. I was informed that he could not come.

For explain the reverse holds:

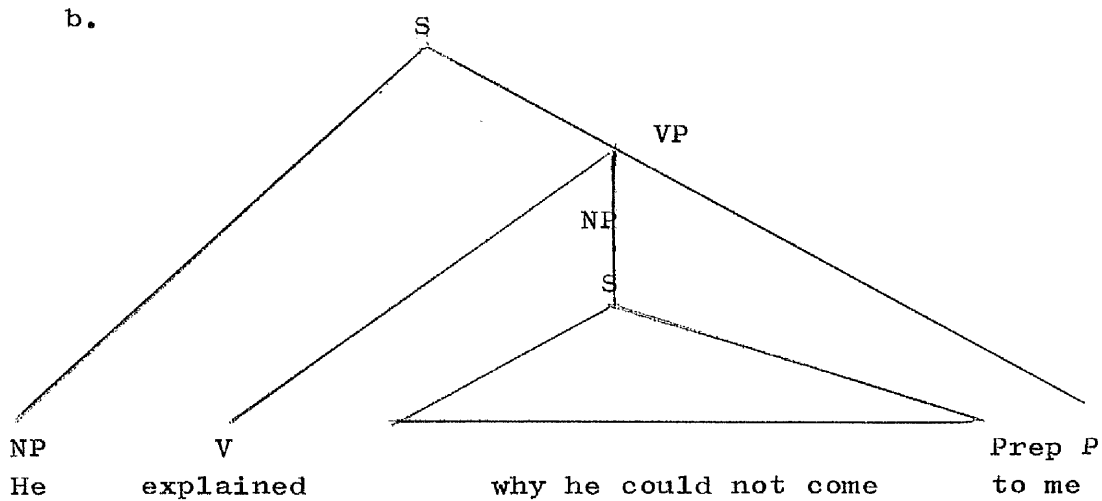
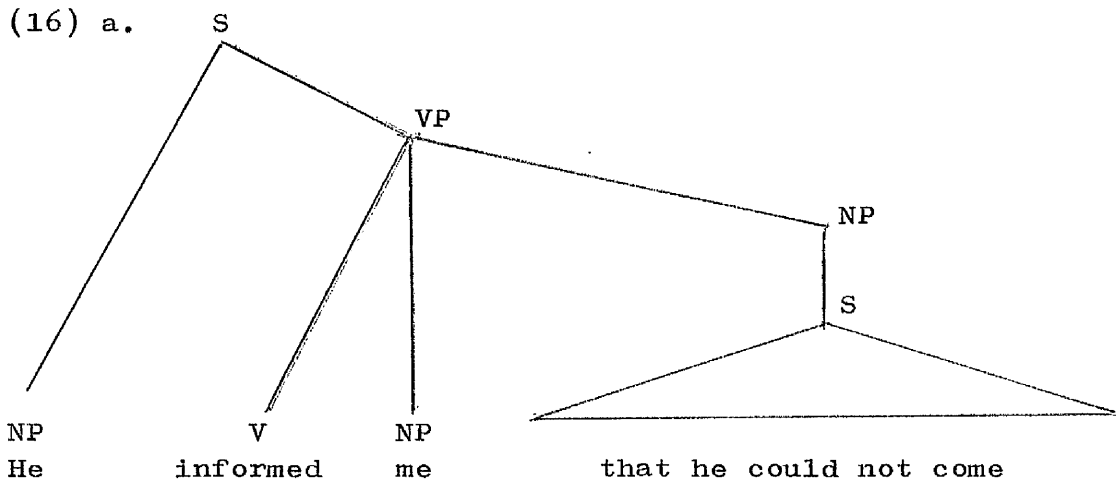
- (14) a. Why he could not come was never explained to me
b. *I was not explained why he could not come.

(v) With inform the human complement is obligatory, with explain it is not:

- (15) a. *He informed that he could not come

b. He explained why he could not come.

These differences indicate that for inform the human complement comes first and the sentential complement second, whilst for explain the order is the reverse:



I do not use the term 'indirect object' to refer to the human complement in either case. The human complement of inform functions syntactically as a direct object; that of

explain is closer to the function of the indirect object with verbs like give but does not permit the movement transformation characteristic of indirect objects. Other verbs that fit into the structure (16½a) include notify, convince, warn, assure; propose and suggest fit into (16½b).

Some verbs do not quite fit into either of these schemes. Tell is like inform according to criteria (iv) and (v) but unlike inform according to (iii):

(17) I told him that.

(In earlier stages of the language the preposition of occurred in this position; the O.E.D. cites: he ... told me of my fault.)

Permutation of the two complements and attachment of a preposition to the human one, (ii) and (iii), produces a sentence which frequently occurs but which for some speakers is not fully grammatical, e.g.

(18) ?He told the facts to no one but John.

I think that in the underlying structure the human complement comes first and that if sentences like (18) are to be generated they must be derived transformationally. Unlike inform, notify, etc. tell also occurs with interrogative clauses, both finite and infinitive:

(19) a. He didn't tell me where he was going

b. He told me where to go.⁶

Ask, which takes only interrogative clauses, is more complicated. It behaves like explain according to (iii) and (v):

- (20) a. I didn't ask him that
b. I asked why he didn't come.

Formerly it also behaved like explain according to (i) and (ii) with the preposition of, to or at inserted before the human complement:

- (21) I asked that question of him

but in contemporary English this usage is rare. In passive sentences (iv) both complements can occur as subjects, though the sentential complement is only likely to occur in this position when it is nominalized:

- (22) a. I was asked where I had been
b. That question was never asked
c. ?Why he didn't come was never asked
d. ?That was never asked.

Thus for ask both types of analysis could be justified, depending on which of the above criteria should be given preference. In Appendix B I shall give reasons why an analysis like that of explain, i.e. with the sentential complement coming first, is to be preferred.

4.1.2. Infinitive Complements

Verbs that are followed by infinitives (as well as gerunds and participles) in the surface structure are commonly called catenatives, e.g. he wanted to go, he advised her to go (with intervening human complement). In some sentences that show this construction, however, the infinitive clause that

appears after the verb cannot be regarded as a deep structure complement but is part of the subject of the sentence. Thus (23. a) is derived from (22. b):

(23) a. He seems to be happy

b. ((he be happy) (seems))
S NP NP VP VP S

Following Huddleston I shall adopt this analysis for seem, appear, chance, tend, fail as well as those instances of begin, start and continue in which the surface subject is not agentive.⁷

There has been considerable discussion on whether infinitive clauses that function as complements should be regarded as objects of their verbs, i.e. as NP dominated. Jespersen (1927, p. 9 ff.), pointing to the substantival origin of the infinitive, had no doubt that they were objects; he even included the 'bare' infinitive after modals in this category. More recently Palmer rejected this approach, preferring "a hierarchical analysis in which the downgraded clause is deliberately not assigned status as a clause element, object or complement".⁸ Among transformationalists the controversy was triggered off by the work of Rosenbaum, who distinguished between "NP complements" and "VP complements" (his use of the term 'complement' differs from mine but for the purposes of the present discussion they overlap). For the first he claimed that the passive and pseudo-cleft tests were positive, giving the examples (1967, p.14, (15) a.2 and 3)

(24) a. To remain silent was preferred by everyone

b. What everyone preferred was to remain silent.

In some cases NP domination was justified by postulating a

preposition, e.g. decide was assigned the preposition on, which would yield such sentences as

(25) To remain silent was decided on by John.

(This example is not Rosenbaum's.) I do not consider any of Rosenbaum's examples fully grammatical. Notice that 24(a) becomes much worse if a definite NP like John is substituted for everyone. This is because a subjectless infinitive can often be understood to have a generic subject, which is semantically similar to everyone.

It should also be noticed that infinitive clauses cannot be pronominalized in it or that:

- (26) a. *I endeavoured it / that
b. *I persuaded him it / that.⁹

These objections do not, however, constitute conclusive evidence against regarding infinitive clause complements as NP-dominated. For it can, I think, be shown that the relevant constraints are all due to the obligatory deletion of the subject of the infinitive. I shall reserve discussion of the constraint that blocks the passive transformation for Appendix A, since it is part of a larger constraint on passives. The pseudo-cleft transformation is, I suggest, blocked because the infinitive whose subject has been deleted would be separated from the matrix clause by the intervening copula; in the derived sentence the infinitive would be the subject of the copula and its own subject could not therefore be determined by the underlying matrix verb. A fully grammatical pseudo-cleft version of such sentences requires a copy of the infinitive to be left before the copula:

(27) What John prefers to do is to watch television.¹⁰

It is instructive to compare the corresponding cleft sentence:

(28) *It's to watch television that John prefers.

This sentence is ungrammatical for other reasons; notice, however, that it would become considerably worse if we added to do:

(29) *It's to watch television that John prefers to do.

This is only to be expected since in the cleft sentence the infinitive, though preposed, is not separated from the matrix verb by the copula.

If this argument is correct the same constraint should apply to those gerund clauses in which the subject of the gerund has been deleted. Such clauses cannot become subjects of passive sentences:

(30) *Playing Malvolio was enjoyed by John.

The following sentence also strikes me as not fully grammatical:

(31) What John enjoyed most was playing Malvolio.

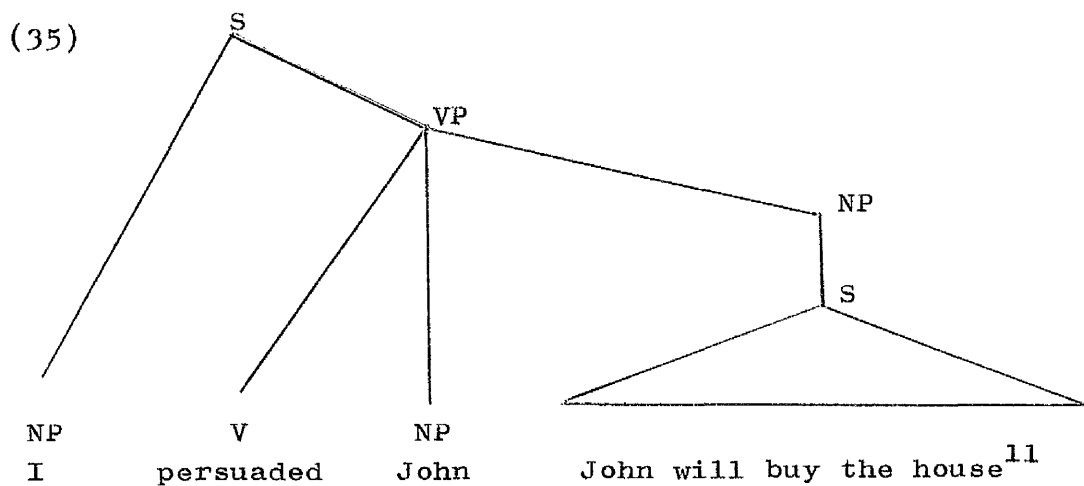
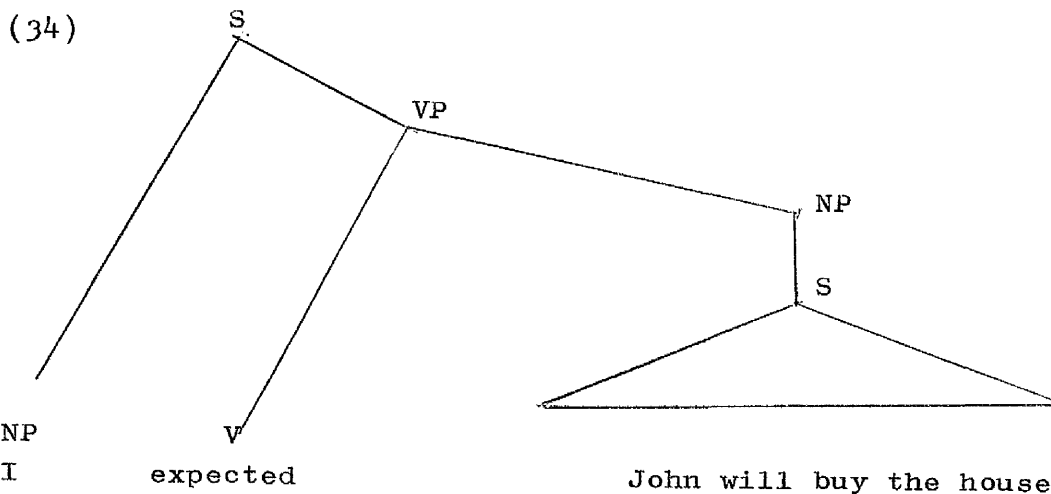
In general it seems to me that infinitivization which involves obligatory deletion of the subject, causes a gross distortion of the underlying structure but that it is nevertheless possible, and, I think, simplest to postulate NP domination.

4.1.3. The Structure of Infinitive Clauses after a Noun Phrase

Infinitives separated from the matrix verb by a noun phrase can have two different derivations. Thus (32) and (33) are derived from (34) and (35) respectively:

(32) I expected John to buy the house

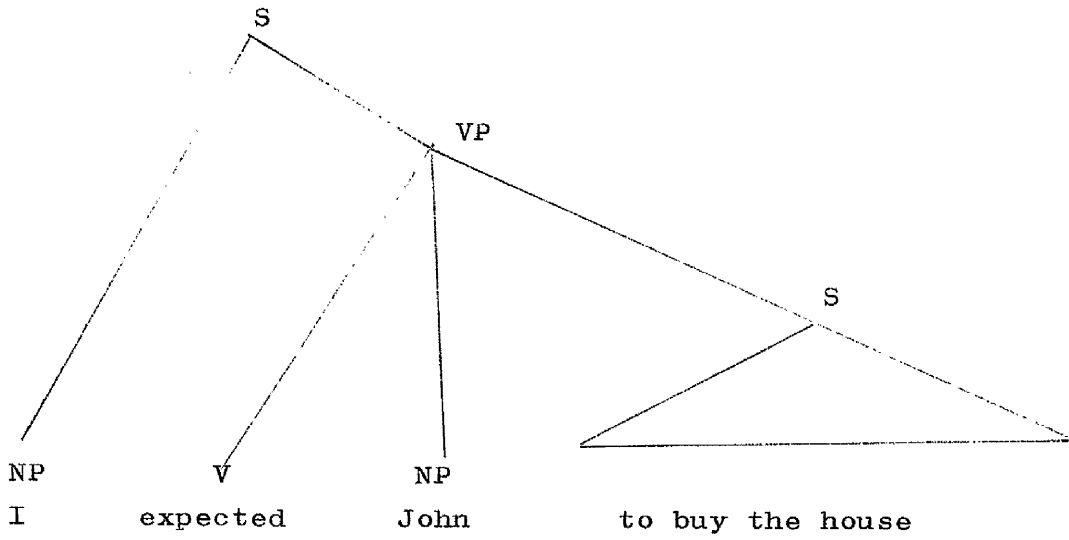
(33) I persuaded John to buy the house.



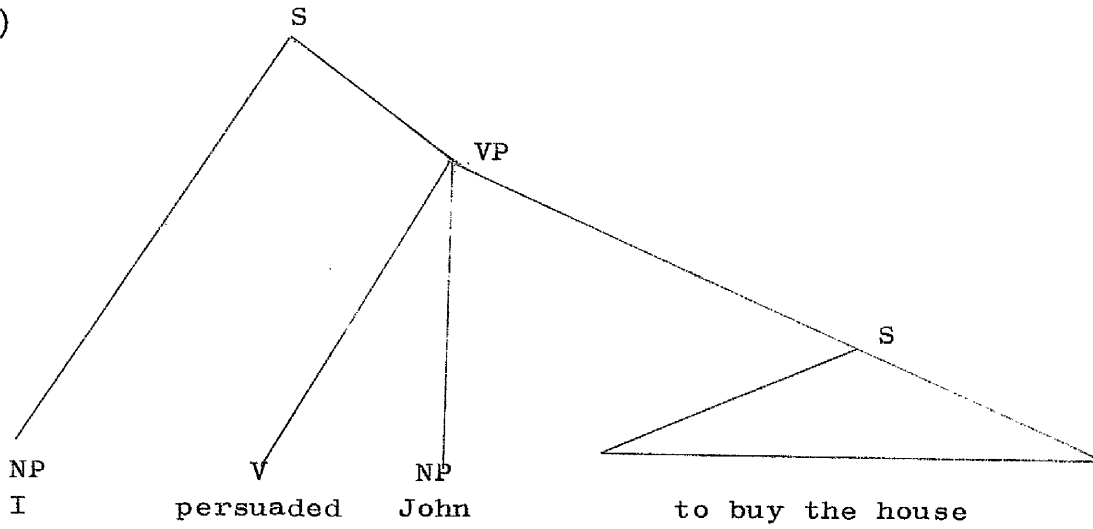
In (34) the intervening NP is part of the embedded clause and its selection is independent of the matrix-clause verb. Verbs that permit this type of embedded clause include expect, believe, want.¹² In (35) the intervening NP is part of the matrix clause and its selection is governed by the verb of that clause: it must be [+Human]. The derived structure is

the same for both types:

(36)



(37)



In (36) John has undergone 'subject-raising' in (37) Equi-NP deletion. Some verbs permit both types of embedding, e.g. allow, force, help.¹³

4.2. Ellipsis of Finite Sentential Complements

I have examined ca. 170 verbs which may be followed by finite sentential complements.¹⁴ Those that permit contextual ellipsis of such complements fall into two distinct classes.

4.2.1. The first and more interesting class consists of

- (38) a. ask, inquire, wonder, understand, explain,
b. know, remember, forget, recall, remind,
find out, notice, guess, inform, notify,
c. tell, say, hear, decide (in restricted uses).

The verbs in (38 a) are followed only or predominantly by interrogative or WH-clauses;¹⁵ those in (38 b and c) can be followed by declarative or THAT-clauses. Contextual ellipsis with the verbs does not occur automatically but depends on discourse between two interlocutors.¹⁶ Examples (39) to (44), which are far from exhaustive, illustrate elliptical uses in various discourse situations. The type of clause that has undergone ellipsis is indicated in brackets.

(39) Declarative response to interrogative (WH-clause)

- | | |
|---------------------|-------------------------|
| a. I don't know | f. I haven't discovered |
| b. I don't remember | g. I wonder |
| c. I've forgotten | h. He didn't say |
| d. I didn't ask | i. He didn't explain |
| e. I haven't heard | j. He hasn't decided |

(40) Declarative response to declarative (THAT-clause)

- | | |
|--------------------|-------------------------------|
| a. I know | d. I've heard already |
| b. I remember | e. He's told me |
| c. I had forgotten | f. I understand ¹⁷ |

- (41) Interrogative response to declarative (WH-clause)
- a. Did you ask him
 - b. Why don't you find out
- (42) Interrogative response to declarative (THAT-clause)
- a. How did you know
 - b. Who told you
- (43) Declarative response to interrogative of (42)
(THAT-clause)
- a. I guessed
 - b. John told me
 - c. I found out by accident
- (44) Declarative or interrogative addition to declarative
by same speaker (THAT-clause)
- a. I knew already
 - b. John told me
 - c. I've notified John
 - d. I was not informed¹⁸
 - e. Did you know
 - f. Have you forgotten
 - g. Don't you remember
 - h. Haven't you heard
 - i. Have you noticed
 - j. Do you understand

In contrast to these examples the majority of verbs taking finite sentential complements require these to be represented anaphorically either by pronouns or by the pro-forms so (or not):

- (45) a. I doubt it / that

- b. He denied it / that
 - c. He has proved it / that
 - d. I don't believe it / that (believe 1 = consider to be true)
- (46)
- a. I think so / not
 - b. I believe so / not (believe 2 = think)
 - c. I suppose so / not
 - d. I hope so / not
 - e. He said so / that

The pro-form so would be impossible with all the elliptical examples listed and it would be unlikely to occur. That is possible with varying degrees of probability. Sometimes it implies contrast (and would be pronounced with heavy stress) but one can imagine contexts where there is no difference between, for example, did you know and did you know that. The use of that is, I think, least likely in the sentences in (39) and (41), i.e. an interrogative clause is more likely to undergo ellipsis than a declarative one. Thus also in the following pair the first response is much more acceptable than the second:

- (47)
- a. Is he coming? He didn't say
 - b. John is coming? Oh yes, you said.

Since question and answer represent one of the prime instances of a grammatical unit extending beyond the sentence it need not surprise us that it is just here that ellipsis frequently occurs.

But a similar factor operates, I think, in the case of the other responses too. To explicate this factor I shall first consider the semantic make-up of the verbs in (38). Except for those in (38 c), with which ellipsis is very restricted, they all contain a semantic component which I shall call KNOW. Thus remember and its synonyms can be glossed as "continue to know" or "know again", forget as "no longer know" or "cease to know", understand as "know why".¹⁹ Notice, discover and find out (and perhaps also guess) incorporate an ingressive KNOW component, inform and notify a causative one. Remind may be analyzed as "cause to know again", explain as "cause to know why". Wonder is equivalent to "want to know", and ask usually implies this. Decide can be analyzed as "ingressive KNOW what to do".

Insofar as these verbs can be followed by declarative clauses the following generalization can be made. For any sentence with overt or contextually understood THAT-clause the truth of the embedded proposition is taken for granted by the matrix verb and usually presupposed by the speaker uttering the sentence.²⁰ With other verbs there are two possibilities. For those whose embedded clauses are pronominalized in it — e.g. believe, doubt, confirm, deny, show, prove, disprove — the truth of the embedded proposition is specifically asserted (or denied as the case may be) by the matrix subject. For those whose embedded clauses are pronominalized in so (or not) the truth of the proposition is merely suggested and usually hedged in with doubt or negative implications.²¹

Tell and say occur with so and that, and tell also occurs freely without ellipsis of the sentential complement. Note in particular the difference between the ellipsed and the pronominalized forms in

- (48) a. Who told you
b. He didn't tell me
c. Who told you that
d. He didn't tell me that.

In (48 a and b) the speaker presupposes that the omitted sentential complement expresses a true proposition; (48 c and d) are possible without this presupposition. Similarly with

- (49) a. Have you heard
b. Have you heard that.

The distinction here drawn has some affinity with that made by P. and C. Kiparsky (1970) between 'factive' and 'non-factive' verbs. The semantic criterion for factive verbs is that "the speaker presupposes that the embedded clause expresses a true proposition". Know is semantically factive though syntactically it is non-factive. But the class of factive verbs is much wider than those I am concerned with, for in addition to the KNOW verbs it contains many 'emotive' verbs like regret and resent. Moreover, the notion of presupposition does not, I think, explain the ease with which the complements of the KNOW verbs undergo ellipsis in discourse between two interlocutors.

Instead of the notion presupposition we might, however, invoke that of implication as used by philosophers. Austin (1962)

has argued that the utterance of any declarative sentence implies that the speaker believes the proposition expressed by the sentence. One might add that the very fact that he utters the sentence normally implies that he believes that the addressee does not know the content of the proposition. The response I know, I remember, etc. could thus be regarded as a contradiction of this second implication. (The response is, of course, inappropriate if the initial sentence itself began with expressions like I know or I think).²² Similarly the utterance of an interrogative sentence implies that the addressee knows it. The response I don't know would again contradict the second implication. On this assumption both responses would be similarly linked to the preceding sentence and in both cases one would speak of a grammatical unit extending over sentence boundaries.


This notion of implication would apply particularly to the responses illustrated in (40) but it could be extended, I think, to the others. (41) concerns the addressee's implied lack of knowledge. In (42) it is the source of the addressee's knowledge that is questioned, whilst in (43) the former addressee, turned speaker once more, gives the source of his knowledge. (44) concerns the discourse relationship between the speaker and a third person whilst (45) modifies the normal discourse implication; the addressee might, or should, have prior knowledge of the proposition just communicated.

The notion of discourse implication put forward here might also account for other grammatical phenomena.

Ross (1967 p.103 ff.) has pointed out that there are constraints on the conjunction of declarative and interrogative sentences:

- (50) a. *John is coming and is Mary coming
b. *Is John coming and Mary is coming.

Intuitively it seems obvious that from the speaker's point of view the utterance of a declarative sentence implies that he knows the proposition concerned (subjectively there is no difference between knowing and believing) and that the addressee does not know it. The converse holds for the utterance of an interrogative sentence: the addressee knows, or might know, the proposition concerned, the speaker does not know it. Hence the utterance of a conjunction of declarative and interrogative sentences would carry contradictory implications.²³

Ross regards the constraint on such conjunction as a deep structure constraint and I have followed him in marking the sentences in (50) (as well as (3g) in note 19) with a simple asterisk. I think it would be preferable, however, to distinguish sentences which violate discourse implications from ordinary ungrammatical sentences and to mark them with a different symbol, e.g. 

4.2.2. The second class of verbs permitting a finite sentential complement to be contextually omitted may be illustrated by the following examples:

- (51) a. I must go; I promised

- b. There will be trouble; I warn you
- c. He isn't really asleep; he is only pretending
- d. John thinks that there are people on Mars
and Peter agrees (with him)
- e. John argued that there are people on Mars
but he didn't convince me.

In the case of these verbs there is, I think, much less cohesion between verb and complement. The first three represent actions rather than mental processes or communication of such processes. Promise and warn are full performatives in Austin's sense of the term. Pretend represents a special kind of communication which need not involve verbalization. The basic meaning of convince is, I think, "change a person in respect to his belief;" it usually presupposes a preceding clause with a communication verb.²⁴ Agree incorporates a pronominal element equivalent to "the same" i.e. it means essentially "think the same". I am not sure whether with these verbs one can speak of true ellipsis, in other words, whether the sentential complement, though clearly implied, is a necessary grammatical constituent of the sentence.

4.3. Ellipsis of Infinitive Clauses

4.3.1. Ellipsis of Infinitive Clauses Functioning as Sole Complements

Verbs that take infinitive clauses as sole complements include

- (52) want, prefer, (would) like, wish, decide, try,
attempt, endeavour, aspire, agree, consent,
decline, refuse, promise, threaten, hope, fear,

pretend, remember, forget, condescend,
offer, manage, deserve, ask, beg.

Infinitivization is usually obligatory; and in most cases the deleted subject of the infinitive corresponds to its deep structure subject.²⁵

An infinitive clause complement (including the derived complement in split-subject constructions) that is recoverable from the context is normally abbreviated to the infinitive morpheme to e.g.

- (53) a. I want to c. He offered to
 b. He seems to d. He deserves to.

The scope of to extends to any nominal complements of the omitted verb, e.g.

- (54) Has he sent you the books? No, but he promised to.

Optionally it may also extend to any adverbial element (time, place, etc.) present in the contextually given sentence. Its behaviour is thus analogous to that of the auxiliary in short-form answers, tags, etc. I do not know whether this is just an interesting coincidence or whether one should postulate some deeper relationship between the infinitive morpheme and the auxiliary of finite verbs.²⁶ No other pro-form is possible; the distinction between the simple definite and the demonstrative pronoun — i.e. the distinction between I doubt it and I doubt that — cannot be made for infinitives just as it cannot be made for auxiliary short-forms of finite verbs (*I can that).

With most of the verbs listed in (52) the pro-form to is obligatory for a contextually specified infinitive clause:

- (55) a. Are you coming to the party? * I intend
b. *I didn't think John would come but he
condescended.

Absolute or elliptical uses are possible in the following cases:

A. Try, e.g.

- (56) I won't promise to come but I shall try.

Originally try was a true intransitive (= "make an effort"), a use that survives in the language of school-reports; according to Jespersen (1940, p.197) try to is not old in the language. It may be surmised that the infinitive after try was, to begin with, an infinitive of purpose rather than a verbal complement and that even in contemporary English cohesion between try and the infinitive is not as strong as in the case of other catenatives.²⁷ It should also be noted that try, unlike its semantic cognates attempt and endeavour but like some intransitive verbs (work, think), occurs with the adverbial intensifier hard.

B. The verbs wish, like and, for some speakers, want occur with ellipsis of the complement clause in matrix clauses introduced by if and whenever:

- (57) a. You can come if / whenever you wish
b. I shall come whenever you wish.

(Notice that in (57b) an intervening NP has also been

omitted; the structure is like that of expect (cf. 4.1.3)
i.e. whenever you wish (I come)).

With prefer this usage is found in parenthetical if-clauses:

(58) Just phone or, if you prefer, drop me a line.

A use that is probably related is found in comparative
clauses:

(59) He spoke more truly than he intended.

C. Decline and refuse e.g.

(60) He was asked to take the chair but refused

It is not clear, however, and perhaps cannot be decided
whether one can properly speak of ellipsis of an infinitive
here. Both verbs can be used with simple noun phrase
objects, where the noun is a nominalization of such verbs
as invite and offer. Thus one might regard this as an
instance of simple noun phrase ellipsis. Ellipsis with
agree is rather dubious:

(61) ?He was asked to take the chair and after some
hesitation agreed.

Note that the simple abstract noun with agree (to) is plan
or proposal rather than invitation or offer.

D. Promise, pretend, remember, forget. These are among the few
verbs that can take finite as well as infinitive sentential
complements. Ellipsis with promise and pretend was
mentioned in 4.2.2. With remember and forget finite and
infinitive clauses differ in implication:

- (62) a. He forgot that he had to go
b. He forgot to go.

(62 b) implies that he did not go. The same implication is present in the elliptical example

- (63) He meant to go but forgot.

Begin, start, continue. As indicated in 4.1.3, I follow those scholars who set up different analyses for these verbs according to whether the subject is agentive or not. Thus in (64 a) the infinitive would be a verbal complement of begin whilst in (64 b) it would be part of the underlying subject of begin:

- (64) a. He began to work
b. He began to hiccup.

It seems to me that this difference is reflected in the possibility of ellipsis:

- (65) a. How long has he been working? He started at
7 o'clock
b. How long has he been hiccuping? *He started
at 7 o'clock
c. How long have you been collecting stamps? I
started when I was ten
d. How long have you been suffering from asthma?
*I started when I was ten.

4.3.2. Ellipsis of Infinitive Clauses Functioning as
Second Complement

In 4.1.3. I discussed the structures underlying the surface sequence V+NP+Infinitive, distinguishing between verbs like expect and verbs like persuade. For the first class infinitivization is optional (except for the verbs wish, want and prefer which form a sub-division of this class) and the complement cannot undergo ellipsis.

Verbs of the persuade class include

- (66) ask, tell, advise, encourage, urge, entreat,
enjoin, exhort, order, command, warn, remind,
challenge, tempt, teach, train, oblige, compel,
force.

Infinitivization is obligatory for all these verbs except remind.

In anaphoric uses the pro-form to is usually obligatory:

- (67) *We didn't want to go but he told / persuaded /
ordered / compelled us.

Absolute uses occur in

- (68) a. If he doesn't want to finish his dinner
don't force him
b. Don't tempt him; he is driving
c. He couldn't support his assertion when challenged.

These examples are similar to those discussed in 4.2.2 with reference to pretend, promise, etc. Force and tempt are 'action' rather than communication verbs, whilst challenge

is a full performative. The question again arises whether such sentences should be regarded as true cases of grammatical ellipsis.

The verbs let and make function like verbs of the persuade class when they are followed by an NP that is [+human] and an agentive verb, but unlike the verbs in (66) they take the 'bare' infinitive so that to is not available as a pro-form. Cohesion between these verbs and their complements is strong, so that there is certainly ellipsis in

- (69) a. I wanted to go but he wouldn't let me
b. I didn't want to go but he made me.

Note that in passive uses of make the pro-form to cannot be omitted.

4.4. Ellipsis of Gerunds

With the following verbs the complement, if sentential, must normally undergo the gerund transformation:

- (70) regret, avoid, escape, enjoy, stop, finish, ignore,
resent, deplore, mind,

A number of verbs take finite or gerund complements, e.g. remember, forget, mention. Ellipsis of gerund complements occurs only with mind, stop and finish.

- (71) a. I have taken your pen; I hope you don't mind
b. He worked for six hours without stopping for
a cup of coffee
c. Have you finished.

In addition many verbs take prepositional complements that may consist of either simple NPs or gerund clauses; these were dealt with in 3.5.

CHAPTER 5

OMISSION OF REFLEXIVE AND RECIPROCAL PRONOUNS

Reflexive and reciprocal sentences without overt pronoun represent a special category. If there is an unrealized NP in such sentences, it must be specified and definite but unlike the omitted elements discussed in Chapters 3 and 4 it is fully recoverable from the simplex sentence in which it occurs.

5.1. Reflexives

(1 a) seems to be a fairly clear example of ellipsis of a reflexive pronoun since it contrasts with (1 b):

- (1) a. Mary is dressing
- b. Mary is dressing the baby.

The type of process involved is usually felt to be different with a reflexive object, but this applies whether a reflexive pronoun is present or not. I do not know whether it is merely odd or deviant to say

- (2) Mary dressed herself and the baby.

Verbs permitting ellipsis of a reflexive pronoun typically denote actions concerned with parts of the body. The following list includes all the examples I am aware of:

- (3) wash, dress, undress, strip, shave, make up, scratch.

It is possible to imagine similar uses which are not English, e.g.

- (4) a. *Mary is combing
- b. *Mary is manicuring.

Ellipsis in these cases is probably connected with the fact that the English reflexive pronoun is rather 'heavy'; unlike other definite pronouns it bears stress. Another factor may be that it is homophous and in usage blended with the emphatic pronoun. Thus Mary dresses herself (with neutral stress) implies a contrast in the subject rather than the object; it states that Mary is capable of performing the action, that she does not need anyone else to dress her. Is this use of the pronoun emphatic or reflexive or both? In some cases, however, an overt pronoun is purely reflexive and in free variation with ellipsis, e.g.

(5) John scratched himself.

Ellipsis of the reflexive pronoun can also occur with verbs denoting actions concerned with the whole body, e.g.

(6) John is hiding.

Hiding oneself involves a different kind of action from hiding an object (or another person); but the basic meaning of the verb is placing something in a position where another person cannot see it and the way this is accomplished is immaterial. The difference is greater in

(7) a. John shook free of his pursuers

b. John flung out of the room. (this example is given by Halliday).

The normal meaning of fling involves use of the hands, I think; its use in (7 b) is metaphorical, preserving only the semantic component 'quick movement'. Similarly with

(8) John threw himself into the battle,

where the reflexive pronoun cannot be omitted.

The next examples involve psychological processes:

- (9) a. John identified with the hero of the story
- b. John adapted well to the changed conditions.

In both sentences it is possible to insert a reflexive pronoun;

(19 a) perhaps also contrasts with

- c. John identified his new friend with the hero
 of the story,

but such cases seem to be on the borderline between reflexive and intransitive uses of verbs. Compare also

- (10)a. The amoeba reproduces by division
- b. John wouldn't submit to this indignity
- c. The enemy surrendered.

A few verbs are inherently reflexive, i.e. the reflexive pronoun does not contrast with a non-reflexive NP. Examples include

- (11) absent, perjure, bestir, pride, comport, conduct,
 behave, enjoy.

Since the reflexive pronoun is obligatory, cannot be separated from the verb by any other word and carries no meaning it does not function as complement but rather as part of the verbal constituent, i.e. the verb is intransitive.

The last two verbs on the list require some comment.

Behave occurs without the pronoun when it is followed by a manner adverb, but the two uses differ. Behave without adverb implies a positive quality (something like "properly");¹

with an adverb it is completely neutral and seems to function as a mere dummy verb (it might be glossed as 'acted') for the adverb, which must therefore be regarded as a constituent of the VP. I can see no way of incorporating the two uses in one lexical entry. Enjoy has no pronoun when it is followed by a noun — he enjoyed the play — but there is no contrast between this noun and the reflexive pronoun.

A slightly different case of reflexive ellipsis is the use of change in the sense of "change one's clothes", where a reflexive possessive phrase is omitted. It may, however, be preferable to treat this use of change as a separate lexical item.

5.2. Reciprocals

This section will deal mainly, but not exclusively, with inherently reciprocal verbs, i.e. those which logicians describe as symmetrical predicates; it will include verbs which appear with direct objects (meet, marry, resemble, etc.) and with prepositional objects (quarrel, combine, mix, collide, etc.). Such verbs appear in two types of structure

(12) John met Mary

(13) John and Mary met.

Is there ellipsis of the reciprocal pronoun each other (or one another) in (13)? The answer to this question depends essentially on how one views the relationship between (12) and (13).

Lees and Klima (1963) and Gleitman (1965) took the view that (12) represents the underlying structure and that (13) is derived from a reduction of two conjoined sentences.

(14) John met Mary and Mary met John.

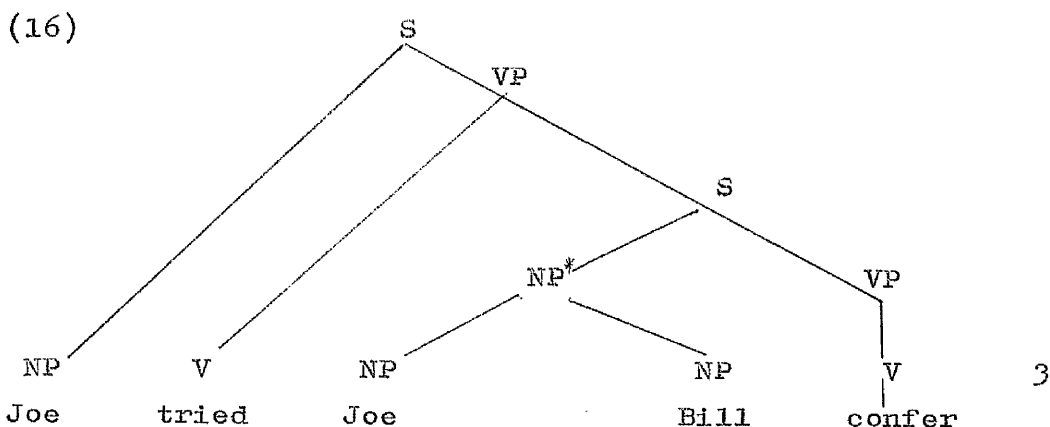
Accordingly they postulated deletion of a reciprocal pronoun. Gleitman established a special category of verbs permitting this deletion. The examples given in the published version of her work are all inherently reciprocal.²

Lakoff and Peters (1970, henceforth L-P) suggested that inherently reciprocal verbs are in fact intransitive verbs requiring a conjoined subject (symbolized NP*), so that (13) would be closer to the underlying structure; they derive (12) by a transformation which they call the Conjoint Movement Transformation. Hence there would be no deletion of each other.

Perlmutter has argued that this analysis would be counter-evidence against the like-subject constraint for verbs like try, intend and condescend. The deep structure of

(15) Joe tried to confer with Bill

would have to be



Perlmutter rejected the L-P theory for a number of other reasons, one of which is semantic and the rest syntactic. Among the syntactic objections the most compelling is, I think, that resemble would have to be an "absolute exception" since it is not possible to say John and Bill resembled.

The semantic objection is this:

- (17) a. John agreed with Bill
b. Bill agreed with John

and

- c. John and Bill agreed

are not synonymous. The surface subject, according to Perlmutter, is the agent who does the agreeing; it must therefore be the deep subject too. This observation applies with particular force to agree, which, as I shall argue later, is not an inherently reciprocal verb. If one substitutes confer for agree in the above sentences the difference in meaning is smaller; but it is still greater than the difference between an active and a corresponding passive sentence and cannot, therefore, be accounted for by invoking topicalisation.

The difference is intensified in sentences which contain a manner adverb. As a preliminary to the discussion I shall draw a distinction between two types of manner adverb. The first refers to the nature of the process involved; e.g.

- (18) a. John ate the cherries greedily

which transforms into

- b. John's eating of the cherries was greedy.

The second refers to the nature of the subject in performing

the action, e.g.

(19) John greedily ate all the cherries,

which, in its most obvious reading, corresponds to "it was greedy of John to eat all the cherries"; this type occurs only with agentive verbs. Both kinds can occur with symmetrical verbs, but with this difference: the first has a rather restricted range and if ^{it is} used in one sentence its presence in the converse sentence is also entailed

(20) a. John met Mary accidentally

normally entails

b. Mary met John accidentally.

The second type can apply to one of the participants only.

(21) a. John met Mary reluctantly

does not entail

b. Mary met John reluctantly

and cannot therefore be derived from the conjoint subject sentence. We are thus faced with a problem very similar to that which we encountered over the like subject constraint. Essentially the problem consists in the fact that the verb in John met Mary stands in a different relationship to the two participants, i.e. it is transitive, though a special kind transitive.

Another problem for the L-P hypothesis is that it would involve two lexical entries for kiss in

(22) a. John and Mary kissed

b. John kissed Mary,

since (22 b) does not entail

c. Mary kissed John

and cannot, therefore be derived from (22 a).

Accordingly I shall not adopt the L-P theory but shall return to the sentence reduction solution for sentences with a conjoint subject and assume that there is pronoun ellipsis.⁴ I shall now consider the conditions to which this ellipsis is subject.

Ellipsis can occur for all inherently reciprocal verbs except resemble and for at least three verbs that are not inherently reciprocal, viz. kiss, embrace and talk (to). In an earlier stage of the language see and love could also be used without the pronoun.⁵ Talk (to) has the further property that its prepositional object need not be specified:

(23) John and Mary talked

is ambiguous between a reciprocal and a non-reciprocal reading.⁶

For inherently reciprocal verbs the two conjoined sentences necessarily have the same time reference. With some potentially reciprocal verbs the time reference need not be the same, e.g.

(24) The two cats licked each other by turns.⁷

Hudson (1970) has pointed out that in the pair

(25) a. John and Mary kissed

b. John and Mary Kissed each other

(25 a) implies simultaneous kissing whilst (25 b) does not. This observation might be incorporated in the grammar by a

rule specifying that the Auxiliary element in the two sentences must be identical.⁸

A further condition should probably be added to the effect that deletion of each other blocks if the two conjoined sentences contain different adverbials. Hudson (1970) also remarks that

(26) John and Mary talked in English and French
respectively

cannot mean that they talked to each other. But it is, I think, possible to say

(27) John and Mary talked to each other in English
and French respectively.

Similarly with an inherently reciprocal verb:

(28) John and Mary corresponded with each other in
English and French respectively.

The verbs resemble, equal and parallel, which denote purely relational predicates, do not permit ellipsis of the reciprocal pronoun but there are corresponding adjectival expressions (with similar, equal and parallel) which can be used without the pronoun.

Agree is not, I think, inherently reciprocal when the subject is human.

(29) John agrees with Bill

means "John holds the same opinion as Bill" and presupposes that John knows Bill's opinion; it does not presuppose that Bill knows John's opinion. It is entirely acceptable to say

(30) John agrees with the correspondent in the
'Times' who said that ...,

a sentence to which there is no corresponding conjoint
subject sentence. There seems to be a restriction, however,
that the person agreed with should be a contemporary of
the subject; (31) is slightly anomalous:

(31) John agrees with Karl Marx that ...

We have seen that the logical property of symmetry
does not fully correlate with the deletability of the
reciprocal pronoun. It does, however, correlate negatively
with another transformation; inherently reflexive verbs do
not normally passivize.⁹ Hence this property must be marked in
the lexicon. Another, though less important, reason for
marking it is that it is anomalous to say

(32) John met Mary but Mary did not meet John.

A sentence containing an inherently reflexive verb entails
a second sentence which is a perfect mirror image of it
except for certain adverbials (which probably derive from
a higher sentence). It is also odd, though not ungrammatical,
to say

(33) a. John wants Mary to marry him
b. I don't intend Bill to meet us.

Since the embedded sentences have mirror images whose
subjects are identical to those of the matrix sentence, it
is more natural for the mirror image sentence to be chosen.

CHAPTER 6

CONCLUSION

In this chapter I shall consider how the phenomena described in Chapters 2-5 are to be handled by a grammar.

As stated in Chapter 1 TG grammarians have dealt mainly with unspecified complements (in fact, unspecified objects) and have accounted for these by a deletion transformation. The reason for this procedure was that it permitted an absolute classification of verbs into transitive and intransitive and that, it was claimed, such a division was justified on syntactic grounds, inasmuch as intransitives can form pre-nominal gerundive modifiers in -ing whilst transitives with unspecified objects cannot.

The claim that all intransitives can form pre-nominal modifiers in -ing does not, however, stand up to close scrutiny. Most intransitives can do so but the exceptions are too numerous to be brushed aside. I think it would be difficult to find contexts in contemporary English for the following:¹

- | | |
|----------------------------|----------------------------------|
| (1) (the) working students | (the) dissolving sugar |
| (the) dining guests | a/the splitting party |
| a/the praying congregation | a/the marching army |
| a/the sinning woman | a/the swimming boy. ² |

This is a difficult area of grammar because prenominal modifiers in -ing do not form a homogeneous phenomenon. It is necessary to distinguish at least three parameters:

a) Is the expression definite or indefinite? Thus a growing child but hardly the growing child. b) If indefinite, is it specific or generic? A crawling baby is, I think possible only in a generic interpretation. c) If the expression is definite, is the modifier restrictive or non-restrictive? The laughing boys permits a non-restrictive interpretation only but the dying man can be restrictive or non-restrictive. Moreover there are many stereotyped expressions which are not, I think, subject to any rules at all, e.g. a working woman (generic) for a woman who works outside the home and a working man for a man who does manual work. Thus also paying guests but hardly paying patients. One must also take a stylistic factor into account; expressions with non-restrictive modifiers are characteristic of certain types of literary English. Finally, it should be pointed out that many transitive verbs occur as prenominal modifiers in -ing when their objects can be contextually understood, e.g. a compensating factor, the corresponding word, his opening remarks. The one generalization that can, I think, be made is that such modifiers tend to be formed by non-agentive verbs; but, significantly enough, some of the exceptions to this generalization are verbs that can, in fact, take objects, e.g. the singing boys, an attacking army.³

If this argument for a rigid classification of verbs into transitive and intransitive falls away the case for handling the use of normally or potentially transitive verbs without specified objects by a deletion transformation needs to be examined afresh. We have already seen that the postulated

dummy node lacks certain features present in the indefinite pronoun something and cannot therefore correspond to this pronoun or any other formative. We have also seen that the absence of unspecified objects is not a unique phenomenon but is paralleled by the absence of other unspecified complements, in particular directionals with verbs of motion (cf. 2.1.1.3). Hence we would have to postulate a deletion transformation for such cases too.

It might be argued that such complement nodes are necessary to take care of selection restrictions.⁴ The head noun of the object of eat must have a feature $\langle \text{solid food} \rangle$ and this feature figures in the interpretation of John is eating. But this argument would apply not only to object nouns and other verbal complements but to constituents which, by the criteria discussed in 1.1, have much less ^{cohesion} ~~coherence~~ with the verb and belong outside the verb phrase. Thus cut can occur with an instrumental phrase whose head noun has the feature $\langle \text{sharp} \rangle$. If selection restrictions are crucial for a deleted object with eat we would also have to postulate a deleted instrumental node for John cut the string. The same objection applies to the argument that John is eating can be countered with what is he eating. It can equally well be countered with where is he eating or with whom is he eating. Thus the arguments from selection restrictions or from the potential for questioning would necessitate the generation of a large number of dummy nodes.

This is not to deny that the direct object occupies a special place among the verbal complements and post-verbal

constituents of the sentence by virtue of its closeness to the verb. It tends to be unmarked morphologically, being identified by position only, and in many languages it imposes concord on the verb. But this does not, I think, justify a rigid division of verbs into transitives and intransitives and special treatment of unspecified direct objects.

The only syntactic support for such a rigid division that I have been able to find comes from some Amerindian languages. According to Whorf (1946, pp.172, 384) Hopi requires 'indefinite' (i.e. unspecified) objects to be marked explicitly by a pronoun; and in Aztec object prefixes are obligatory with all transitive verbs, unspecified objects being marked by an 'indefinite' prefix. It would be worth while to examine this evidence more fully and to collect data from more languages.⁵

In the absence of strong support from comparative studies for an absolute division of verbs into transitive and intransitive as a language universal I conclude that the case for such a division is not proved; and I consider it to be cumbersome and unnecessary to generate nodes which have no syntactic justification for English and which play no part in the projection rules of the semantic component. Moreover, even with a deletion transformation the lexicon still has to carry the burden not only of marking verbs which permit this transformation but of indicating in what circumstances it is possible.

The alternative is to transfer responsibility for this part of the grammar entirely to the lexical component. Some

verbs would be subcategorized for obligatory complements, others for optional complements, e.g.

- (2) make: V / — NP
eat: V / — (NP) or / — $\left\{ \begin{array}{l} \text{NP} \\ \# \end{array} \right\}$

Such an entry would correspond to the practice of those lexicographers who label uses without specified objects 'intransitive'; and it would show up the essential similarity of the two verb phrases in a sentence such as

- (3) This baby sleeps whenever he is not eating.

It is surely counter-intuitive to regard the second as more complex than the first.⁶ It should be pointed out that this notation implies that the expression 'omission of unspecified complement' which I have used hitherto is, strictly speaking, inaccurate.

Other examples of lexical entries would be

- (4) come: /— to + NP (from + NP)
go: /— from + NP (to + NP)
walk: /— (to + NP) (from + NP)
carry: /— NP (to + NP) (from + NP)
put: /— NP + in (on, under, etc.) + NP
pay: /— (NP) (to + NP) (for + NP)
dream: /— (NP - S)

For verbs taking factitive objects it might indeed be argued that the intransitive use is primary and that the transitive use arises through an additional feature, i.e.

(5) knit:
$$\begin{array}{c} v / \text{---} \# \\ \left[\begin{array}{c} \vdots \\ \vdots \end{array} \right] \\ v / \text{---} \text{ NP} \end{array}$$

/produce by
knitting/

Such^a notation would have to be supplemented by general conventions governing the occurrence of optional contextual features.

A. We have seen that there is a high correlation between the feature /activity/ on verbs and their potential for occurring without complements. There would be a general convention to the effect that in the presence of this feature complements marked as optional need not occur. This would have the advantage of bringing out the parallel between verbs like eat and read and intransitive verbs like sleep and work. It would apply not only to direct objects but to directional complements of walk, swim, etc. In 2:1.1 I treated the feature /activity/ as an absolute property of verbs but subject to neutralization in perfect aspect and in VPs that have the feature /completive/. Alternatively, one might regard it as a latent feature which can be activated in certain circumstances.⁷

B. Verbs like see and spell (cf. 2:1.3.1.) could be assigned a latent feature /faculty/ which is activated by the modal can or by adjectives like easy, possible, etc. The complements of these verbs would be optional only if this feature is present.

C. With many verbs complements are optional only in habitual uses, e.g. the direct objects of steal and bite, many indirect objects and prepositional objects. One could either handle these by a latent feature [characteristic] or there might be a general convention that unless other features were present verbs marked as taking optional complements could occur without these only when the VP node (or Aux) has the feature [habitual]. Such a convention would also help to explain the frequent occurrence of ungrammatical uses of verbs without specified complements in habitual sentences.

With some verbs the lexical entry would have to be more complicated because uses without complements narrow the normal range of the verb, e.g.

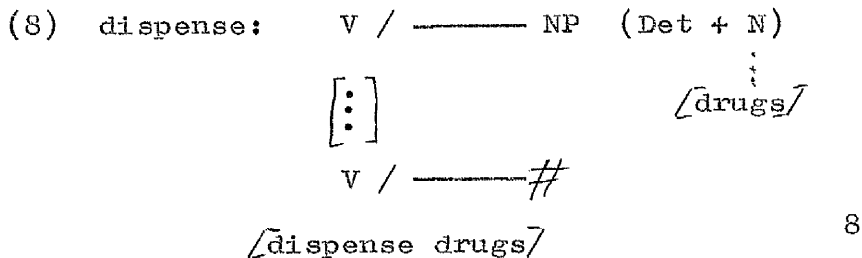
- (6) wash — wash clothes (2.1.1.1)
- ?register — register students (2.1.3.4)
- climb — climb mountains
- ?give — give money (2.1.3.7)
- ?lose — lose money (2.1.3.7)

Such verbs would have to be entered as taking obligatory complements, with a sub-entry for uses without complements.

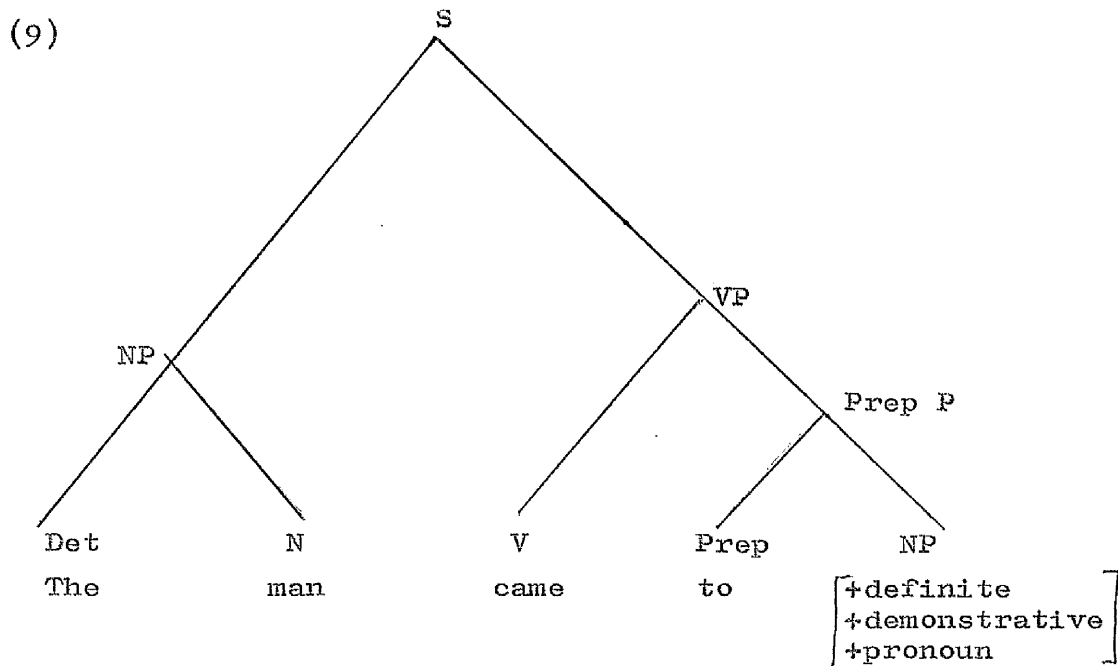
Thus the entry for wash would be

- (7) V / — NP (Det + N) (the brackets indicate expansion of NP)
- [:] [solid object?]
- V / — #
- [wash clothes activity]

Thus also for verbs with very specialized complements, e.g.



The absence of contextually specified complements is an entirely different matter and one that has hardly been dealt with in TG studies. Such complements have to be assigned features, in particular [+definite] and, usually, [+demonstrative], and these can only be attached to an NP node. If the phrase_{structure} rules are to generate all the constituents that figure in the interpretation of a sentence, i.e. in the input to the semantic component, then such complements must be represented by NP nodes in the terminal string of a deep structure derivation. Hence the PS marker for the man came would be

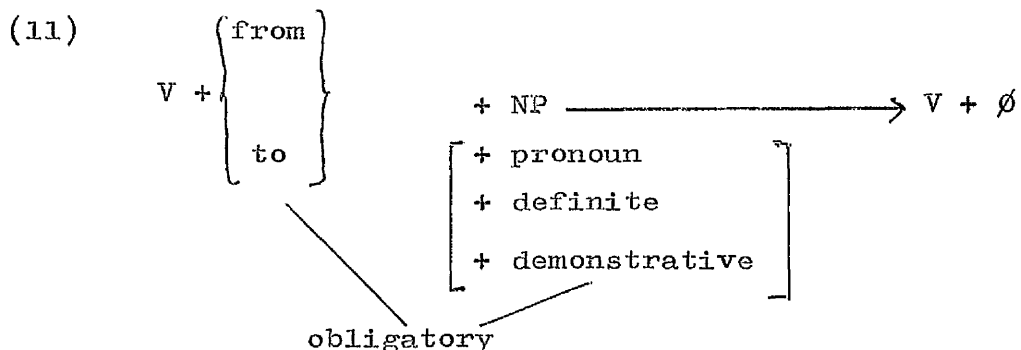


The second NP node is not replaced by a pronominal formative during lexical insertion and the Prep P node is subsequently deleted. But the features of this node are part of the input into the semantic component. It should be noted that zero realization of pronominal NP nodes is not confined to verbal complements but occurs in other contexts: in many languages pronominal subject NPs have no overt realization, and in English this phenomenon is illustrated in comparative sentences like John is taller.

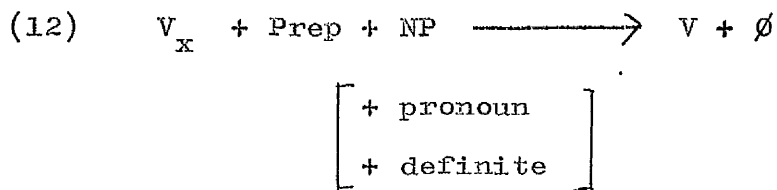
The conditions for zero realization of pronominal NP nodes must again be stated in the grammar. Insofar as they are idiosyncratic (i.e. a matter of idiom) they belong to the lexicon. Thus the entry for visit might have a rider: "permits zero realization of $\langle \bar{+} \text{definite}, +\text{pronoun} \rangle$ object." The rider for open would have to include the additional information that an object realized by zero is interpreted as referring to an establishment and incorporates a possessive (cf. 3.1). The lexicon is also the place for omitted reflexive complements (cf. 5.1). The entry for dress could have a rider "permits zero realization of reflexive object"; alternatively we could use the formulation

(10) dress: V / ——— NP
 $\langle \bar{+} \rangle$ $\langle \bar{+} \rangle$
 V / ———#
 $\langle \bar{\text{dress self}} \rangle$

But wherever possible the rules for zero realization of pronominal NP nodes should be stated more generally, e.g.

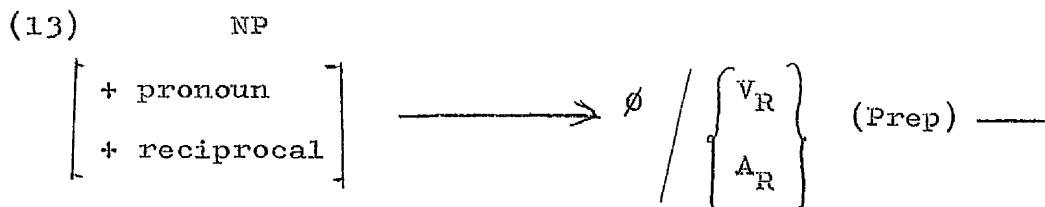


(11) would formalize the fact that directional complements which figure as obligatory contextual features with come, go, etc. can undergo ellipsis. Similarly



where V_x stands for the class of verbs that take prepositional complements with abstract head nouns (cf. 3.5). Since the majority of verbs belonging to this class permit such complements to be deleted it would be simplest to have a general rule like (12) and to mark the exceptions (like adhere to) in the lexicon.

For zero realization of reciprocal pronouns there might be a rule



where V_R consists of verbs marked as inherently reciprocal (as well as of talk, kiss, embrace, etc.) and A_R of reciprocal adjectives.⁹

As regards the principles governing zero realization of the sentential complements of know, remember, etc. there is a twofold problem. First these principles depend on the notion of implication and are therefore more difficult to formalize. As a first approximation I would suggest something like

- (14) Pronominal complements of KNOW verbs may have zero realization in any sentence which contradicts or modifies the discourse implication holding between two speakers concerning what is known or not known.

The second problem is, of course, that since these principles apply to supra-sentential units they cannot be included in a grammar which confines itself to the sentence. TG grammarians have dealt with pronouns in two ways: those that stand for NPs occurring in the same sentence are introduced transformationally; those that stand for NPs in the preceding discourse (or for objects in the extra-linguistic setting) are introduced in the base. The most explicit defence of this position is due to Postal (1966). Referring to the traditional notion of "stand for" in its sentence internal meaning he writes:

I would argue that there is really no other meaning. The idea that a form like she in sentences such as she dances well is a "replacement" or "substitute" for some other noun, say in "discourse contexts" or the like, seems to me completely without basis. Such an assumption explains nothing for the quite simple

reason that there is nothing to explain. It is quite sufficient to indicate precisely that such forms refer to object-types whose particular referents are assumed by the speaker to be known to the person spoken to. (note 3)

There have been some protests against this uncompromising position, notably from Heidolph (1966), who argues that restriction of the grammar to individual sentences cannot account for linguistic phenomena like the order of constituents in surface structure, anaphora, articles and stress and intonation. Heidolph considers that it is technically possible, with such a restriction, to generate all the sentences of a language but that it is not possible completely to account for the competence of native speakers. I doubt, however, whether it is possible to generate (15 a) without at the same time generating (15 b):

(15) a. (It's your wife's birthday today.)

Don't you remember?

b. *It's his wife's birthday but he doesn't remember.

The only alternative to incorporating at least some rules of discourse into the grammar is to relegate the phenomena illustrated by (15 a) to 'performance' or a 'theory of language use'; but such a theory would have to contain rules that are analogous to the rules of generative grammar since these alone could not express a native speaker's total knowledge of his language.

This study has been concerned with grammatical phenomena which until now have been considered purely idiosyncratic. Chomsky (1965 p.192) refers to "topics that, so far, resist systematic and revealing grammatical description" and goes on to discuss the possibility of there being a "fringe of marginal cases, to be expected in a system as complex as natural language, where significant systematization is just not possible." Some of my exposition (particularly 2.1.3, 3.1 and 3.3.) has indeed been in the nature of "mere taxonomic arrangement of data" (ibid.) which are recalcitrant to systematization. But I have tried to demonstrate that there are also considerable regularities in this area of grammar which lend themselves to systematic description.

APPENDIX A

THE PASSIVE TRANSFORMATION AND THE
OMISSION OF THE 'AGENT'

In the model I have adopted the NP that appears as the subject of an active sentence is not regarded as a verbal complement. But since this NP often disappears in passive sentences and since I have been concerned with the conditions under which normally obligatory elements can be omitted, a discussion of agentless passive sentences is relevant to this investigation. ¹

In the standard formulation of the passive transformation

$$(1) \text{ NP}_1 + \text{Aux} + \text{V} + \text{NP}_2 = \text{NP}_2 + \text{Aux} + \text{be} + \text{En} + \text{V} + \text{VP}_1$$

the subject NP node must be transported to the end of the sentence; if the dummy symbol Δ of the subject NP has not been replaced during lexical insertion it is deleted (together with the preposition by) by a subsequent transformation. This procedure has the advantage of making the passive transformation uniform but gains this advantage through the dubious device of shifting an empty node.

Lyons (in Lyons and Wales, Eds.1966) has criticized it in the following terms:

As long as we confine our attention to English it might seem reasonable to derive sentences such as John was killed by deletion of an agentive 'node' and to say (although this is surely counter-intuitive)

that John was killed is syntactically more complex than John was killed by Bill. It is, however, a commonplace of traditional syntactic theory that the principal function of the passive in all languages (and in some languages its only function) is to make possible the construction of 'agentless' or 'impersonal' sentences. It is possible, therefore, and indeed it seems to me very probable, that, when fuller transformational grammars have been written for a wider range of languages, even the English passive might be treated in such a way that John was killed by Bill is shown to be syntactically more complex than John was killed. In any case the relationship between the active and the passive in English is far less straightforward than current transformational work suggests. (pp.130 ff.)

One possibility that is sometimes mooted is to abandon the idea that passive sentences are derived transformationally. In that case there would be no need to postulate a deletion transformation at all. But the semantic equivalence of active and passive sentences would have to be left entirely to the semantic component. Moreover, there is independent justification for treating unspecified agent phrases differently from unspecified complements. In an infinitive phrase like it is wrong to kill the verb kill appears without overt subject or object, both being understood generically. But the omitted subject can manifest itself syntactically, i.e. it can reflexivize, to produce it is wrong to kill oneself; unspecified objects have no syntactic consequences.

Another possibility would be to amend the standard formulation by changing the order of transformations. If NP₁ in the structural index consists of an empty node it is deleted first; only if it has undergone lexical insertion is it moved to the end of the sentence.² In the first case the passive transformation is obligatory, in the second case it is optional. (The device of making it dependent on the passive marker "manner adverb" seems to me entirely arbitrary.) But I think that such a formulation would still miss an important generalization, viz. that normally the passive is in fact conditional on the potential omission of the agent.

The constraints on the English passive can be divided into those that apply to particular grammatical structures and those that apply to certain classes of verbs. The first group includes the following cases:

(i) Infinitive clause as complement (cf. 4.1.2):

- (2) a. John refused to come
- b. *To come was refused by John.

In (2 a) the subject of the infinitive clause has been deleted under identity with that of the matrix clause. Hence if the agent phrase were omitted in (2 b) the deleted subject of the infinitive could not be recovered.³

(ii) Gerund clause as complement

- (3) a. John remembered posting the letter
- b. *Posting the letter was remembered by John
- (4) a. John remembered my posting the letter
- b. My posting the letter was remembered by John.

(3 b) is blocked for the same reason as (2 b). (4 b) is grammatical since the subject of the infinitive has not been deleted. Consider also

- (5) a. *Fighting was started at 6a.m.
- b. The fighting was started at 6a.m.

In (5 a) the complement of start is sentential and its subject has therefore been deleted under identity with an irrecoverable NP. In (5 b) the subject of start is a nominalization which is not bound by the rules of Equi-NP deletion.

(iii) Reflexive and reciprocal sentences:

- (6) *John was killed by himself
- (7) *John and Bill were killed by each other.

If the agent were omitted in these sentences there would be no means of marking identity of reference with the subject to ensure the correct interpretation. The normal interpretation of John was killed excludes the reading that the killing was done by John.⁴

(iv) Pronominalization:

- (8) a. *His_i hat was lost by John_i
- b. *John's_i hat was lost by him_i.

These sentences are blocked for the same reason as (6) and (7); in the absence of the agent from (8 a) there would be no means of identifying the reference of his, and in (8 b) the correct interpretation would be impossible. Compare also

- (9) a. *The accusations against his_i wife were not
 accepted by John_i
- b. The accusations against his_i wife were new to John_i.⁵

(v) Interrogative infinitive clauses:

- (10) a. John told me where to go
b. John asked me where to go
c. I was told by John where to go
d. *I was asked by John where to go.

In (10 a) the subject of the deleted infinitive is I, in (10 b) it is John (cf. Appendix B). Hence in (10 d) the subject of the infinitive would be irrecoverable if the agent phrase were removed.

Next I shall consider lexical constraints on the passive, i.e. verbs that do not passivize:

- (11) meet, marry; cost, weigh; fit, suit;
possess; contain.

Meet and marry are inherently reciprocal and a sentence containing such verbs, as we saw in 5.2, entails a mirror image sentence with subject and object reversed. Hence it is not possible for one of the participants to the process to be left unspecified.⁶ The rest of the verbs are all stative and denote relations rather than events; it is self-evident, therefore, that the subjects of such verbs cannot be left unspecified.

In this connection it is noteworthy that the verbs which form an exception to the general rule that the agent phrase of passive sentences is never obligatory are all stative verbs. Consider

- (12) a. The dog is owned by John ⁷
b. The lecture will be followed by a discussion

- c. p is entailed by q
- d. Influenza is caused by a virus
- e. The government's policy was influenced by
the impending election.

These sentences become ungrammatical if the agent phrase is removed. In some cases the agent does not have to be present but is contextually specified, e.g.

(13) John was affected more than Bill.

Even with stative verbs like know, think, etc., which usually occur in passive sentences without overt agent, the omitted agent is not completely unspecified, e.g.

(14) It is known / thought that he has left the country.

This can hardly mean "it is known by (to?) some unspecified person ..." One peculiarity of such passives is that the omitted agent is understood to be plural and is often expressed obliquely by an adverbial phrase:

- (15) a. It is generally known that ...
- b. It was believed in ancient times that

Thus also

- (16) a. He was loved by everybody who knew him
but hardly ...
- b. He was loved by Mary.

Hence it appears that passivization is not the same process with stative verbs as with other verbs.

Note also that many of the stative verbs discussed — both those that do not passivize and those that passivize only with specified agents — have non-animate subjects. The

deleted agent with non-stative verbs is nearly always human. The only exceptions are certain passive sentences for which there is no corresponding active sentence precisely because the agent cannot be understood as human:

- (17) a. John was killed in a car crash
- b. We know nothing of the cerebral patterns
 or how they are established.⁸

I shall now return to the question of how ~~the~~ agentless passive sentences might be handled in a grammar. I shall take as my starting point a revised version of the passive transformation suggested on independent grounds by Hasegawa (1968). In this version the element be + En that appears in an English passive sentence is generated in the base and regarded as taking a sentential complement; the underlying structure of passive sentences thus becomes part of a general pattern of sentences containing sentential complements. The Phrase Structure rules would generate the string

$$(18) NP_1 + Aux + be + En \# NP_2 + Aux + V + NP_1 + by + D \#$$

By the first transformation, $T_{Agentive}$, NP_2 is substituted for the dummy symbol D to yield

$$(19) NP_1 + Aux + be + En \# Aux + V + NP_1 + by + NP_2 \#$$

Next by $T_{verbal\ complement}$ the complementizer En is substituted for Aux of the embedded sentence and ~~#~~ is deleted to yield

$$(20) NP_1 + Aux + be + En + V + NP_1 + by + NP_2$$

Finally by T_{erase} the second occurrence of NP_1 is deleted to yield the transform of the standard passive transformation, viz.

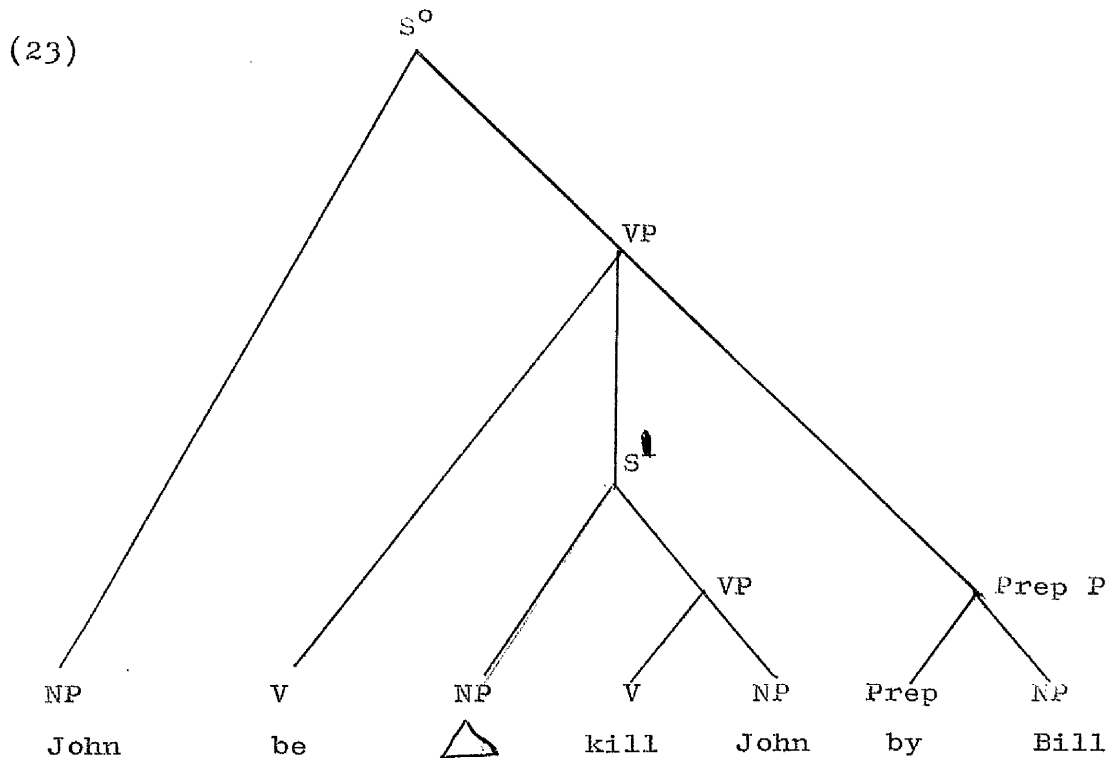
$$(21) NP_1 + Aux + be + En \overset{+V}{\wedge} + by + NP_2 \quad (\text{with the indices reversed})$$

For ordinary non-stative passives I suggest a modification of (18) as follows:

(22) $NP_1 + Aux + be + \underline{En} \# \Delta + Aux + V + NP_1 \# (by + NP_2)$

In this string the subject of the embedded sentence is a dummy symbol that is obligatorily deleted and the agent phrase — by + NP_2 — is an optional constituent in the matrix sentence. Thus we not only avoid having to move an empty node but ensure that only embedded sentences with unspecified subjects appear in the structural index of the normal passive transformation.⁹

A simplified phrase marker for John was killed by Bill would be



I have omitted the complementizer (En) as well as Aux from this tree.¹⁰ Aux presents a problem; tense and aspect seem

to belong to S^0 rather than S^1 but certain modals must, I think, derive from S^1 . Consider

(24) All tickets must be handed in at the door.

Here must denotes obligation rather than necessity and therefore has selection restrictions with a human subject. This problem needs further investigation.¹¹

The 'cost' in terms of general theory, of this modification of (18) would be that selection restrictions for the agent phrase (by + NP) are no longer automatic. There would have to be a general convention to the effect that only those nouns that can appear in the subject NP of a verb are permitted to appear in the environment / by + Det —.

For stative verbs like own, follow, etc. the structural index of the passive transformation would be (25)

(25) $NP_1 + Aux + be + En \# NP_2 + Aux + V + NP_1 \#$

i.e. the agent phrase would be an obligatorily specified constituent of the embedded sentence and would have to be moved by a transformation to the end of the sentence. I think (25) could also serve as the structural index for the passive of know, think, etc., but the specification would not consist of an actual lexical item but of a bundle of features and it would be either deleted or transformed to an adverbial phrase.

It has not, I think, been pointed out in the published literature that Hasegawa's formulation of the passive transformation would solve one knotty problem of semantic

interpretation. It is well known that in certain cases active and passive sentences are not synonymous:

- (26) a. Beavers build dams
b. Dams are built by beavers.

In (26 a) beavers is interpreted as toti-generic, dams as parti-generic; the reverse holds for (26 b). In the standard formulation of the passive transformation this discrepancy can only be dealt with by a second input to the semantic component (i.e. after the transformation has applied).¹² But in Hasegawa's formulation (as well as in my modification of it) the subject of a passive sentence is generated as such in the base. Hence there would be no need for a second input into the semantic component. Instead there would be a general convention that subject NPs are interpreted as toti-generic, all others as parti-generic.¹³ I suspect that in this way we would also avoid a second input into the semantic component for sentences with overt quantifiers, such as the notorious pair

- (27) a. Few people read many books
b. Many books are read by few people.

I have not gone into this problem fully enough to arrive at a definite conclusion. The advantage of the revised formulation over the standard one would be greatly enhanced if all passive sentences could be completely interpreted from the base component.¹⁴

APPENDIX B

EQUI-NP DELETION AND THE ORDERING OF COMPLEMENTS

Equi-NP deletion (or identity erasure) is the process by which the subject of a non-finite verb is removed under identity with another noun phrase in the sentence. Rosenbaum (1967, p.17) formulated the principle governing this process as follows:

An NP_j can be erased by the identity erasure transformation just in case there is some sentence S_α (a complement sentence) such that (1) NP_j is dominated by S_α ; (2) NP_i neither dominates nor is dominated by S_α , and (3) for any NP_k which neither dominates nor is dominated by S_α , the distance between NP_j and NP_k is greater than the distance between NP_j and NP_i (where the distance between the two nodes is defined in terms of the number of branches in the path connecting them.)

This principle (henceforth minimal distance principle) accounts correctly for most cases but it breaks down for two well-known examples. The first is illustrated by the second member of the following pair:

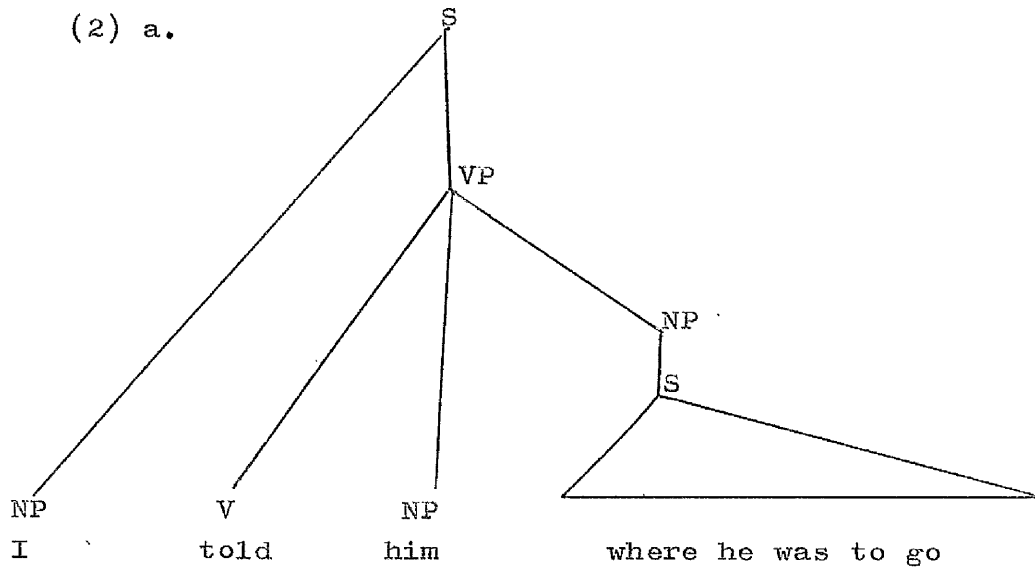
- (1) a. He told me where to go
b. He asked me where to go.

In (1 b) the subject of the infinitive is understood as identical to the subject of the matrix sentence. Since both

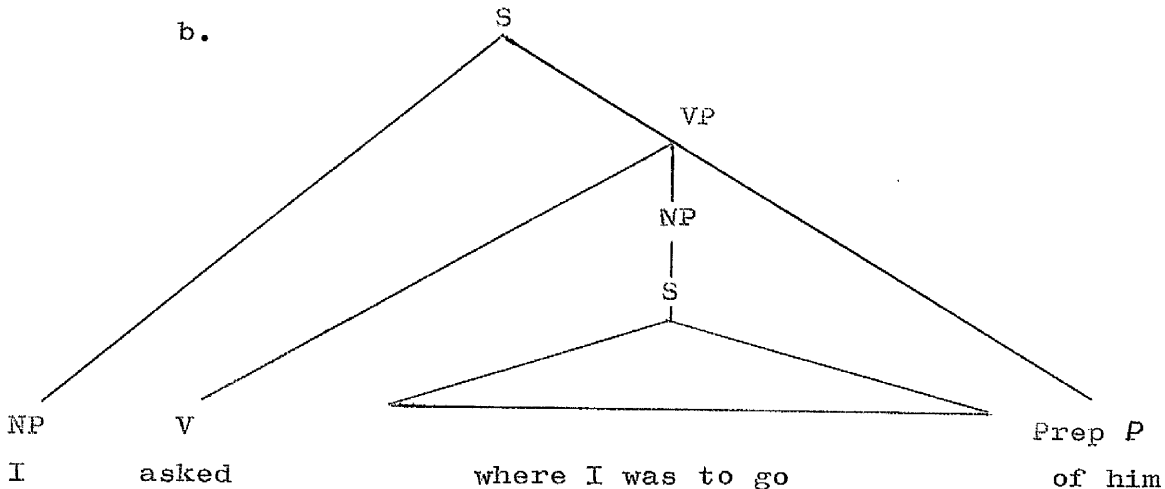
complements of ask are dominated by the VP node the subject of the embedded clause must be further removed from the subject of the matrix clause than it is from the human complement.

I suggest that the difference in interpretation between (1 a) and (1 b) can be explained if we go back to Rosenbaum's earlier formulation of the principle of Equi-NP deletion and if, furthermore, we postulate a difference in the ordering of the two complements of tell and ask in deep structure (cf. 4.1.1):

(2) a.



b.



Rosenbaum's earlier formulation of the principle of Equi-NP deletion (p.16) stated that deletion is possible "just in case the subject NP of the complement sentence is identical to the first NP to the left of the complement sentence in the main sentence" (henceforth left NP principle). This would give the right results for (1 a) and (1 b), assuming the underlying structures are those of (2 a) and (2 b).¹

Rosenbaum abandoned this earlier proposal because it did not account correctly for two types of sentences:

(3) I sold the boat (in order) to save money

(4) Can you expect it of him to do what is right always.

(4) seems to me very dubious and I shall not discuss it.

(3) constitutes a more serious objection. But consider

(5) a. I sent the children out to get some fresh air

b. I sent the children out to get some peace and
quiet.

The difference in most likely interpretation of these sentences could not be accounted for by the principle of minimal distance between nodes. A possible solution might be along the following lines. Notice that the embedded sentence in (5 a) cannot be fronted while that in (5 b) can:

(6) a. *To get some fresh air I sent out the children

b. To get some peace and quiet I sent out the
children.

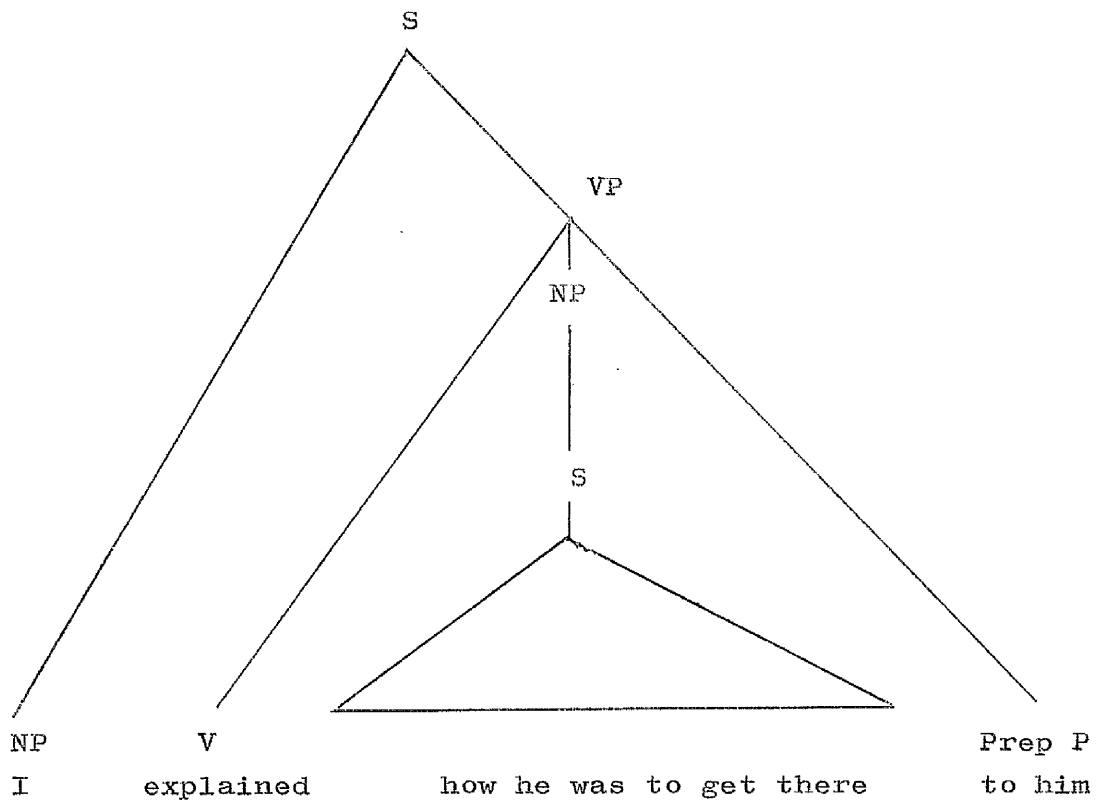
Moreover (5 b) but not (5 a) can have in order inserted before the infinitive. This suggests that the embedded clause in (5 a) is in the verb phrase, i.e. a verbal complement, while

that in (5 b) is outside it.² One could then limit the left NP principle so that it did not apply to embedded sentences outside the VP. In these the subject can only be deleted if it is identical to the subject of the matrix sentence.³

A possible counterexample to the principle adopted here might be the sentence

(7) I explained to him how to get there,

which would have the underlying structure



It seems to me however, that in such sentences the subject of the infinitive does not correspond exclusively to the human complement but can be interpreted generically, i.e.

"I explained to him how one could get there". Generic human NPs are not bound by the rules of Equi-NP deletion but can be dropped fairly freely (cf. 2.1.3.10). A sentence like

(8) I explained to him where to go,

where the subject of the infinitive cannot be understood generically, does not seem to me to be fully grammatical. A generic interpretation is also required for the deleted subject in

(9) He said not to wait for him,

which occurs in some dialects. Here the subject of the infinitive can only be inferred from the context (you? we?); compare the French idiom on va?

The above principle would also account, I think, for the second counterexample to the minimal distance principle:
~~deletion:~~

(10) I promised him to go.

Notice that the human complement of promise, unlike that of tell, order, persuade, etc. can readily be dropped:

(11) I promised to go.

This indicates that it comes second in deep structure since first complements cannot be dropped.⁴

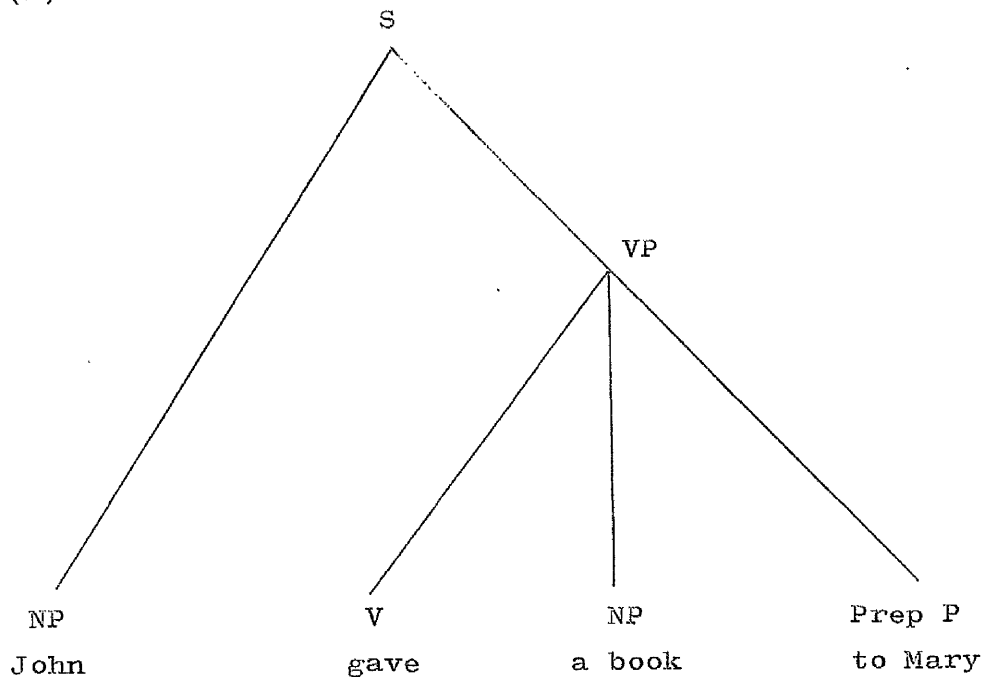
APPENDIX C

A PROPOSAL CONCERNING CONSTITUENT STRUCTURE

Most current theories of generative grammar permit multiple branching of constituent nodes in the phrase structure.

Thus in

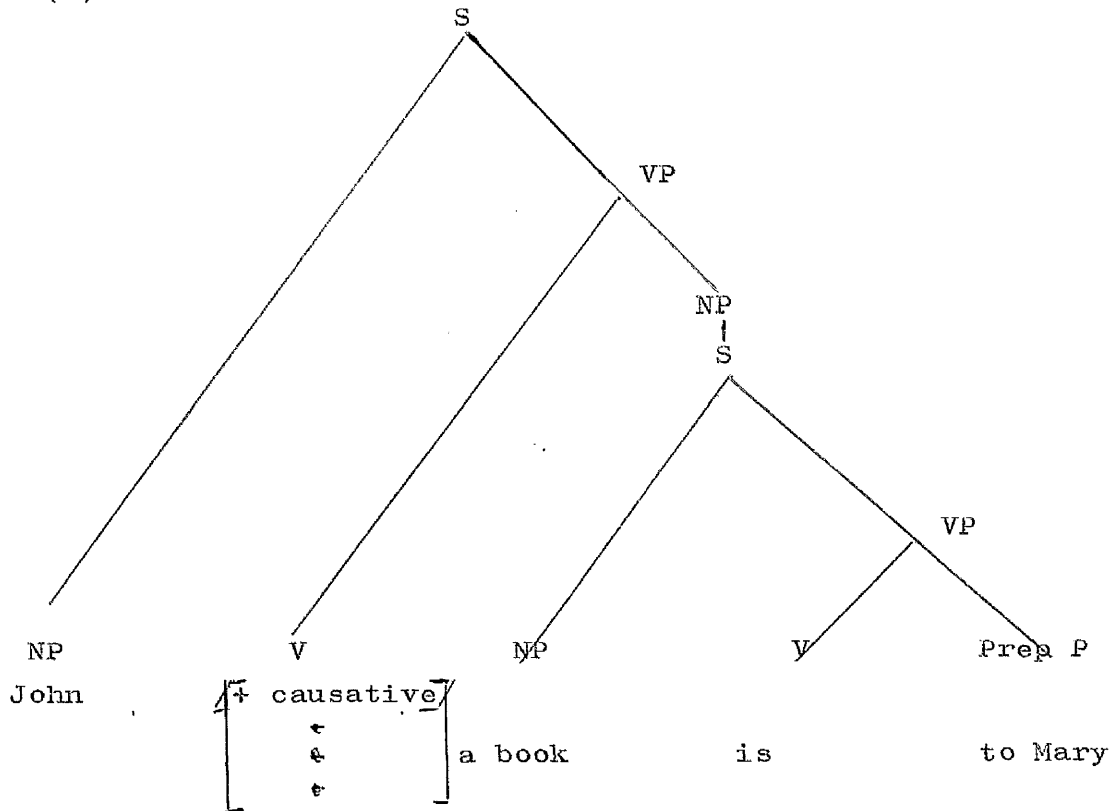
(1)



the VP node divides into three branches without any further structuring between them. But since this structure contains two transitive expressions, the verb and the preposition, it is difficult to envisage how the semantic component can assign an interpretation to it in one operation. For transitive expressions, as Weinreich pointed out, involve nesting of semantic features to produce ordered sets, (1966 p.424)¹

If we wish to modify the theory so that it permits only binary branching (other than for conjoined constituents) there are two alternatives. The first, which has recently been suggested by a number of scholars, follows the logician's principle of three-place predicate reduction.²

(2)

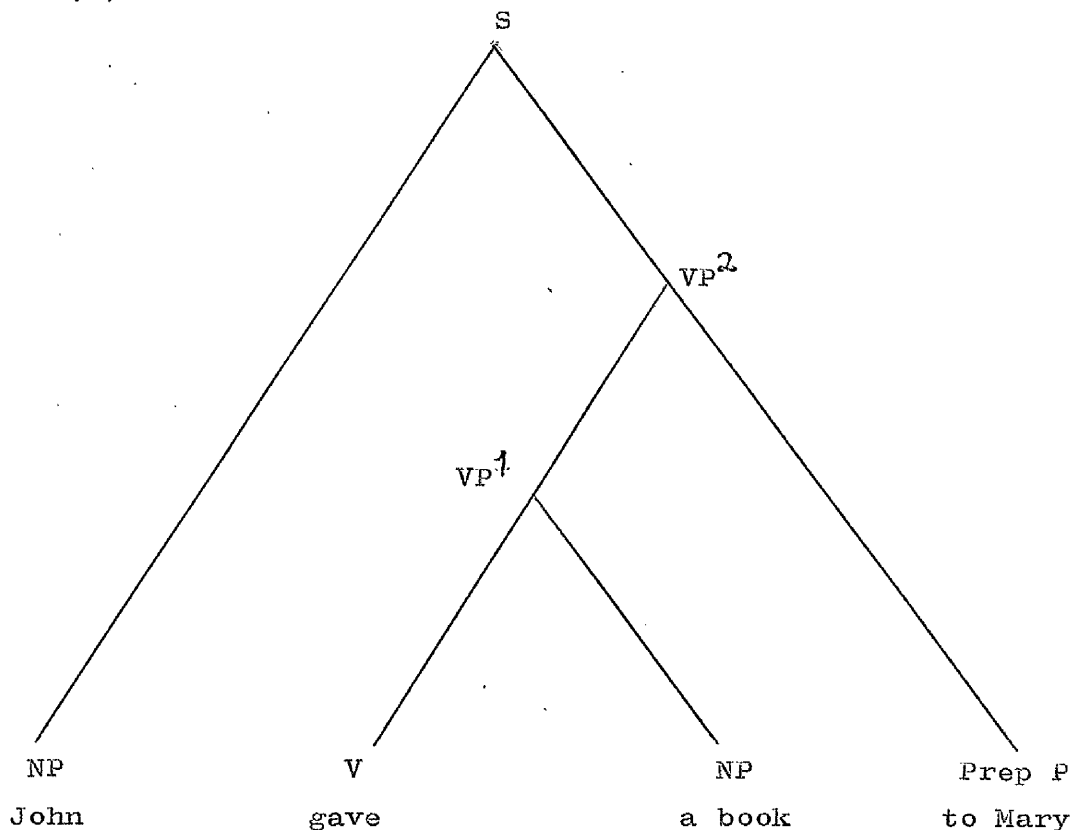


Hence the verb would act as a causative for an embedded possessive sentence; the question of the relative distance of the two complements from the verb (cf.1.1.4) would not arise. Lexical insertion of the verb would take place after the transformation that deletes the embedded S node. It has never been made clear, however, what the semantic specification under V would be. A feature $\langle \text{causative} \rangle$ would not be sufficient since the meaning of give in (1) includes the fact that the

book was in John's possession in the first place. Such difficulties multiply with verbs like lend, sell, etc. that are semantically more specified.³

The second alternative corresponds essentially to the analysis of indirect object constructions given by Jespersen (1927 p.279). In Chapter 1 I referred briefly to Jespersen's discussion of the terms 'direct' and 'indirect object', quoting his remark that the direct object is more essential to the sentence than the indirect object. The passage continues: "In they offered the man a reward it is possible to isolate the direct object ... but not the indirect object ... A reward is the object of offered but the man is the object of offered a reward." This analysis implies a tree like

(3)



in which verb-plus-direct object (VP^1) forms a constituent functioning as an intermediate node between VP^2 and the terminal nodes V and NP. (The indices are meant to indicate that VP^2 is a higher node than VP^1 .) It seems to me that there is semantic and syntactic evidence for such an analysis.

One test for constituent status is the possibility of conjunction. Thus the bracketing (S(VO)) rather than ((SV)O) is justified by the fact that (4) is more natural than (5):

(4) John washed the dishes and cleaned the kitchen

(5) John washed and Mary dried the dishes

For verbs taking indirect objects conjunction of verb and direct object as in (6) is more natural than conjunction ~~of~~^{of} verb and indirect object, as in (7):

(6) John lent a Goya and sold a Rubens to the National Gallery

(7) John lent the National Gallery and sold the Courtauld Institute some of his pictures.⁴

Another way of isolating constituents is by co-occurrence restrictions. Typically the restrictions for the verbs with which we are concerned are as follows: The direct object must be concrete, except for give, promise and offer, which permit certain abstract nouns, and tell, which only permits story and synonymous words. When the object is abstract there is a difference in the semantic interpretation of the verb. John gave Mary a book implies that prior to the event John had the book and subsequently he no longer had it. There is no such implication in John gave Mary the reasons for his

actions. The indirect object must be animate for give; for all the other verbs it must also be human. (Moreover it cannot be identical to the subject.) In cases where the direct object is abstract one might be justified in imposing certain restrictions on the indirect object to rule out nonsense like

(8) *He gave the dog a free pardon

(9) *He promised John an amnesty

(10) *He offered a job to the Government.

A third reason emerges from sentences like

(11) He sold every boy a book.

Here the distributive quantifier on the indirect object forces the interpretation that there were as many acts of giving and as many books as there were boys. Sentences with the quantifier on the direct object do not imply plurality of the indirect object:

(12) He sold every book he had to an American customer.

Finally, the existence of action nominalizations like the selling of alcohol to children indicates not only that the direct object is closer to the verb than the indirect object (cf. 1.1) but that verb and direct object function as one constituent.

The last two arguments can also apply to sentences in which the second complement is a directional. Consider

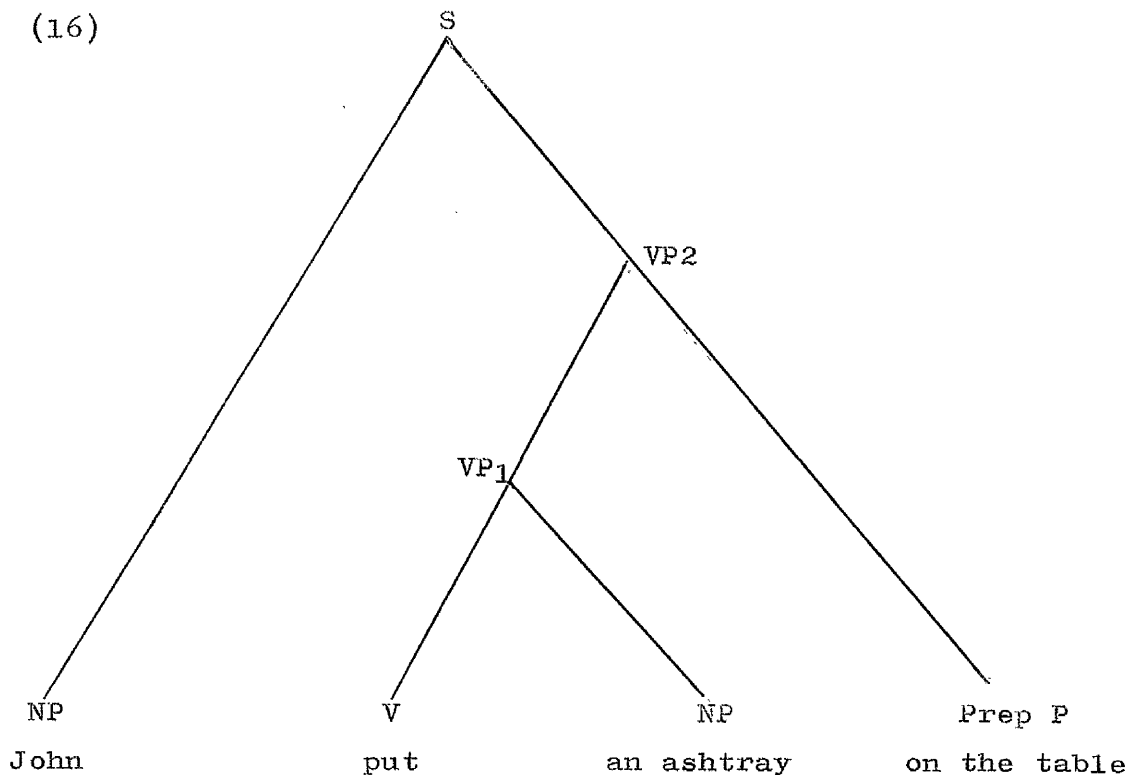
(13) I put an ashtray on every table

(14) I put every ashtray on one (?a) table

and

(15) The sending of bank-notes abroad is illegal.

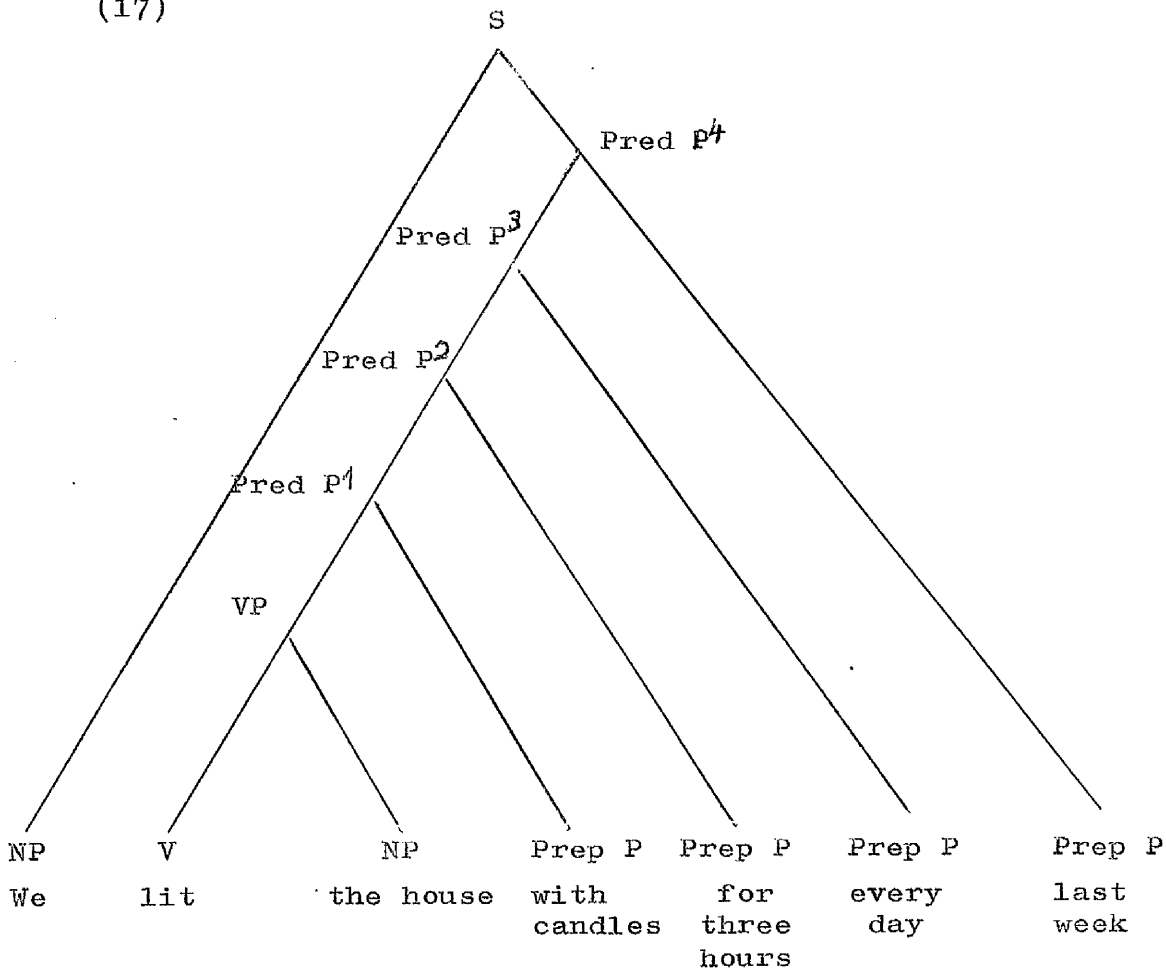
Accordingly such sentences would have the structure



Similarly with the various types of adverbial which are not verbal complements in the sense in which I have used this term. A viable theory of adverbials will involve their placement along a scale according to their degree of cohesion with the verb or with those features of aspect and tense which are usually ascribed to the Auxiliary element. Apart from word order, including shift to sentence-initial position, and conjunction possibilities the crucial criteria would be co-occurrence restrictions. It is likely that no two of these constituents will turn out to be subject to identical selection restrictions. Those which are selected solely by

the verb, e.g. instrumental and manner,⁵ are obviously closer to the verb than those whose co-occurrence is determined partly or wholly by aspect and tense, viz. the various temporal adverbials.⁶ Of these durational comes before frequency, frequency before 'time when'.⁷ Thus for a sentence with several adverbials I would suggest a structure like

(17)



Here Chomsky's distinction between Predicate Phrase and Verb Phrase has been kept, though the line has been drawn at a different point. Alternatively one might do away with this distinction, labelling both types of node with the same symbol and attaching labels or numbers to the various post-verbal constituents.

NOTES TO CHAPTER I

1. This statement needs to be modified for 'weather' verbs like rain; the so-called expletive pronoun which appears as the surface subject of these verbs can hardly be called an NP participant in the usual sense.

2. My use of the term 'complement' is similar to that of Chomsky (1965, p.102). In a number of recent works the term is restricted to sentential constituents of the verb Phrase, e.g. Lees (1963) Matthews (1967) Weinreich⁽¹⁹⁶⁶⁾ Rosenbaum (1967) uses the term to cover sentences embedded as subject.

3. Case grammars like those of Fillmore⁽¹⁹⁶⁸⁾ and Anderson^(1969a) do away with the primary cut of a sentence into NP ~~and~~ VP (and hence with the category of VP as distinct from V). Instead, the sentence pivots on a verb which chooses a number of NPs. The selection of the subject from among the NPs is determined by a rule-governed transformation. Similarly with the object. I have not adopted this model for two reasons; (1) The number and nature of the actual cases postulated seems to me highly problematic. (2) The functions of subject and object act as the point of departure for a number of transformations and therefore represent a definite 'level' in the grammar which is highly relevant to the problems with which I am concerned. I leave open the question whether this is the deepest level that is attainable by a grammar. Moreover, I shall consider the possibility that grammatical relations should

be indicated explicitly (i.e. labelled) rather than in purely categorial terms. (cf. Appendix C).

4. Tesnière (1959, pp. 105 ff, 127, 238 ff). The term 'valence' is used in a similar, though non-technical, and wider sense by Hockett (1958) = "It is as though the whole network of structural relationships between forms, overlapping sometimes into the non-speech context, constituted a complex intertwining of various kinds of valences, only one layer of which is immediately apparent to the analyst" (p.249). The relationship between a transitive verb and its object is one kind of valence, "a valence of the directive type (p.253).

5. The comparative ease with which benefactives shift to subject position is, I think, connected with the fact that they are semantically related to indirect objects. Thus (6 a) implies that "John has got a new job" and (6 b) that "I was to have some medicine". Halliday (1967, pp.53, 55, 61) has a number of examples where this implication does not hold: she washed John the clothes; I've reviewed that journal six books already; will you teach John his daughter French. These sentences do not seem grammatical to me.

6. Similar tables are given by Droescher (1969) to describe the application of Tesnière's concept of valence in some recent German work. This approach makes no claim to representing the deep structure of sentences.

7. Cf. note 9; also 2.3.1. on charge and sell.
8. Note also the American usage I wrote him.
9. Note also that Objects of measure tend to be questioned in how much or how long rather than what:

How much (what) does it cost?

How much (?what) do you weigh?

How much (*what) have you grown in the last year?

How long (*what) did the meeting last?

Moreover they cannot be relativized:

* I haven't got the money which this car costs

* I slept through the two hours which the meeting lasted.

I now think that there may be good arguments for not in fact treating these measure phrases as direct objects but rather as a distinct type of verbal complement. There would thus be five types instead of four.

Note also that one of the complements of pay is a measure phrase.

10. See Fillmore (1965, p.25) and (1968, p.35). Also Postal (1968, pp.114 and 126, note 1) and Ross (1967, p.59, note 10).
11. Lees's order permits

A car is given her by him.

Mine does not and I consider this sentence ungrammatical.

I believe that ^{for} verbs with indirect objects it is necessary to postulate two passive transformations.

The first applies to the underlying structure to yield

A car is given to her (by him).

The second applies after indirect object shift to yield

She is given a car (by him).

12. The order V+DO+IO is also borne out by an experiment conducted on Japanese children by McNeill et al. (forthcoming). In the conclusion to their paper they write: "If we think of the 21 sentences of the experiment as presenting the range of possible stimuli for these two responses (viz. the DO response and the IO response), and locate the actual Japanese sentences we used within this range, we find the sentences of Japanese are not the best stimuli for evoking the DO response and suppressing the IO one. The best stimulus to accomplish these effects for our Ss (combining all ages) has the verb first, the DO second and unmarked, and the IO last and marked. Such a sentence is, as it were, "a supernatural" stimulus, working better than anything nature (i.e. Japanese) provides for the control of the DO response young children seek marking of the IO but not of the DO for them the DO is the most prominent of the objects and the one most closely related to the verb..." In Japanese the verb comes at the end, both objects are morphologically marked and the order between them is free.

13. Jespersen (1927, p.332) calls verbs like burn, boil, etc., "double-faced" verbs. They have been much discussed by Halliday (1967/8) Fillmore (1968) and other exponents of case grammar (cf. note 3). Perhaps the relationship between the two uses could be established by a general convention governing the lexicon (cf. Chomsky 1970 p. 215). Such a convention, however, would have to take account not only of the selection restrictions on subject and object but also of certain other restrictions connected with temporal relations. For example: John had burnt all the rubbish by noon; I don't think there is a corresponding sentence all the rubbish had burn by noon. Transitive burn can be perfective, intransitive burn cannot (cf. chapter 2). Chomsky (loc. cit.) illustrates his discussion with the verb grow, pointing out the ambiguity of the growing of tomatoes (transitive and intransitive) and the non-ambiguity of the growth of tomatoes (intransitive only). This is, I think, a misleading example since one needs to distinguish two uses of intransitive grow : the first applies to animals and plants and means "become bigger"; the second applies to plants only and corresponds partially to live for animals. The first is nominalized by growth, the second by growing. Thus the growth of tomatoes depends on the amount of sunshine but I was surprised by the growing of tomatoes in the Hebrides. It is only the second use that is related to transitive (or causative) grow : *John grew the tomatoes two inches, John grew the tomatoes in a hothouse.

14. Cf. the categories V_x , and V_A and V_{i2} on the table given on p.pp. 22/3.
15. "The use of the dummy symbol \triangle has been extended here to the case of various unspecified elements that will be deleted by obligatory transformations. There is in fact good reason to require that only 'recoverable deletions' be permitted in the grammar." (p.222, note 1)
16. There has been considerable confusion on this point in recent discussion. To take just one example: McCawley has objected to Lees's distinction of transitive and intransitive verbs on the basis of the pre-nominal modifier transformation (1968, p.264). He gives only one counter-example: visiting relatives are a nuisance. In this sentence the object of visit would normally be supplied by the context; hence it would not, I think, come under Lees's object deletion transformation. (cf. 3.2)
17. "It has become apparent that the verb is the principle variable in sentences upon which the syntactic form of the sentence depends It will be by means of specifications in the lexicon that the syntax of particular verbs will be established. These specifications will indicate the environment for a verb in terms of the formatives generated in the prelexical structure. Syntactic constraints or environmental specifications will then merge with semantic reasons for the way in which the verb is used. Since the prelexical structure itself is what becomes semantically interpreted, environmental specifications of

lexical items in terms of these become indistinguishable from a specification of the meaning of the lexical item. We shall in fact assume that much of the meaning of the verb is specified in this way." (pp.3-4)

18. The notion of incorporation is first introduced on p.13. It is mainly used for prepositions and adverbs. On p.43 Gruber writes, rather surprisingly: "The relative infrequency of incorporation of nouns and adjectives is probably due to their being elements less regularly defined in the prelexical structure." On p.45/6 he poses the crucial question how the idiosyncratic features of a noun can be specified in the prelexical structure and suggests as a possible solution that they might be produced by a pass through the dictionary.

19. (1967) pp. 52, 49. Cf. also part 3 of the same article (1968), pp. 181-2. The paragraph ends: "The potential distinction, in other words, between verbs which are inherently goal-directed and verbs which are not, is less useful as a generalization than the actual distinction between clauses which contain a goal, or rather (an important difference) a feature of goal-directedness, and those which do not."

NOTES TO CHAPTER 2

1. I have included read with verbs taking abstract objects since one normally refers to the contents rather than the physical manifestation of a book when one speaks of "reading a book".
2. R. Fowler (1969) refers to these as 'semi-transitive'. Halliday calls the complements of these verbs 'range' rather than 'extensive'. Dance is more restricted in its possible objects than sing; thus, will you sing something for us but hardly will you dance something for us.
3. Cf. Fillmore, (1968) p.25; Jespersen, (1927) p.230.
4. Cf. A. Lehrer, (1969) especially p.41. She distinguishes three senses of cook, cook₁ (the least marked) which means 'prepare a meal', cook₂, which contrasts with bake₁ and means 'prepare foods other than cakes, etc.' and cook₃ 'apply heat to food'. I have treated the first two together. It seems to me not so much the fact that they are least marked that enables cook₂ and bake₁ to be used without specified objects as that they take factitive objects.
5. The grammar of teach presents a special problem. The abstract complement never has a preposition, the human one rarely (?he teaches English to engineers). The human complement differs from normal indirect objects in these respects: (1) I taught him, *I gave him (i.e. with (of verbs) give the direct object cannot be omitted) (2) the teaching

of undergraduates, *the lending of subscribers

(3) nominalizations such as 'infant-teacher'. Hence, in spite of the occasional occurrence of a preposition with the human complement, I prefer to regard it as the direct object and the abstract complement as a second direct object. Cf. Halliday (1967) pp. 58-61 and the entry under teach in the OED. Cf. also 4.1.1. on tell.

6. Weinreich (1966, p.453) uses a feature \langle activity \rangle but without further elucidation. He does say that it is a 'linking' feature (i.e. one that combines with the features of the subject to form a 'cluster) rather than a 'nesting' feature. This would also apply to the feature \langle activity \rangle which I am trying to formalize. Katz (1966, p.168) uses a semantic marker (Activity). He distinguishes three classes of verbs: 'state' verbs such as sleep, wait, suffer, believe, 'process' verbs such as grow, freeze, dress, die and 'activity' verbs such as chase, eat, speak, walk, remember (!) He does not explain on what grounds verbs are assigned to these classes and the classification seems entirely arbitrary.
7. There is a good deal of overlap in the literature between the terms 'agentive', 'active' and 'non-stative'. Thus Lyons (1968, p.325) contrasts verbs of 'state', distinguished by absence of progressive aspect, with verbs of 'action'. Cf. also Lakoff, (1966). I take 'agentive' to be a sub-division of \langle -stative \rangle verbs with human subjects.

8. Note also that verbs which do not take imperatives in English may have translation equivalents in other languages that do because they can incorporate an ingressive element. Thus the Hebrew yada' (know, realize, perceive) frequently occurs in the imperative in the Old Testament. In English a similar phenomenon is illustrated by the imperative of find with incorporation of look for: (I've lost the book.) Well, find it.
9. Lakoff (1968) points out that selection restrictions are generally the same for sentences with instrumental adverbs and with the verb use. He draws the conclusion that any sentence with an instrumental has a deleted verb like use in the deep structure. The suggestion here put forward is, on the contrary, that a feature of instrumentality is incorporated in use.
10. Cf. Garey, (1957). Garey's discussion of this phenomenon is the most thorough I have encountered. In particular he draws attention to the confusion that has been prevalent over 'perfective' verbs and 'perfective' tense; he uses the term 'lexical' aspect to refer to the former and accordingly distinguishes between 'atelic' and 'telic' verbs (or constructions). Since, however, in the case of transitive verbs the distinction depends on the object as well as the verb the attempt to apply these labels to verbs only is not really justified. Garey is fully aware of the need to take the object into consideration but his formulation of the distinction involved is rather

unsatisfactory: "If there is a direct object and if this object designates something that has a structure with a temporal ending to it — a game of chess ... or a Beethoven sonata — the expression verb-plus-object is telic. In the contrary case, if the complement of the verb is atelic — ... chess, ... the violin — or if there is no object ... the expression is atelic." This formulation happens to work for the example chosen but it would break down for the object in the expression eat an apple.

Allen (1966) p. 177~~f~~ replaces Garey's terms by a distinction into bounded (=telic) and unbounded (=atelic) predications. The philosopher A. Kenny (1963) uses a test very similar to that of Garey: "For some of these (sc. non-static) verbs any statement of the form "A is ϕ ing" implies a statement of the form "A has not ϕ d"; for others it does not." On the basis of this test, he divides 'non-static' (=non-stative) verbs into two groups. The first, called 'performance' verbs includes "build a house", "cut a cake", "knit a sweater"; the second, called 'activity' verbs, includes "live in Paris", "giggle", "listen to". As the examples show, the distinction is not in fact based on the properties of verbs only but on a combination of verb and complement. Thus knit without specified complement would be an 'activity' by Kenny's criterion. Needless to say, Kenny's use of the term 'activity' is different from mine. For a recent discussion, cf. Fillmore (1969) pp.111-114.

11. Directional phrases are always, in fact, $\left[+\text{definite} \right]$ or $\left[+\text{specified quantity} \right]$. If sentences like *he walked to stations occurred, presumably the implication would hold, but the point is purely hypothetical.
12. Notice that it is possible to say he read the paper for two hours. In this case the article does not seem to be a marker of definiteness; its use may be connected with the fact that it figures in the proper names of newspapers. The sentence could not refer to any other kind of paper, e.g. a scientific paper, and he read my paper for two hours is unacceptable. Compare also he read the Bible for two hours, and similar expressions.

On the other hand, the verbs watch and listen to, which I have classed with activity verbs, exhibit certain restrictions with temporal expressions. The following sentences are odd:

He watched the film for two hours

It took me an hour and a quarter to listen to that symphony

Have you finished listening to that symphony?

The reason is obviously that the unfolding in time of the film or symphony proceeds independently of the person watching or listening. I do not know how this fact should be incorporated into the description of these verbs.

Obviously finer distinctions than the ones I have drawn will be needed.

13. These terms were suggested to me by the discussion in Rungren (1955) p.301.

14. The verb come always implies a contextually specified directional (cf.3.4); hence a sentence like he came in half an hour does not constitute a true counter-example. (A contextually specified directional is also implied in he moved the cupboard in half an hour.) In he came for half an hour the adverbial refers not to the time spent in coming but to a subsequent period of time, viz. the time he stayed.
15. Explain can occur with both types, convince with integral duration.
16. For the term 'change of state' cf. Fillmore, (1969).
17. I would restrict the term 'iterative' to verbs like hit, kick, etc., which have the properties described above. Fillmore (1969) uses it also for cases like break vases, etc.
18. On the attachment of features to non-terminal nodes cf. Weinreich (1966) section 3.4, Chomsky (1970) p.207, Mittwoch (1971).
- 18a. See Katz and Postal (1964) p.81ff, Fraser & Ross (1970).
19. In John bought some glasses and Mary borrowed some it is not the whole noun phrase but only the noun that is pronominalized, with the result that the two objects are not co-referential. This type of pronominalization also depends on the presence of the determiner, as is shown by *John bought glasses and Mary borrowed ^{some} them.
20. Cf. the chapter on Determiners in Stockwell, Schachter and Partee (1968). I have not had access to the works discussed there.

21. This usage is fairly common with the class of verbs that take abstract subjects and human objects. Curme (1931) p.437) cites

As a teacher he not only interests and inspires but also stimulates and incites to further investigation.

22. I think it is probably necessary to distinguish between frequentative and habitual uses of the verb. With frequency adverbs the process is understood as happening repeatedly, i.e. with a frequency of more than one; the number of times may be specific as in he stole three times or non-specific as in he often stole. Without frequency adverbs a repeated process is understood as happening with maximum frequency or universally. The difference might be compared to that between plural and generic for nouns (or noun phrases).

23. Another familiar example is the relative pronoun in sentences like

Everybody who knows him respects him.

This does not imply that "everybody knows John".

24. It has been suggested that all generic NPs (i.e. non-specific NPs without determiners) are definite. Cf. Stockwell, Schachter, Partee (1968), Chapter on Determiners. This might have some plausibility for toti-generics, i.e. those in subject position, or in object position after some stative verbs (e.g. John likes poetry) since toti-generics refer to the whole of a class. It is hard to see, however, how parti-generics could be definite.

25. It seems that the semantic interpretation of such sentences is based on the following principles: for intransitive verbs used non-habitually they fill the duration 'slot'; for most transitive verbs used non-habitually they fill the object slot, but for activity verbs, where object and duration co-alesce, they can also fill the duration slot; in any habitual uses they can also fill the frequency slot. Moreover with some verbs they fill an 'intensity' slot, e.g. I like him very much;

26. Cf. Leech (1969) p.41.

27. Let occurs only with prepositional phrase:

He lets a room to John

*He lets John a room.

28. Note the German expression

Er hat das Buch verliehen

compared with

Er hat das Buch jemandem geliehen.

29. Lie does not occur without some complement, but it need not be a locative one e.g. he lay quite still. I am indebted for this observation to Professor R.H. Robins.

NOTES TO CHAPTER 3

1. This usage is very common in Yiddish, non-standard German and Swedish (and, no doubt, other languages) and it is my impression that it is commoner among American than British speakers, presumably because of the influence of these languages on American English. In modern Hebrew there are no indefinite pronouns corresponding to one and some / any and zero expression of indefinite contextually specified objects is therefore mandatory.

2. It is found, I am told, in Hausa and Igbo. For Hopi cf. Whorf (1946).

3. The same difference is found in German:

Der Mantel passt nicht

*Der Mantel steht nicht.

In French there is a lexical difference between the members of the following pair:

Le manteau ne me va pas

Le manteau ne va pas.

The first corresponds to both "the coat doesn't fit me" and "the coat doesn't suit me", whilst the second means something like "the coat won't do".

4. Cf. Fillmore (1966)

5. Bolinger (1968, p.211) remarks that he probably went implies "there" whilst he must have gone implies "from here" (I think it could also imply "from some other place"; the main contrast is between to and from). The reason is

presumably that the perfect focuses on the time of utterance and therefore makes a statement about a change of place "now", i.e. departure; the simple past tense is not related to the time of utterance.

6. Another difference between the two verbs emerges from

It took us an hour to reach (*arrive at) the camp

Reach can incorporate something like 'travel', arrive cannot.

7. In the expression it (all) depends the element that has undergone ellipsis is not recoverable from the preceding discourse, but can only be interpreted on the basis of shared knowledge between speaker and hearer.

NOTES TO CHAPTER 4

1. It is not always easy to determine whether a particular form functions as a gerund or present participle.
Cf. Palmer (1965) p.155. I would not regard this as an overriding objection to the basic distinction, however; in most cases the distinction is clear. Sometimes there is a blurring of the two, as in

I object to his smoking

I object to him smoking.

Notice, however, that only the former can be passivized:

His smoking was objected to

*Him / he smoking was objected to.

2. For this section see Rosenbaum (1967). Rosenbaum does not mention pronominalization as a criterion for NP status.
3. The passive transformation is not, however, possible for gerunds with deleted subjects (cf. 4.1.2 and Appendix A):

*Playing Malvolio was enjoyed by John.

It should also be observed that the above remarks deal only with sentences embedded as complements. A finite-verb sentence embedded as subject must undergo gerundivization before the passive transformation can apply:

That John was at home shows that Peter lied

That Peter lied is shown by John's being at home

*That Peter lied is shown by that John was at home.

4. The suggestion of an underlying it is due to Rosenbaum. It is questioned in P and C Kiparsky (1970), and in Morgan (1968).

5. It is noteworthy that in Hungarian, where verbs have concord for the feature [definite] on the object, finite sentential clause complements behave like definite objects; infinitive complements, however, behave like indefinite objects.

6. On the other hand tell with ordinary infinitive, as in he told me to go, is a separate lexical item, in my view. Notice that both tell that ... and tell how to ... etc. can occur in answers to questions beginning how did you know ...? Tell to cannot. Similarly with ask how to ... versus ask to ...

7. This analysis goes back to Jespersen, who called it the 'split-^{sub}object' construction (1940 p.319). (Jespersen did not, however, assign all the verbs listed above to this construction.) Rosenbaum calls this construction 'subject noun phrase complementation' but uses a different analysis for tend, fail, begin, continue, etc. Huddleston (1969) makes voice neutrality the criterion for the split-subject analysis. The twofold analysis of begin etc. is also suggested by Perlmutter (1970).

8. Accordingly Palmer (1965 pp.155-6) suggests the following kind of structure for the sentence

I got him to persuade her to ask him to change his mind
S P (S P ((S P (((S P C)))))))

where the bracketed elements are not labelled in terms of their matrix clauses.

9. In apparent counter-examples like

I attempted it / that
the pronoun cannot be taken as equivalent to an infinitive
clause.

10. Cf. Palmer (p.153): "The question forms that correspond to many of the declarative forms with infinitives ... are not of the kind what do you want? but what do you want to do?"

11. According to Rosenbaum the sentential complement of persuade, as well as of advise and remind, is dominated by a Prepositional Phrase Node, with the preposition, viz. of, subject to obligatory deletion. This analysis is, in my view, based on the mistaken assumption that if a verb can sometimes be used with a certain preposition, then this preposition must underlie all other uses of the verb. The preposition of is characteristic of verbs and adjectives of cognition (sure, aware, inform, etc.) and never betrays any sign of its alleged presence with the structures under discussion, Rosenbaum's examples notwithstanding.

12. Rosenbaum has the equivalent of what I have called "subject-raising" ('pronoun replacement' in his terminology) only for verbs like expect, consider, believe (Appendix A. 1.2.2) but not for want, prefer, etc. (A.1.2.1). He does not discuss the case of the pronoun in examples like I want him to be given a chance; presumably he would account for it by means of the deleted complementizer for, but I am doubtful whether this for is really necessary. It might be pointed out that the analogous construction

in Latin — e.g. hoc te scire volui — certainly derives from subject raising.— Huddleston (1969) also mentions examples with optional reflexives: he expected (himself) to be the one elected; but since such sentences always imply contrast, and therefore emphasis, one cannot be sure whether the pronoun is a true reflexive.

13. Huddleston (1969) includes order among verbs that occur in both types of structure, quoting the ambiguous sentence: he ordered John to be examined by the specialist.

According to one reading the order was not given to John, and Huddleston would assign this reading to the same type as expect. ^{I would prefer} To assign both readings to the same basic structure and to account for the difference as follows:

He ordered John (the specialist examine John)

He ordered "someone" (the specialist examine John).

14. A total of 153 are listed in Rosenbaum (1967) Appendix, A.1.1, A.3.1 and A.4.1. A further 17 are included in the lists given by Huddleston in Huddleston et al (1968) pp.143-4.

15. Explain that and understand that are, I think, secondary to the use of these verbs with interrogative clauses.

16. The following examples, where this condition does not hold, are not, I think, fully acceptable:

John had an accident as a child but he does not remember

John's engagement was kept a secret. Only two people know.

17. I find it hard to determine whether I understand normally implies a declarative or an interrogative clause. Similarly with do you understand?(44 j).
18. The examples in (44 a-d) do not involve a discourse relationship between the speaker and his addressee but rather between the speaker and a third person.
19. Ellipsis seems to be fairly general in European languages with the translation equivalents of know, remember, forget and understand. Note that in French the response je le sais must have a pronoun; but the negative je ne sais pas, used in response to a question, is elliptical.
20. The main exception to speaker's presupposition is how do you know (in the present tense) which often implies incredulity; this is patently a special use of know. In this connection it may also be relevant to consider the adjectival expressions be certain and be sure, which readily permit ellipsis of the embedded clause. These expressions seem to be intermediate between believe 1 and know. Consider
- (1) a. John is certain (believes) that he will get
the job but I have my doubts
b. *John knows that he will get the job but I have
my doubts.
- (2) a. Why (*how) are you certain (do you believe) that ...
b. How (*why) do you believe that ...
- (3) a. I know that ...

- b. I know whether ...
- c. I am certain that ...
- d. *I am certain whether ...
- e. I believe that ...
- f. *I believe whether ...
- g. *I don't know that ...
- h. I don't know whether ...
- i. I am not certain that ...
- j. I am not certain whether ...
- k. I don't believe that ...
- l. *I don't believe whether ...

In most cases be certain behaves syntactically like believe but in (3 j) it behaves like know. I don't know whether ellipsis with be certain / sure is due to the fact that they contain adjectives or whether it is connected with their affinity to KNOW^{verbs}. It should also be observed that be aware, which is adjectival and definitely incorporates a KNOW complement, does not permit ellipsis; but be aware does not readily fit into the discourse situations exemplified by (38) - (44). Similarly with realize, which is also positive for speaker's presupposition and hardly permits ellipsis.

21. Most typically the possibility is left open that the polar opposite of the suggested proposition might be true. Both I think so and I think not imply I am not sure. Similarly with the verbs believe 2, expect, imagine, hope. In I am afraid so the proposition is indeed asserted but with the implication that it is unwelcome to the addressee.

So and not represent the positive and negative disjuncts respectively for an embedded polar question. They correspond to yes and no as pro-forms for the disjuncts of independent polar questions; but whereas yes and no imply that the speaker is sure of the proposition, i.e. of which disjunct to the question is true, expressions with so and not imply lack of certainty. It might be objected that lack of certainty is also characteristic of, for example, doubt, which is pronominalized in it or that. The difference is that doubt already incorporates a component which can be glossed as "it is not so".

There is in addition a sentence-initial use of so, with stress, which can also carry negative implications but which must be distinguished from sentence-final so, e.g. so he said, so I believe. This use of so does not contrast with not and occurs with verbs other than say, think, etc. e.g. so I remember, so I've heard and with auxiliaries, e.g. so he did.

22. It would also be inappropriate in situations of "phatic communion" e.g. after it's a lovely day again. — One might set up a further discourse implication viz. that the addressee should be interested in (i.e. should want to know) the proposition uttered by the speaker. This implication is outside the proper field of linguistics, however, except that it may be connected with "intimacy signals" like you know and you see. Cf. Quirk (1955) p.178 ff.

23. Note also that the utterance of a sentence containing any definite NP, including proper names, implies that the

reference of the NP is known to the addressee. When the reference of a proper name is not known to the addressee one uses such expressions as

There's a Mr. Smith here to see you

I stayed in a place called Pudling.

It has also been pointed out (I think by Ross) that questions with spliced appositives imply that the addressee knows the content of the appositive clause, e.g.

Does John, who has never been to M.I.T.,
understand transformational grammar?

This would again follow from the notion of discourse implication.

24. My treatment of convince differs radically from that of Lakoff (1970^b, p.91 ff), who considers that the basic meaning of the lexical item underlying this verb is "believe strongly" as in John is convinced that he is a genius. The causative sense that appears in John convinced Bill that ... is, according to Lakoff, not inherent to this lexical item but introduced transformationally. On semantic grounds I disagree with this analysis (1) because convincing a person implies that he held a different view before (2) because convincing a person does not entail that he should hold his new belief "strongly". On syntactic grounds I would point out that John is not convinced (without overt complement sentence) is only possible on the reading that somebody tried to convince him, not on the reading "John does not believe strongly".

A similar analysis would apply to persuade. Lakoff treats persuade that as synonymous with convince that (in fact he gives the lexical entry for persuade rather than convince) but adopts an entirely different set of basic semantic features for persuade to, viz. an underlying item "intend". If the basic meaning is "to change a person in respect to his state of mind (belief or intention)" the relationship between the two uses could be shown in one lexical entry.

25. Perlmutter (1968, p.38ff) has called this properly the "like-subject constraint"; in sentences with passive infinitive complements he postulates a deleted pro-verb, e.g. in

He tried / agreed / refused / condescended / managed
to be co-opted.

On the other hand with want, prefer, would like, which can be used with an intervening NP, there is no like-subject constraint and, therefore, no need to postulate a deleted pro-verb with passive sentences. Thus the following pair would have the same derivation.

He wants the committee to co-opt him

He wants to be co-opted by the committee.

Some verbs can only be used with non-agentive or passive infinitives, e.g.

He deserved to get a prize / to be elected.

Ask and beg are special cases; in the following pair the first sentence can only derive from something like the second:

He asked to go

He asked to be allowed (? authorized) to go.

With hope which can take a that-clause as well as an infinitive there may be a pro-verb denoting possibility.

I hope to go

is not equivalent to

I hope that I shall go,

but rather to

I hope that I shall be able to go.

26. Stockwell et al (1968) have a transformation "To replace Aux". Note that the ^{time}~~base~~ reference of the infinitive is usually future in relation to the ^{main}~~noun~~ verb. It can, I think, be present for habitual uses of prefer and like and it is always present for manage. With pretend it is usually present, but this verb also occurs with the perfect infinitive:

He pretended to have lost my address.

27. Note in particular the use of try and as in try and come. Jespersen (1940, p. 210) points out that this use is confined to the 'base' forms of try i.e. the infinitive (including the infinitive after modals) and the imperative.

NOTES TO CHAPTER 5

1. Cf. Steinitz (1969) p. 21 ff.
2. I have not seen Gleitman's M.A. dissertation, which deals with the subject at greater length.
3. Perlmutter (1968: p.62 ff.) The L-P theory and the like-subject constraint could, I think, be reconciled. As Perlmutter himself points out elsewhere, when verbs like try occur with a passive infinitive it is necessary to postulate an intervening pro-verb with a meaning akin to let. With the help of such a pro-verb (15) could be derived from a sentence in which the like-subject constraint is not violated. But such an analysis would be cumbersome, and I think, unnecessary.
4. Basically the L-P theory is, I think, incompatible with a model that postulates a syntactic base and lexical insertion prior to transformations. The insights of the L-P theory should, however, be incorporated in the lexicon of such a model. Underlying inherently reciprocal verbs there is a semantic component which may be glossed as $\langle \overset{f}{\text{together}} \rangle$. Thus John met Bill may be broken down into "John brought it about" (agentive interpretation) or "it happened to John" (non-agentive interpretation) "that John and Bill were together". Cf. also Anderson (1969^b).
Dougherty (1970) suggests that sentences like (12) and (13) are not transformationally related at all but that

reciprocal verbs should be marked for both intransitive and transitive strict subcategorization. I have not had access to Dougherty's Ph.D. dissertation where this suggestion is fully expounded. (Presumably it could also apply to the reflexive verbs discussed in 5.1.) It should be noted, however, that in most European languages sentences like (13) contain an overt reciprocal pronoun.

5. See Jespersen (1927) p.332.
6. Similarly with John and Bill fought. Fight seems to be logically symmetrical in its non-metaphorical sense, but it is not felt to be symmetrical when one of the participants is left unspecified, as in John fought bravely. It also seems to passivize:

 ? John was fought by all the other boys.
7. With verbs like see, look at, know, find the time reference must be the same.
8. In the standard model such a rule would involve attaching referential indices to the Tense element in Aux. But if, as many scholars believe, Aux belongs outside the sentence proper it could be shared between the two sentences.
9. Note that normally reflexive verbs may have non-reflexive uses which passivize, e.g.

 John was met at the airport by the firm's representative.

NOTES TO CHAPTER 6

1. The process by which pre-nominal modifiers in -ing are formed seems to have become less productive in comparatively recent times. The O.E.D., which provides separate entries for these forms, cites many examples which would not be acceptable today.
2. The last two examples are verbs of motion; there is, however, no absolute restriction on these occurring as pre-nominal modifiers, as shown by a moving train and a crawling baby.
3. I have also encountered hearing people as contrasted with the deaf.
4. Cf. Katz and Postal (1964) p.83 ff.
5. Jespersen (1924 p. 158 note 2) refers to the Somerset dialect of English which made a distinction in the verb according to whether an object is present or not. See Elworthy (1877) particularly p.50 ff. Thus aay du dig, aay digz (transitive) aay du digee, ayy digus (intransitive). It is noteworthy that intransitive verbs often have the same endings as potentially transitive verbs without objects e.g. aay du wuurkee tuurubl aard (I work terribly hard) aay du waukee, aay waukus (I walk) dhu znoa vaalus (the snow falls). Thus this evidence does not support an absolute division of verbs into transitive and intransitive.

6. Professor Bazell has pointed out to me that the similarity could also be captured for surface structure if the VP node dominating V + dummy NP is 'pruned' after deletion of the dummy NP node. Ross (1969) discusses 'pruning' in relation to embedded S nodes that do not branch. But his remark that it is necessary to have a rule "to prune unwanted upper nodes from derived trees" suggests that the notion of pruning might be extended to other nodes. In deep structure, however, a VP containing eat without specified object would still be more complex than one containing sleep.
7. For the concept of latent features compare Kempson and Quirk (1970).
8. This notation has some affinity with Gruber's notion of 'incorporation'; cf. 1.2 and note 18 to Chapter 1.
9. Gleitman (1965) handles the omission of reciprocal pronoun by a transformational rule (x_{lix}) which deletes a constituent immediately dominating verbs and adjectives marked as reciprocal. I would prefer to speak of zero realization of the pronominal NP and subsequent deletion of the NP node.

NOTES TO APPENDIX A

1. It should be noted that the term 'agent' as used in this appendix refers to the constituent by + NP in passive sentences. It does not imply that the verb in the passive sentence is agentive by the criteria set out in 2.1.1.2; and the 'agent' in this sense need not be animate.
2. Cf. Householder (1962).
3. The constraint on to come was persuaded me by John would be different, viz. that second complements cannot become subjects of passive sentences.
4. Postal (1968) explains the blocking of passive sentences by the 'cross-over constraint', viz. that no transformation can move an NP across a co-referential NP.
5. The same constraint would also block the following example given in Ross (1970):

? She was expected by Max; to wash him; (Ex. 40b)

It is doubtful, however, whether such sentences are grammatical even if the agent is not co-referential with another NP:

? She was expected by Max to wash the baby.

In the same context Ross also cites the observation originally made by Zellig Harris "that passive sentences with first person agents are generally not fully acceptable":

??? It was given by me to your sister.

Ross accounts for this fact by a constraint based on a deleted superordinate performative sentence with first

person subject. One might also account for it by an interpretative rule that John was killed excludes the reading that the speaker was the agent.

6. I have heard

I do not want to be met eating an ice-cream in the street,

where there is good motivation for leaving the agent unspecified; but I do not regard the sentence as grammatical.

7. The agentive phrase with own can, I think, be left unspecified if it is to be understood as generic. Compare the following sentence, from a philosopher:

Only what is owned can be stolen.

8. Example (16 b) is taken from Huddleston, in Huddleston et al (1968) 1.8.

The verb rumour is confined to passive sentences for a different reason; it is in the nature of rumours that their authors are unspecified.

9. Emonds (1969) accounts for agentless passives by a general principle that deep structure trees may contain empty nodes i.e. nodes that do not dominate any terminal symbols. The structural index for the passive trans-formation, according to Emonds, seems to be something like

$NP_1 + \text{Tense} + V + NP_2 (PP)$

where PP (=prepositional phrase) is an optional phrase

structure choice which provides an empty node for "receiving a postposed agent phrase NP" (p.48). Agent postposing and NP preposing (i.e. the shifting of the underlying object into subject position) are separate transformations. If NP₁ dominates a terminal element it is moved under PP. "The deep structure of a passive lacking an agent phrase in surface structure has an empty NP in the subject position. Agent postposing cannot apply to such deep structures since there is no empty node to move the subject NP onto." (p.51) The last sentence seems to imply that if the subject NP node is empty PP cannot be ~~the~~ chosen (or generated) in deep structure. This is an improvement on the standard formulation since it avoids a deletion transformation for the by + NP phrase. I have not adopted it for two reasons: 1) because I would prefer to confine the generation of empty nodes to subject NPs; 2) because, in my view, the passive transformation is, in fact, conditional on the deletability of the agent.

I might also point out that there would be a very simple way of capturing this generalization if one adopted the view of Lakoff (1968 and 1970a) that some adverbial constituents outside the verb phrase originate in higher sentences and extended it to cover the by + NP constituent of passives. One could then derive agentless passives from the string

△ + Aux + V + NP

and embed this string under the predicate by + NP to

produce a passive sentence with an agent. I do not think, however, that there is sufficient evidence for such an analysis of agent phrases. Furthermore, the more complicated derivation that I have adopted simplifies problems of semantic interpretation, as I shall demonstrate below.

10. Hasegawa specified Tense in both clauses; see his phrase marker (15).

11. I have included be in the phrase marker, but it should probably be introduced transformationally. Two further questions arise. Is this be the same as the copula; and how should the embedded sentence be labelled? Hasegawa introduces passive be and the copula be by different rules, and he does not label any of his complement sentences. At present I can see no clear criteria for deciding these questions. Conjunction of a predicate adjective or noun and a verbal form in -en produces ungrammatical sentences:

- * He was innocent but convicted all the same
- * The book was a best-seller and printed many times
- * John was generous and loved by everyone who knew him.

(The last example is slightly better than the others because the verb is stative and has duration.) But conjunction of predicate adjectives and nouns is slightly dubious too:

?He is delicate but a good athlete

?He is a senior wrangler and good at games.

Predicate adjectives and nouns can be questioned:

What is he like

Who/ what is he.

There is no corresponding question with be for passives.

12. Cf. Chomsky (forthcoming).
13. The objects of some stative verbs may also be interpreted as toti-generic; cf. Chapter 2, note 24.
14. Notice that if aspect in a passive sentence is derived from the matrix clause of the underlying sentence there would be no difficulty over the following example cited by Chomsky (at a lecture held at University College, London in 1969):
 - (a) Einstein has visited Princeton
 - (b) Princeton has been visited by Einstein.(a) implies that Einstein is alive, (b) does not.

NOTES TO APPENDIX B

1. It is interesting to compare the rules for Equi-NP deletion in case languages. In German, Russian and ancient Greek the deleted subject of an infinitive may correspond to a preceding complement in the accusative or dative:

Er zwang mich zu kommen

Er befahl mir zu kommen.

In the second example the dative complement comes after the sentential complement in deep structure, I think; when both are pronominalized the natural order is

Er befahl es mir.

This indicates that the rule for Equi-NP deletion is ordered after that for dative movement. In classical Latin prose the rule ordering is different since the following is ungrammatical:

*Mihi imperavit venire.

2. Similarly with infinitives of purpose in sentences with indirect objects:

She gave the baby a dummy to suck

She gave the baby a dummy to calm him down.

The first is inside the VP, the second outside. Notice also the occurrence of infinitives of purpose with factitive objects:

In the olden days they built houses to last

He put up a fence to shield him against the wind.

These too are part of the VP.

3. Apart from infinitives of purposes, the only other infinitive to which this would apply is exemplified by
He took his leave of his friends, never to see
them again.

4. For a different solution to the problem discussed in this Appendix see Postal (1970). For Equi-NP deletion in relation to language acquisition see ~~see~~ Carol Chomsky (1968), which appeared after I worked out my own solution. She accepts the minimal distance principle and regards sentences like (1 b) and (10) as exceptions. Her findings indicate that such structures are indeed more difficult for young children. It may be, therefore, that my solution is of diachronic rather than synchronic significance.

NOTES TO APPENDIX C

1. Cf. also Katz (1966 p.164 ff) on the operation of projection rules, in particular the remark: "There is a distinct projection rule for each grammatical relation." Since the sequence V + DO + IO involves two grammatical relations, the readings of the three lexical items do not seem to be combinable by means of a single projection rule. This is most obvious in cases where the DO as well as the IO is animate e.g.

He showed the mouse to the cat

He sold John to Peter.

2. Cf. Weinreich (1966) p. 426; Lyons (1968) pp. 368, 386; Leech (1969) p.69.
3. For criticisms of the 'causative' derivation of kill cf. Fodor (1970) and Chomsky (forthcoming).
4. It has been pointed out to me by Miss Deirdre Wilson and Dr. J. Taglicht, who kindly read a draft of this section, that conjunction depends on surface structure. Even so, however, it is only elements that function as constituents in the derived structure that can be naturally conjoined. The fact that (7) is unnatural indicates that the sequence V+IO is not a constituent in derived structure. On the other hand conjunction of IO and DO in a sentence with V+IO+DO order is natural:

John lent the National Gallery a Goya and
the Courtauld Institute a Rubens.

5. The class of adverbials selected by the verb also includes benefactives (for John) and comitatives (with John). For word order compare

- (a) For two hours he worked with John
- (b) With John he worked for two hours;

and for conjunction compare

- (a) He worked with the new manager and dined with the new director on Monday
- (b) He worked on Monday and dined on Tuesday with the new manager.

In both pairs the (a) sentences are, I think, more natural than the (b) sentences.

6. This is also borne out by Henrici's findings in a corpus-based study of English. See Huddleston et al. (1968) p.631 ff. In the section with which I am concerned here Henrici investigated eight classes of 'adjuncts' (the study is based on the model of systemic grammar) divided into 'nuclear' and 'peripheral' uses according to their position relative to each other. Direction has the highest percentage of nuclear uses (a result which provides further evidence for the 'complement' status of directionals) and is followed, in that order, by Agent, Instrument, Manner, Place, Circumstantial, Time (which seems to include Duration) and Reason. Two other criteria, viz. the percentage for each class that occurred in sentence-initial position and the percentage having an 'extended domain' (i.e. applying to more than one clause), gave very similar results.

7. Notice that durationals may become the object of a pro-verb:

He spent three hours writing letters.

It may even, on occasion, function as the subject of a passive construction; in a statistical table drawn up by a psychologist I have come across the expression number of hours slept.

Some of the factors determining the co-occurrence restrictions on summative durationals were discussed in 2.1.1.4. It was shown that the restrictions involve features of the verb, the VP or a combination of tense and aspect. The following sentences involve violations of these restrictions:

- * He woke up for three hours.
- * He walked to the station for three hours (completive VP)
- * He was playing tennis for three hours (progressive, non-perfect, past)

Similar factors determine the co-occurrence restrictions of frequency adverbs but the features involved are different. Many stative verbs are incompatible with frequency adverbials as shown by

- * He understood the problem three times
- * He liked his job twice.

Progressive aspect places stronger restrictions on frequency than on duration:

- * He has been playing tennis twice.

The fact that frequentative (or repetition of event) is

clearly an aspectual property of the predicate, though not overtly marked in the verb, may explain why frequency adverbs can be positioned in front of the main verb. It was also pointed out in 3.1.1.4 that the feature \langle frequentative \rangle can provide a second source for durational adverbials. Thus we can get two occurrences of durational with an intervening frequency adverbial (which must be distributive):

He lectured for two hours every Monday afternoon
for forty years.

Notice that for forty years or every Monday afternoon for forty years can be preposed, but not for two hours or for two hours every Monday afternoon. It is hard to see how such a sentence could be represented in a grammar which makes durational and frequency adverbs 'sister' nodes.

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