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SILVA, Georgette Marie Thérèse, 1929-
on infinitival complements: a cross-
linguistic study.

University of California, Los Angeles,
Ph.D., 1973
Language and Literature, linguistics

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On Infinitival Complements: a Cross-linguistic Study

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Linguistics

by

Georgette Marie Thérèse Silva

1973
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Paul Schachter, Committee Chairman

University of California, Los Angeles

1973

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ACKNOWLEDGMENTS

I am grateful to members of my committee for offering valuable comment and constructive criticism, particularly Paul Schachter, Sandra A. Thompson, and George Bedell, whose patient guidance and encouragement sustained me throughout my work. I also wish to express my indebtedness to Mrs. Juanita Dodd and Ms. Sharon Barr for typing the manuscript.
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ABSTRACT OF THE DISSERTATION

On Infinitival Complements: a Cross-linguistic Study

by

Georgette Marie Thérèse Silva

Doctor of Philosophy in Linguistics

University of California, Los Angeles, 1973

Professor Paul Schachter, Chairman

The present study critically examines two conflicting approaches to the analysis of infinitival complements in the light of evidence from English, French, German, Hungarian, and Romanian.

The first approach considered is that advocated in Shopen (1972), where it is argued that infinitival complements should be generated directly in the base. The second approach, in which it is assumed that infinitival complements are transformationally derived from full underlying sentences, is represented by work carried out within the framework of Generative Transformational Theory, generally known as the Standard Theory, or, in its more recent version, as the Extended Standard Theory.

Relevant studies carried out within the Standard framework are, for example, Rosenbaum (1967), G. Lakoff (1965, 1970a), Ross (1967), R. Lakoff (1968), Kiparsky and Kiparsky (1971), Jackendoff (1969, 1972), and Stockwell et al. (1973).

The main question asked in this work is the following: do the languages considered here support the hypothesis that all infinitival
complements are derived from full sentences, or do they support the competing view that infinitivals are generated directly in the base?

Part I of this study deals with various aspects of infinitival complement constructions which in the Standard approach are assumed to be the result of complement subject deletion. Part II is concerned with those complements which in the Standard approach are assumed to arise through raising operations.

The main conclusions emerging from this study are summarized below:

1. It would appear that a theory which derives infinitival complements from underlying sentences holds more promise than one which would generate them directly in the base.

2. An analysis which assigns readings to "empty" subjects of "subjectless" complements is to be preferred over one which would derive "subjectless" complements by means of deletion rules.

3. There is strong syntactic evidence from English, German, French, Hungarian and Romanian in support of the hypothesis that there exists a rule of RAISING in those languages. The rule induces semantic contrasts which are shown to be a function of the main predicate and, to a certain extent, of the nature of the raised NP. It is suggested that the information pertaining to the potential semantic effects of RAISING should be made part of the semantic information entered in the lexical entry for "raising" predicates.

4. We give reason to believe that the semantic contrasts induced by the RAISING transformation are such that they are best handled by rules of semantic interpretation operating on the output of transformations.
5. It would appear that the formalism developed in Shopen (1972) provides a promising means of representing the meaning contrasts in question.

6. In sum, the model which emerges is one that incorporates the Standard view of deep structure and accounts for sentence relatedness in terms of transformational processes, while meaning contrasts such as those induced by the RAISING transformation are taken care of in terms of derived structure interpretive rules.
INTRODUCTION

The aim of this investigation is to critically examine two alternative approaches to the analysis of infinitival complements in the light of evidence from several languages. Special emphasis is placed on questions related to underlying representation.

The first approach we are interested in is that originally developed within the standard framework of Generative Transformational Theory as represented by Rosenbaum (1967), G. Lakoff (1965, 1970), Ross (1967), R. Lakoff (1968), Kiparsky and Kiparsky (1971), Perlmutter (1971), Stockwell et al. (1973), and many others. We shall also be concerned with a later version of the Standard Theory, namely the Extended Standard Theory (EST) as set forth in Chomsky (1969) and (1971b).

The works cited above were conceived and written between 1965 and the present and reflect various stages in the development of transformational syntax starting with Chomsky's Aspects of the Theory of Syntax in 1965, to what is today known as the Extended Standard Theory (EST). The main difference between the Standard Theory and its extended version is that the first considered the deep structure level (as defined in Aspects) as the only level for semantic interpretation, whereas proponents of the EST claim that semantics must be done at more than one point in the derivation. Towards the end of his discussion of the kind of grammatical phenomena that should be handled by derived structure interpretation rules, Chomsky writes the following:
These considerations may not affect the weaker hypothesis that the grammatical relations represented in deep structure are those that determine semantic interpretation. However, it seems that such matters as focus and presupposition, topic and comment, reference, scope of logical elements and perhaps other phenomena, are determined in part at least by properties of structures of K other than deep structures, in particular, by properties of surface structure.

(Chomsky 1969, p. 35)

Apart from the different assumptions about the correct way of doing semantic interpretation, the extended theory does not differ from the Aspects theory in any fundamental way: it still has essentially the same phrase structure rules as were originally proposed and essentially the same transformational component, although the use of 'dummy nodes' or 'empty nodes' seems to be more widespread now than in the days of Aspects. It is therefore not surprising to find that the major changes in the approach to complementation lie in the area of semantic interpretation and not in the assumptions about underlying structure. Although the various analyses proposed within this changing framework vary in detail, the basic assumption that infinitival complements are transformationally derived from full underlying sentences has remained unchanged.

The second approach to complementation discussed is that of Tim Shopen as set forth in his 1971 dissertation entitled A Generative Theory of Ellipsis.¹ The main goal of his theory is to account not only for "all and only the well-formed sentences of a language" (the goal of the Standard Theory), but to also account for utterances which are not sentences by standard definition, but which are nevertheless
used as coherent pieces of communication. Shopen's theory might almost be described as non-transformational, because in it elliptical structures are not derived from full underlying sentences, but are generated directly by phrase structure rules. The role of transformations is restricted to performing permutations only. They may neither delete nor insert any material into a structure. There is no PASSIVE, no EQUI, no RAISING. Shopen shows first that there are a large number of productive 'sentence fragment' patterns like Into the dungeon with him, or To the little lady with a brown dress, a bunch of roses! which have form and meaning characteristics all of their own, and for which no fully specified source sentence can be found. Nevertheless, such sentence fragments are used and interpreted correctly. But, Shopen argues, since incomplete sentences receive correct semantic interpretation without a fully specified underlying source, it must be the case that linguistic competence includes the capacity to generate elliptical structures directly by means of phrase structure rules. Next, Shopen shows that there are many cases for which the full range of elliptical meaning cannot be recovered from the immediate context, so that all the possible meanings in such cases cannot be accounted for in underlying representation unless one were to allow non-recoverable deletions and unconstrained power for deletion rules. Now if some elliptical structures cannot be generated from complete sentential sources, the question arises as to whether any of them should be. Shopen adopts the view, based on a desire for consistency, that all elliptical structures must be generated directly in the base. Now, infinitival complements
are incomplete subparts of sentences and must therefore be accounted for together with all other incomplete sentences; hence, infinitival complements must be generated directly in the base.

Shopen argues at great length against both deletion rules and Raising rules as a means of accounting for infinitival complements. In fact, he makes the claim that deletion under identity, one of the key transformations in Standard Theory, is not only an unnecessary part of the grammar, but one that makes incorrect predictions about linguistic competence.

In his system the meaning of elliptical structures is accounted for by means of semantic interpretive rules which set up correspondences between syntactic structure and semantic structure on the basis of phonetically realized form and the lexical entries for words that are phonetically realized. That is, the syntax generates just the structure which achieves phonetic interpretation, and this same structure undergoes semantic interpretation at some appropriate level.

In the Standard Theory underlying syntactic structure is taken to reflect logical structure. Not so in Shopen's theory. As we shall see, in the latter syntactic structures and semantic structures are not in a one-to-one correspondence.

These then are the main distinguishing characteristics of the two theories we are interested in. It is clear that they make different empirical claims about the constructions of interest to us. For example, in the Standard Theory the (a) and (b) sentences in examples (1)-(3) are generally considered to be transformationally related. In each case the (a) sentence is derived transformationally from a deep
structure also underlying the (b) sentence:

(1) a. It is necessary to dig up the garden.
   b. It is necessary for someone to dig up the garden.

(2) a. We expect to see Bill.
   b. We expect that we shall see Bill.

(3) a. Mary believes John to be clever.
   b. Mary believes that John is clever.

In Shopen's theory the sentence pairs above are not transformationally related, but are derived from different deep structures which are very much like their surface structures. In each case the governing predicate, necessary, expect, and believe respectively, carries the necessary information for the correct interpretation of the structures generated by the syntactic component of the grammar.

Shopen's approach is at variance with a great deal more of Standard Theory. As mentioned above, transformations may neither delete constituents nor insert lexical material. Their essential function is restricted to carrying out permutations. As a result of this restriction on transformations, formatives that in Standard Theory are inserted on second lexical look-up are inserted here freely in the first lexical look-up. The lexical insertion procedure itself is context free; the only thing that matters are category symbols. All those aspects of the derivation that in Standard Theory fall under the notion of 'cooccurrence' are accounted for by means of interpretive rules, as are other context-sensitive aspects of the grammar, like agreement. In Shopen's theory there are no feature-changing rules. The interpretive rules not only impose semantic interpretation upon
utterances, but they also act like a set of well-formedness conditions which check utterances to see if all subparts match and agree with each other properly. Case markings, stress, and intonation are generated freely and their well-formedness in terms of cooccurrence is accounted for by interpretive rules. Semantic functions such as AGENT, INSTRUMENT, THEME, GOAL, SOURCE, etc., (cf. Gruber, 1965; Fillmore, 1968) are imposed upon NPs, PPs, etc. in semantic interpretation. They are not viewed as being category symbols to be expanded by phrase-structure rules. Shopen's approach leads to a much richer theory of the lexicon than has ever been proposed, and a richer theory of interpretive rules. It does, however, entail a considerable simplification of the transformational component.

The major question that will be asked in this work is: Do the languages considered in this work support the Standard Theory which assumes that all infinitival complements are derived from full sentences, or do they support the hypothesis that infinitivals are directly generated in the base? The task we are setting ourselves here, then, is to weigh the two claims outlined above against facts from several languages and against each other with particular emphasis upon the grammar of infinitival complement constructions.

Most available generative transformational studies base their arguments on one language only (in most cases English). My intention is to broaden the empirical basis of my investigations and to bring cross-linguistic evidence to bear upon the questions involved. In order to neutralize as much as possible the sources for similarities due to genetic and areal influences, I make use of facts from several
languages. These are: French and Romanian (I.E. Italic); English and German (I.E. Germanic) and Hungarian (Finno-Ugric, a subgroup of Uralic). In the course of this work I have used information from whatever generative transformational studies were available and from traditional grammars. Most of the material used was tested, as far as was possible, against grammaticality judgments of native speakers.

The work is divided into two main parts. Part I is concerned mainly with infinitival complements which in the standard approach arise from deletion rules. It begins with an introductory section on definitions, followed by a brief discussion of Shopen's arguments against deletion rules, and an extension of his arguments to infinitival complement constructions. This in turn is followed by a detailed discussion of infinitival complements on adjectives. The last section of Part I contains a selection of arguments for a sentential source for infinitives with determinate subjects.

Part II deals with infinitival complements that in the standard approach are analyzed in terms of raising operations. After presenting both the standard view and Shopen's counterproposal, I survey relevant data from German, French, Romanian, and Hungarian, and present evidence for the existence of a RAISING rule. Section 5 of Part II deals with the semantic effects of raising operations. The general conclusions emerging from this study are presented at the end of Part II.
FOOTNOTES TO THE INTRODUCTION

¹All quotes in this work refer to the 1972 version reproduced by the Indiana University Linguistics Club.
PART I

INFINITIVES FROM DELETION RULES

1. **General**

This chapter is concerned with infinitival complements that in Standard Theory are assumed to be the result of complement subject deletion. Such infinitivals fall into two classes: those that have grammatically indeterminate subjects, and those whose subjects are grammatically determinate, i.e., their subjects can be retrieved from the wider context of the sentence (cf. Section 2 on definitions). The two types of infinitives are illustrated in (1) and (2) below:

(1) It is advisable to eat an apple a day.

(2) Mary likes to eat an apple a day.

In Standard Theory both classes arise through the deletion of a meaning-bearing constituent, but only the first is relevant to Shopen's arguments against deletion rules, since only with the first does there exist a possibility of a non-recoverable deletion. Sentences like (2) arise through deletion of the complement subject under conditions of referential identity with an NP in the higher sentence. In such cases, therefore, deletion is always recoverable. In order to prepare the ground for a discussion of Shopen's approach, it is necessary to begin with an explanation of some of his terms. This will be done in Section 2.

Section 3 is concerned with the analysis of infinitives with grammatically indeterminate subjects. It begins with a selection of examples from German, French, Hungarian, and Romanian. This is followed
by a brief review of the standard treatment of infinitives with indeter-
minate subjects. Next, I give a summary of Shopen's arguments against
deletion analyses as presented in his dissertation, and extend those
arguments to the treatment of infinitives with indeterminate subjects.
Section 4 contains an in-depth discussion of two classes of adjectives
taking infinitival complements with special emphasis on complement sub-
ject interpretation. Finally, Section 5 brings together some facts
which help decide between the two theories.

2. Definitions

2.1 We will begin by explaining the terms grammatically determinate
and grammatically indeterminate which are relevant to our subsequent
discussion of complement subjects.

An infinitive with a grammatically determinate subject is one whose
subject can be determined from the context of the sentence. The follow-
ing examples will serve by way of illustration:

(3) a. It is difficult for Mary to solve the problem.
    b. It was easy for John to say that.
    c. It is dangerous for Mary to swim the river alone.
    d. It is inconceivable for anybody to be so naive.
    e. It was odd for it to rain today.
    f. It would be absurd for you to give up now.
    g. John is afraid to tell the truth.
    h. Mary stands to lose a fortune.
    i. Peter prefers to eat apples.
    j. Peter prefers Mary to eat apples.
k. I like for you to wear blue.

l. It would be embarrassing for me for my son to fail his exam.

m. For John to fail his exam would pain his mother.

In the first three sentences the subject of the infinitive is felt to be coreferential with the noun phrase following for. For example, in (3.a) Mary is understood as the one experiencing the difficulty as well as the one solving the problem; in (b) it is John who does the saying, and in (c) it is Mary for whom it is dangerous to do the swimming. In (g–i) the subject of the infinitive is felt to be coreferential with the subject of the main sentence, while in (j) it is coreferential with the object of the main verb. In each case the subject of the infinitive can be retrieved from the context of the sentence, therefore we shall say, following Shopen, that it is grammatically determinate.

Sentences like (3.d–f) and (3.k–m) are somewhat different from the ones just mentioned. In each of these sentences the for-phrase preceding the infinitive would normally be described as the "overt" subject of the infinitive. For example, in (d) for anybody can only be understood as the actual subject of the infinitival phrase to be so naive; it cannot be understood as a constituent of the matrix. The same holds for (e) and (f). Similarly for examples (k–m). In (k) for you is the overt subject of to wear blue; in (l) for my son is the subject of to fail his exam, and in (m) for John is the overt subject of the infinitive.

It is difficult to know whether Shopen would distinguish between sentences in which infinitival complements have overt subjects and
sentences in which the complement subject is missing but can be retrieved from the context, simply because he does not discuss sentences with overt subjects. For him all infinitives seem to be "subject-less." He says that "when they are generated, they (the infinitives) demand a subject to be supplied from without, and sometimes the subject is supplied in the linguistic context, and sometimes not." (Shopen 1972, p. 273). Contrary to a more traditional approach then, none of the for-phrases preceding the infinitives in sentences like (3) are, in Shopen's analysis, to be regarded as the subjects of the infinitive. We will assume that Shopen would describe all sentences in (3) as constructions with infinitival complements with grammatically determinate subjects.

Consider now the sentences in (4):

(4) a. It is advisable to drink lots of water.
    b. It is difficult to beat the champion.
    c. It is easy to criticize others.
    d. It is necessary to lock the door at night.
    e. It was foolish to leave the door open.
    f. It is dangerous to climb this mountain.
    g. It is a mistake to do that.
    h. It is time to leave.

The sentences in (4) are quite different from those in (3). Their surface structure does not contain any one constituent representing the subject of the infinitive. Sentence (4.a), for example, can be paraphrased as "It is advisable for some indeterminate person(s) to drink
lots of water." (4.b) means that it is difficult for some unspecified person(s) to beat the champion. In other words, the subjects of the infinitives in (4) cannot receive a specific interpretation within the context of the sentence alone. We shall say, again following Shopen, that the subjects of the infinitives in (4) are grammatically indeterminate.

2.2 In this subsection I will first give a brief description of the structure and organization of lexical entries proposed by Shopen in his dissertation. This will be followed with the elucidation of the term constituent ellipsis as used by Shopen.

Shopen's lexical entries consist of two parts: one, a syntactic part, and the other, a semantic part. As an example consider the entry for the non-agential and intransitive verb of motion slide, used as illustrated in (5)-(7) below:

(5) The log slid.
(6) The log slid to the bottom of the ravine.
(7) The log slid from the bushes to the bottom of the ravine.

The lexical entry Shopen proposes for these uses is as follows:

(8)

```
slide, +V
[NP (PP)* x y, z] (a)
[CHANGE x y z] (b)
```

PHYSICAL MOTION
MOVE EASILY WITH CONTINUAL SURFACE CONTACT

(Shopen 1972, p. 128)
Part (a) of the lexical entry simply shows the syntactic environment in which slide can appear. The asterisk in the expression (PP)* means that slide optionally allows one or more PPs to its right in the syntactic environment. Part (b) represents the meaning of slide in terms of semantic predicates. The semantic structure of slide is characterized in terms of the 'three place predicate' CHANGE (x y z), adopted from Jackendoff (1972). The first argument x is understood as the THEME, the entity which is moving, the second y as the SOURCE, the point from which the motion starts, and the third z as the GOAL of the change, the point at which the motion terminates. The symbols x, y, and z are used as subscripts to the syntactic cooccurrence features to show the correspondences between deep structure grammatical relations and the subparts of the semantic structure (propositional meaning). The THEME is realized on the surface as subject, while the SOURCE and the GOAL are optionally realized in prepositional phrases.

Constituent ellipsis is analyzed as a case where there is an argument in a lexical entry without a corresponding phonetically realized constituent in syntactic structure. According to this definition, sentences (5) and (6) are cases of constituent ellipsis. In (5) both the arguments SOURCE and GOAL are missing in surface structure. In (6) it is the argument SOURCE which has no overt syntactic realization. Other examples of constituent ellipsis are provided by agentless passives and "subjectless" infinitives as illustrated in (9)-(11) below:

(9) The fireworks are being ignited.
(10) It is necessary to dig up the garden.
(11) John expects to go.
In (9) it is the agent which is missing in surface structure, while in (10) and (11) it is the understood subject of the infinitive. Shopen does not concern himself with sentences like (10) in which the subject of the infinitive is indeterminate. He does, however, explain in great detail the mechanism for interpreting missing subjects in cases where the subject of the infinitive can be retrieved from the context of the sentence as in (11). Below is his lexical entry for expect which contains the necessary information to account for the way we understand the following two sentences:

(12) a. John expects Bill to go.
    b. John expects to go.

(13) a. \[ \text{expect}, \quad +V, \quad [\text{NP} \quad \text{NP} \quad \text{IP}] \]
    \[ \text{z} \quad \text{w} \quad \text{y} \]
    \[ \text{[Cognition} \quad \text{LOCATION} \quad \text{wy}] \]
    \[ \text{u} = \text{'anticipated event'} \]

(13) b. \[ [\text{NP} \quad \text{IP}] \quad [\text{Cognition} \quad \text{z} \quad [\text{LOCATION} \quad z \quad v]] \]
    \[ \text{z} \quad \text{v} \quad \text{u} \]
    \[ \text{u} = \text{'anticipated event'} \]

(Shopen 1972, p. 225)

Since both sentences in (12) are generated in the base in practically their surface form, the lexical entry for expect must tell us which noun phrase is to be understood as the subject of the infinitive, i.e., it must tell us that in (12.a) the subject of to go is Bill, while in (b) the subject of to go is John. We will now explain how this is done.

The meaning of the verb expect is represented by the semantic
two-place predicate COGNITION (z u), where z represents the THINKER, and
u the THOUGHT. With expect the THOUGHT is always an anticipated event.
The verb expect then is represented as a relation between a THINKER and
a THOUGHT, where the THOUGHT may itself be a proposition. The THOUGHT
is represented as the two-place predicate LOCATION (w y) in (13.a) and
as LOCATION (z v) in (13.b). LOCATION is an abstract predicate which
Shopen uses extensively. On page 82 he says "LOCATION x y is to be
understood 'x has the location y'. The x is, in Gruber's terms, the
THEME of the location, while the y is the LOCATION." Later he uses it
to characterize physical location, set membership, identity or predica-
tion. The use of this predicate enables him to 'locate' the subject of
the infinitive: in (12.a) the direct object is 'located', in (12.b)
the subject is 'located'. LOCATION w y in (13.a) says simply that in
(12.a) it is the direct object, i.e., the NP indexed with w which is to
be understood as the subject of the infinitive, itself indexed with y.
LOCATION z v in (13.b) says that the subject noun phrase (indexed with
z) is also the subject of the infinitive indexed with v. Notice that
the two parts of the lexical entry for expect cannot be collapsed. In
fact, in order to account for the various sentence patterns in which a
predicate can occur, Shopen simply provides a disjunctive list of sur-
face structure environments, each accompanied by a set of instructions
relating to its semantic interpretation. For details of four such
environments for the verb expect the reader is referred to page 225 of
Shopen (1972).

Let us now return to our lexical entry (13). The syntactic part
of the entry acts like a template. If the sentence parsed matches it,
then a 'semantic parsing' results and each constituent in the actual sentence is assigned an index which refers to the relevant argument in semantic structure.

The semantic parsing of sentence (12) will look as follows:

(14) a. John \[z\] expects Bill \[w\] to go \[y\]

b. John expects to go \[z\] \[v\]

The indexes serve the purpose of setting up the correspondences between the syntactic form of the sentence and its semantic representation. Thus in (14.a), for example, the index \[w\] serves the purpose of projecting the semantic function of "subject" onto the NP Bill. This ability of projecting a semantic function does not require that there be a syntactic position of "subject-of" in the sentence. In a sentence like John tried to catch a fish, for example, John fulfills the subject functions projected by both verbs try and catch. Notice that the above explanation presupposes that there exists some NP in the sentence onto which the semantic function of "subject" can be projected. This is not the case for sentences like It is necessary to dig up the garden. There is no constituent in the sentence to which the verb call could assign the function of subject. The only NP present is it which, it is clear, cannot fulfill the presuppositional requirements of the verb call. Infinitives with indeterminate subjects, then, require a different interpretive mechanism from the one postulated for sentences like (11). Such a rule would have to state that just in those cases where no constituent that can fulfill the subject function of the complement verb can be found in the sentence, a hypothetical subject must
be interpreted.

One might conjecture that Shopen would set up the syntactic part of the lexical entry for necessary as follows:

(15) necessary, It BE____(for NP) IP 

and that he would then add some statement in the lexical entry to the effect that 'if x is ellipted, it is to be interpreted as definite or indefinite according to context.' Such a statement would account for the fact that a sentence like (7) can be interpreted to mean 'It is necessary for somebody to dig up the garden' on the one hand, and also as 'It is necessary for us to dig up the garden,' if appearing, for example, in a context such as 'Come on, let's get going, it is necessary to dig up the garden.'

In the EST, where infinitival complements are derived from sentential sources, i.e., with subjects, only one interpretive rule is needed for subjects: if the subject NP is "empty" it is automatically interpreted as unspecified, and if it is lexically filled the interpretation is obvious.

Finally, we wish to point out with respect to sentences like (12.a) 'John expects Bill to go' that in Shopen's grammar, the noun phrase Bill is considered as the direct object of expect in 'deep structure,' i.e. Bill is in the same simplex as expect. In other words, Shopen interprets simplex to mean 'simplex in the normal sense, plus the accusative plus infinitive construction.' In his grammar the infinitive phrase to go in (12) is generated under an IP node, itself embedded in the VP of the matrix clause. In his system infinitives are
never generated under sentence nodes.

3. Infinitives with indeterminate subjects

3.1 Examples from other languages

Infinitival complements with indeterminate subjects are by no means peculiar to English. They are found in such diverse languages as German, French, Hungarian, and Romanian. The following are some representative examples:

German:

(1) a. Es war unmöglich, ihn zu retten.
   'It was impossible to save him.'

   b. Es wäre wichtig gleich abzufahren.
      'It is important to leave at once.'

   c. Es ist schwierig morgens schon früh aus dem Bett zu klettern.
      'It is difficult to climb out of bed early in the morning.'

   d. Es war gut hier zu essen.
      'It was good to eat here.'

   e. Es ist Zeit aufzubrechen.
      'It is time to start.'

French:

The French sentences with grammatically indeterminate infinitives are very similar to their English and German counterparts.

(2) a. Il est impossible de le sauver.
      'It is impossible to save him.'
b. Il ne faut pas rire trop bruyamment.
   'It is not permitted to laugh too loudly.'

c. Il faut obéir.
   'It is necessary to obey.'

d. Il serait sage de partir tout de suite.
   'It would be wise to leave at once.

e. Il est dangereux de nager la nuit.
   'It is dangerous to swim at night.'

f. Il est juste de faire l'aumône aux pauvres.
   'It is right to give alms to the poor.'

g. Il est bon pour la santé de manger des oranges.
   'It is healthful to eat oranges.'

h. Il n'est pas sage de dépenser tout son argent.
   'It is not wise to spend all one's money.'

Hungarian:

Hungarian differs from English, German, and French, in that it has no equivalent of the English expletive it, the German es, or the French il. For example, a sentence like 'it is necessary to wait,' will simply consist of the infinitive vární 'wait' followed by kell 'it is necessary, must.'

(3) a. Vární kell.
   (wait–INF must)
   'It is necessary to wait.'

The subject of vární is, of course, grammatically indeterminate. Furthermore, it is understood as unspecified. We are not told who must wait. Vární, which consists of the stem vár– and the suffix –ni is
what is known as the uninflected form of the infinitive. This is the
most common form of the Hungarian infinitive. Under specified condi-
tions the infinitive may be inflected. In this case it agrees with its
subject in person and number even if its subject does not overtly appear
in the sentence. For example, in (4) the subject, even though missing
in the surface, can only be interpreted as definite:

(4) Várnia kell.
    (wait-INF-3d-pers.-sg. must)
    'He/she must wait'

The speaker assumes that the hearer knows who it is that must wait.
The following are further examples illustrating the use of infinitives
with grammatically indeterminate subjects:

    (Not must to get frightened)
    'One must not get frightened.'

b. Nem szabad sírni.
    (not allowed to cry)
    'No crying / Don't cry.'

c. Orvoshoz kell menni.
    (doctor-to must go)
    'It is necessary to go to the doctor.'

d. Ezt jó lesz aláírni.
    (This good will-be under to write.)
    'It's advisable to sign this.'

e. Ideje elindulni.
    (time-POSS to start)
'It's time to start.'

f. Ezt a problémát egyszerű megoldani.
   (This the problem simple to solve)
   'It is simple to solve this problem,' or
   'This problem is simple to solve.'

g. Figyelmeztetni kellene Pétért.
   (warn-CAUS must Peter)
   'Somebody should have Peter warned.'

h. Az utcán alig lehet látni embert.
   (on the street hardly possible see man)
   'One can hardly see anybody in the street.'

Romanian:

Romanian has very few verbs that allow infinitival complements at all. Examples of infinitives are therefore very hard to find. Those that I have found involve the adjectives lesne 'easy,' and aneoie 'difficult,' and bine 'good,' and the impersonal predication se cade 'it is fitting / it is proper.' The sentences either express general rules of behavior, or they are proverbs:

(6) a. Lesne a ierta, dar aneoie a uita.
   (it is easy to forgive but difficult to forget)
   'It is easy to forgive, but difficult to forget.'

b. Copilul mic nu-i bine a-l lăsa singur în casă.
   (child-DEF small not is good to him let alone in house.)
   'It is not good to leave the small child alone in the house.'

22
(7) a. Se cade a se încchina înaintea regelui.
   (It is fitting to bow in front of the king)
   'It is fitting to bow before the king.'

   b. Nu se cade a vorbi urât persoanelor în vârstă.
   (It is not fitting to talk nastily to people in age)
   'It is not fitting to speak rudely to old people.'

   c. Nu se cade a rămâne târziu noaptea pe stradă.
   (It is not fitting to remain late night on the street)
   'It is not proper to stay out late on the streets.'

Se cade also occurs in sentences where the infinitive receives a
"controlled" interpretation:

(8) Nu se cade a-ți minții părinții.
   (It is not proper to you-DAT lie parents)
   'It is not fitting that you should lie to your parents.'

The only difference between the sentence in (8) and the preceding
ones is the presence in the sentence of the dative enclitic ti which
refers to the second person singular, i.e., to the addressee. This
pronoun controls the interpretation of the missing subject of the
infinitive, which can only be understood as tu 'you.'

3.2 The standard approach to infinitives with
grammatically indeterminate subjects

In the Standard Theory "subjectless" infinitives are derived
from full sentences by deletion of a subject node which is lexically
present in underlying structure. Since Shopen's criticism is directed
against grammars allowing the deletion of meaning-bearing constituents,
it is of interest to consider in some detail how the Standard Theory
would account for the data presented at the beginning of this chapter.

One of the problems facing an analysis which allows transformations to delete lexical material is how to constrain the power of such rules in order to insure that deleted material is uniquely recoverable. The earliest suggestion of such a constraint upon the functioning of grammatical rules is to be found in Chomsky (1964) "Current Issues in Linguistic Theory." Further discussion appeared in Katz and Postal (1964), in their book _An Integrated Theory of Linguistic Descriptions_, and in Chomsky (1965) _Aspects of the Theory of Syntax_, where the Condition on Recoverability of Deletion is stated as follows:

A deletion operation can eliminate only a dummy element, or a formative explicitly mentioned in the structure index (for example, you in imperatives), or the designated representative of a category (for example, the wh-question transformations that delete noun phrases are in fact limited to indefinite pronouns—cf. Chomsky, 1964, para 2.2), or an element that is otherwise represented in the sentence in a fixed position.

(Chomsky, 1965, p. 144-145)

Consider, for example, a sentence like (10):

(10) In order to get good grades, it is necessary to study hard.

(example from Stockwell _et al._, 1973)

In the Standard Theory such a sentence must have an underlying representation like (11):

(11) In order for ___ to get good grades, it is necessary for ___ to study hard.

where the NP positions at the points underlined must be such as to allow unique recoverability.

Lees (1968) uses the noun "people" as the deletable indefinite subject in cases similar to (10); Rosenbaum, on the other hand, uses
"they." Katz and Postal would derive sentence (10) by deleting one of the designated representatives of the category Noun Phrase, in this case someone. That this must be the case seems clear from the following passage found in Chomsky (1964) and quoted in Katz and Postal (p. 80):

...major categories have associated with them a 'dummy terminal symbol' as a member (which may actually be realized, e.g. 'it' for abstract nouns, 'someone' ('thing') and . . . . this representative of the category is what actually must appear in the underlying strings for those transformations where the transform carries no indication of the actual terminal representative of this category in the underlying string.

(Chomsky, 1964)

Finally, Stockwell et al. suggest that the deletable subject should be the indefinite/impersonal "one" (in some cases "someone.")

We may therefore assume that the Standard Theory would derive (10) from its paraphrase with an indefinite pronoun (some)one as shown in (12):

(12) In order for one to get good grades, it is necessary for one to study hard.

Deletion of an indefinite subject leaves the embedded verb subjectless. The verb cannot undergo agreement rules and is therefore infinitivalized in accord with a very general principle suggested in Kiparsky and Kiparsky (1971).

The main point to note in connection with the derivation of (10) is that it involves the deletion of a meaning-bearing constituent, i.e., (some)one. Since all Shopen's arguments are directed against an analysis involving the deletion of meaning-bearing constituents, it is necessary to summarize them here before giving further consideration to
the treatment of infinitives.

3.3 Shopen's arguments against a deletion analysis

In Chapter III of his dissertation Shopen shows that an analysis involving deletion of a meaning-bearing constituent cannot be applied successfully to all cases of constituent ellipsis. Even though Shopen has nothing specific to say about infinitives with indeterminate subjects, it is important to consider his reasons for claiming that elliptical sentences cannot be derived from paraphrases with indefinite or definite pronouns. He bases his arguments on two types of constituent ellipsis: indefinite ellipsis, and definite ellipsis, as exemplified in (13) and (14) respectively:

(13) Bill got a letter today.

(14) Tommy refused.

(Shopen's examples (96), p. 149)

According to his definition both sentences (13) and (14) are elliptical, since they are understood to have arguments in semantic structure which are not realized on the surface. For example, in (13), the verb get is felt to require three arguments in semantic structure:

(i) a THEME, which is syntactically realized as a letter,
(ii) a GOAL, which is realized in the form of Bill, and
(iii) a SOURCE argument which is ellipted. Non-elliptical surface forms for (13) would be (15.a,b):

(15) a. Bill got a letter from someone today.

b. Bill got a letter from somewhere today.
Shopen says with respect to (13):  

. . . there is no set of referents established in the common focus of both speaker and hearer corresponding to the SOURCE argument that is exhaustively and uniquely referred to. It is just in this sense that the ellipted argument is indefinite. (Shopen, p. 150)

With respect to sentence (14) Shopen says the following:

. . . Tommy refused, on the other hand, has an ellipted argument the referent for which the speaker assumed to be in common focus for the hearer as well as himself, and the assertion of the sentence exhausts or uniquely refers to the set of referents corresponding to that argument. It is in this sense that Tommy refused is definite ellipsis.

In other words, Shopen claims that when a speaker utters a sentence like Tommy refused he assumes that the hearer knows what it is Tommy refused to do. Tommy refused to do something is therefore not an acceptable paraphrase for Tommy refused. We will discuss sentence (14) in greater detail after our discussion of sentence (13).

Let us first consider Shopen's arguments against deriving a sentence like (13) from an underlying structure like (15).

Shopen points out that, although a rule of indefinite pronoun deletion would successfully derive (13) from either the (a)-sentence or the (b)-sentence in (15), it would lead to an ungrammatical output in (16), and result in a change of meaning in (17) and (18).


(17) a. Bill got someone from the kitchen to the living room.
    b. Bill got from the kitchen to the living room.

(18) a. Bill got a letter to someone today.
    b. Bill got a letter today.
In order to keep the deletion analysis, he says, lexical entries for verbs would have to contain rule features indicating when deletion of the indefinite pronoun is permitted and when it is not. This, he suggests, complicates the grammar, but does not present insurmountable problems within the standard framework.

If I understand Shopen correctly, then, his arguments are based upon the totally unfounded assumption that there exists a general rule of 'indefinite pronoun deletion' in the Standard Theory. I do not know of any such rule. To the best of my knowledge, the only cases of 'indefinite pronoun deletion' proposed within the Standard Theory are deletion of indefinite complement subjects, deletion of unspecified agents, and deletion of objects of verbs like eat. I don't know of any proposal within the Standard Theory for deriving a sentence like (13) from a fully specified underlying structure like (15) by means of deletion rules. I would therefore suggest that Shopen's arguments simply do not apply to sentences like (13-18). Sentences like (16.b) can, in any case, be avoided by stating in the lexical entry for put that it obligatorily requires a locative noun phrase in its syntactic environment. Finally, if there is no general rule of 'indefinite pronoun deletion,' then there is no reason why the sentence pairs in (17) and (18) should be regarded as transformationally related. Note, however, that just because Shopen's arguments do not apply to the sentences under discussion, it does not mean that his claim about the incorrectness of deletion analyses is wrong in general. I will show in the next section that deletion of indefinite pronouns can lead to the wrong answers in cases of infinitival complements with grammatically
indeterminate subjects.

Let us now turn to Shopen's discussion of cases of definite ellipsis which, he says, pose a real problem for the transformational analysis. He talks at great length about sentences like *Tommy refused* and *Howard disagreed* arguing first of all that these are cases of definite ellipsis, and that they could therefore not be derived from paraphrases with an indefinite pronoun such as *Tommy refused (to do) something*, or *Howard disagreed with something*. He demonstrates that in both instances we understand the object of refuse and that of disagree to be definite by showing that a sentence like *Tommy refused* can only be used appropriately when that which Tommy refused is in "common focus" for both speaker and hearer. If it is assumed, so the argument goes, that *Tommy refused* must be derived from a complete sentence whose missing argument is represented in deep structure and therefore available for semantic interpretation, then sentences like *Tommy refused* must be regarded as infinitely ambiguous, since there is nothing in the sentence that would allow the deleted constituent to be uniquely recovered. Shopen then considers the possibility of representing missing definite constituents by definite pronouns in deep structure. Under such an analysis *Tommy refused* would have the deep structure representation *Tommy refused it*. Shopen then proceeds to show that this approach too would fail, since there can be found instances of definite ellipsis that have no appropriate paraphrase with definite pronouns. For example, in (19) below, there is no sentence, he claims, in which *that S*, the 'Opinion' being agreed on, can be replaced by a definite pronoun.

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(19) a. John agreed with Mary that Lionel would be a nice name for the baby.

b. *John agreed with Mary it.

(Shopen, 1972, p. 164)

If we were to assume that John agreed with Mary is derived from (19.b) by a rule of definite pronoun deletion, then the lexical entry for agree would have to include an instruction to the effect that the definite pronoun deletion rule is obligatory just in case it stands for the 'Opinion' being agreed on. This, Shopen says, would increase the power of the grammar without adding to its capacity for describing linguistic behavior.

It was pointed out to me by Paul Schachter that there is an alternative to the analysis suggested by Shopen. Some people, it seems, would claim that agree is followed by a preposition (probably about) which is obligatorily deleted immediately before that, but retained elsewhere. Thus we have sentences like "What John agreed with Mary about was that S," and also "John agreed with Mary about it." It seems then that Shopen's example can be explained this way. His arguments with respect to the agree examples then, must be considered inconclusive. Be that as it may, I would certainly agree with Shopen when he says that it is not our syntactic knowledge that tells us that some sentences are instances of definite ellipsis, and others are instances of indefinite ellipsis, but that it is our knowledge of the meaning of verbs appearing in these sentences that tell us this. It seems therefore most appropriate to include facts concerning ellipsis in the lexical entry for predicates. For purposes of illustration, we will
now consider how Shopen would represent the semantic information necessary for the interpretation of sentences (13) and (14) repeated here for convenience:

(13) Bill got a letter today.
(14) Tommy refused.

The lexical entries for get and refuse are shown below:

(20) get, +V, [NP ___ NP (PP)]
     \  z   x   y
    [CHANGE x y z] physical motion

     y = 'indefinite' when ellipted
     (Shopen's entry #116, p. 157; see also #150, p. 166)

(21) refuse, +V, [NP ___ (IP)]
     \   x   z
     [CAUSE x [NOT [CHANGE x y z ]]] abstract motion

     z = 'definite' if ellipted
     (Shopen's entry #117, p. 157; see also #150, p. 167)

Consider the lexical entry for get first. The general structure of Shopen's lexical entries was explained in connection with the entry for slide (cf. Section #2 on definitions). The entry for get is very similar to that of slide, but contains the additional information that if the prepositional phrase PP(y) is ellipted, it is interpreted as indefinite.

The lexical entry for refuse illustrates the fact that there is no one-to-one correspondence between semantic structure and syntactic
structure. The semantic structure of refuse reads as follows: 'x is the direct cause of not bringing about the CHANGE (x,y,z).' The predicate CHANGE involves the three arguments THEME, SOURCE, and GOAL which correspond to x, y, and z respectively. The SOURCE (y) can never have a correspondent in syntactic structures of the type [NP ___ IP], where the subject is THEME and the IP is abstract GOAL.

In Chapter IV of his dissertation Shopen deals with a different kind of constituent ellipsis, namely with agentless passives. In the Katz and Postal approach agentless passives are derived from full active sentences with unspecified agents. In this way the deletion is 'recoverable' in the sense that the possibilities for the underlying agent NP are limited to a finite and small set of lexical items, specifically, someone and something. Shopen shows that not all agentless passives are limited to interpretations with indefinite pronouns. Examples (22) with someone are not acceptable paraphrases for the corresponding agentless passives:

(22) a. I don't want to be disturbed (*by someone). Get the hell out of here! (Shopen, p. 205, ex. #57.b)

b. Henry IV was not written (*by someone) with as much concern for historical detail as Richard III.

(Shopen, p. 205, ex. #60.a)

It might be possible to posit underlying sources with definite pronouns for (22), but Shopen shows that there are examples for which no full underlying source can be found, with either definite or indefinite pronouns. Such an example is

(23) Germany was defeated (from Emonds, 1970).
Neither (24.a) nor (24.b) seems to render the understood meaning of the missing agent:

(24)  
a. Germany was defeated by someone.

b. Germany was defeated by them.

Shopen then concludes that since some agentless passives (see (23)) are correctly interpreted without syntactic representation of the missing constituent in deep structure, it follows that linguistic competence includes the ability to understand the functional meaning of such an elliptical structure without reference to a complete underlying representation. The grammarian is then faced with the dilemma of either constructing a grammar where elliptical structures are accounted for in two separate ways, or assuming that all constructions of a certain type arise only one way. Shopen argues for a unified account of ellipsis, and in particular a unified account of passives, and proposes to handle passives in the lexicon, and not by transformation, a fact which leads him to formulate a much richer theory of the lexicon.

In summary, then, Shopen's main point, a point which he stresses over and over again, is that since not all elliptical sentences can be generated from full underlying sentences, a consistent approach would require that none of them be.

Shopen is, in my view, correct in claiming that the Katz and Postal approach, which would derive all elliptical sentences from fully specified underlying structures by means of deletion rules, faces serious semantic problems. There was, however, at the time Shopen wrote his dissertation, an alternative to the Katz and Postal analysis, namely the Aspects approach to passives which allows the use of "empty" nodes.
Within the Aspects framework agentless passives need not be, and are not, derived from fully specified underlying sentences, but from underlying structures in which the noun phrase representing the agent remains lexically "empty." The correct meaning is then projected by the verb onto this empty node, and no deletion is involved. The Standard model is thus capable of accounting for the phenomena discussed while retaining the more traditional approach to deep structure. In the light of these observations, Shopen's arguments in favor of his analysis do not appear to be quite so compelling.

3.4 Shopen's arguments extended to infinitives with indeterminate subjects, or
Can deletion rules account for complements with indeterminate subjects?

In this section I will explore in some detail how complements with indeterminate subjects are used and understood in an effort to answer the question: Is a deletion analysis viable in the case of complements with indeterminate subjects?

As the examples at the beginning of this chapter show, infinitives with indeterminate subjects are found most often in impersonal constructions that can be represented by the surface structure formula (25).

(25) It BE (ADJ, NP) INF X

or more generally,

(26) It BE PREDICATE INF X

Let us now consider a few sentences that fit into the surface structure formula (26):

34
(27)  a. It is necessary to call the doctor.
    b. It advisable to drink lots of water.
    c. It is difficult to beat the champion.
    d. It is easy to criticize others.
    e. It was a mistake to feed the dog chicken.
    f. It is time to leave.

In what follows I will address myself to the question of just how grammatically indeterminate subjects are understood. In particular, I shall seek an answer to the basic question of whether or not the understood subjects of INF X in constructions of type (26) can be paraphrased by definite or indefinite pronouns in a way which would allow the deleted subject to be recoverable.

Shopen suggested two tests for determining whether a missing constituent is understood as definite or indefinite. The first consists in finding paraphrases with indefinite pronouns. If such paraphrases can be found, ellipsis is indefinite. Consider, for example, sentence (27.a) repeated here as (28).

(28)  It is necessary to call the doctor.

On the most obvious reading this sentence means that in the speaker's opinion it is necessary for someone to call the doctor. Neither speaker nor hearer need have anybody specific in mind, and it is for this reason that the paraphrase with someone is perfectly good. It would appear then that sentence (28) is a case of indefinite ellipsis in the sense of Shopen. The same sentence, however, can also be used in the following context:
(29) Speaker A: What shall I do now?

Speaker B: Well, first it is necessary (for you) to call the doctor.

When used in this context the sentence answers Shopen's criteria for definite ellipsis. Under the first interpretation, then, sentence (28) has a paraphrase with an indefinite pronoun, and can therefore be derived by deletion rules. Under the second interpretation the subject of to call is determined by extra-linguistic context. We have seen in the previous section that a Katz-Postal type deletion analysis cannot account for such cases. In Shopen's system, on the other hand, the lexical entry for necessary would only have to include a statement to the effect that the missing subject of the infinitive allows both a definite and an indefinite interpretation.

The second test proposed by Shopen for determining whether a missing constituent is understood as definite or indefinite, has to do with the notion of 'natural sequence' in a discourse. For example, if one follows an instance of indefinite ellipsis with an information question, a natural discourse sequence is obtained. This is not so for cases of definite ellipsis. To illustrate this, consider the discourse fragments below:

(30) Speaker A: It is necessary to call the doctor.

Speaker B: Who should call the doctor?

On the indefinite reading the information question seems quite a natural response to (28). Not so on the 'definite' reading:
(31) Speaker A: What shall I do now?
       Speaker B: Well, first it is necessary (for you) to call the doctor.
       Speaker A: Who should call the doctor?
       Speaker B: You. What's the matter with you?
       Aren't you listening?

As a further example, consider sentence (27.e) which is also ambiguous between a definite and an indefinite reading. This is clearly brought out in the discourse fragments below:

(27.e) It was a mistake to feed the dog chicken.

(32) It was a mistake to feed the dog chicken.
       He now has a bone stuck in his throat.
       I wonder who did it? (Indefinite reading)

(33) It was a mistake to feed the dog chicken.
       He now has a bone stuck in his throat.
       You shouldn't have done it. (Definite reading)

The discourse fragments in (32) and (33) show that the subject of to feed in (27.e) can receive either an indefinite or a definite interpretation according to context. So we may say that under a deletion analysis the subject of (27.e) would be recoverable in a context like (32). But what about (33)? In that particular context the subject of to feed is interpreted as you. It need not, however, always be you. In some other context it could be I, or we, or anybody else. Deletion in such a case would not be recoverable from the context of (27.e) alone, and would therefore be ruled out. The deletion analysis would therefore predict that the discourse fragment in (33) is ungrammatical,
which, of course, is contrary to empirical evidence. It is therefore clear that a deletion analysis is not even observationally adequate in this case, and should be ruled out.

Within Shopen's interpretive framework the lexical entry for be a mistake would carry the information that, when it occurs in the context of an infinitive without an overt subject, that subject may be interpreted as either definite or indefinite. Notice that the power of the grammar would go no further than that. The remaining information, namely, whether that definite subject is I, or you, or Peter, or anybody else, must be retrieved from the extra-linguistic context. Let us examine a last example, which shows that there are cases where the subject of the infinitive cannot be interpreted as indefinite, and only the definite reading is possible. This is example (27.f) reproduced here as (34).

(34) It's time to leave.

It is unlikely that this sentence could ever be interpreted as "It is time for someone to leave." A person who utters (34) most likely means that it is time for me, or for you, or for us to leave. That is not to say that there can't ever be a sentence like It is time for someone to leave. But the latter can only occur in a different context. For example, imagine that there are a large number of people at a meeting, and that that meeting has been going for several hours. Then it is quite natural for some person to say to his neighbour, "I'm getting tired of it; it is time for someone to leave and break up the meeting. Why don't you do it?" But in this context the sentence It is time for someone to leave does not mean the same as (34), where, as we have seen,
the missing subject of to leave has to be definite and is restricted to a few personal pronouns. It is clear, however, that even though their number is restricted, deletion is not uniquely recoverable.

Additional evidence that subjects of infinitives cannot always be paraphrased by indefinite pronouns comes from sentences whose complement verbs require semantically non-singular noun phrases as subjects. The term "semantic non-singularity" (cf. Dougherty 1970) refers to coordinate conjoined noun phrases, collective nouns, and plural nouns. Examples of predicates that cannot take semantically singular subjects, and which are therefore selectionally incompatible with someone or one are: meet, disperse, outnumber.

Observe that the sentences below are all ill-formed:

(35) a. *It is necessary for someone to meet at once.
   b. *It would be advisable for someone to disperse quietly.
   c. *It would be safer for someone to outnumber the enemy.

A similar point was made by Thompson (1973) in the course of her discussion on subjectless gerunds in English. The following are some of her examples:

(36) a. Adjourning immediately at 4:00 was impossible.
   b. Getting together quickly for coffee would be fun.
   c. Dispersing instantly would have been the thing to do.
   d. Gathering quietly around the campfire each evening was nice.

None of the gerunds above are compatible with an indefinite subject one or someone.

I will now present an argument from Hungarian which supports
Shopen's view on the inadequacy of deletion analyses. The argument involves sentences with *kell* when used as an impersonal predication meaning 'it is necessary'/'must.' A few introductory remarks are in order. *Kell* 'necessary,' like its English counterpart, is a subject-embedding predicate. Consider the following sentences:

(37) a. Péternek várnia kell.
   (Peter-DAT wait must)
   'Peter must wait'/'It is necessary for Peter to wait.'

b. Valakinek várnia kell.
   (Somebody-DAT wait must)
   'Somebody must wait'/'It is necessary for somebody to wait'

c. Várnia kell.
   (wait- INF- 3d-pers.-sg. must)
   'He/she must wait.'

d. Vární kell.
   (wait-INF must)
   'It is necessary to wait.'

Notice that in sentences (a–c) the infinitive turns up as várnia, while in (d) it has the form vární, both meaning 'to wait.' The first is the inflected form and agrees in person and number with its subject, while the second is the uninflected form, consisting only of the stem vár and the infinitive ending -ni.

Let us consider sentences (a) and (b) first. We will take as given that Péternek várnia 'for Peter to wait' and valakinek várnia 'for somebody to wait' are the sentential subjects of *kell* 'must'
respectively. We will also take as given that Péternek and valakinek are the underlying subjects of the embedded sentence NP vár 'NP waits,' that is, we will assume that (37.a,b) are derived from (38.a,b) respectively by Complementizer placement and subject-verb agreement:

(38) a. [[Péter vár] kell] = Péternek várnia kell
   b. [[Valaki vár] kell] = Valakinek várnia kell
Complementizer placement will add the dative suffix -nek to Péter and valaki, and change the verb to its infinitival form. The agreement rule will copy the number and person features of the subject onto the verb. These will eventually be phonetically realized as a. It is important to note that the agreement rule operates whether the subject is definite like Péter, or indefinite like valaki 'somebody.' We must now try to explain sentences (c) and (d), neither of which has a surface subject, but which differ in that in (c) agreement has applied, while in (d) it has not.

Let us begin with (d): Várni kell 'It is necessary to wait.' Just as in its English counterpart, the subject of Várni can be interpreted as either definite or indefinite according to context. However, Várni kell cannot be derived from (37.b) by deletion of the indefinite pronoun, since this would wrongly predict an indefinite interpretation only. We would have no source for the definite interpretation of the subject. In this case then, a deletion analysis would lead to the wrong result. Besides, it would entail the otherwise unmotivated rule of deleting the inflexional affix a.

Within the Extended Standard framework the sentence várni kell can be explained in the following manner. We would posit an underlying
source as in (39) where the subject of the embedded verb remains unspecified:

(39) [[Δ vární] kell]

We will assume that the agreement rule only operates in cases where the subject of the verb is specified. Since the embedded verb in (39) has no specified deep subject the agreement rule cannot apply, and the verb remains in its uninflected form vární. The "empty" subject will be interpreted as definite or indefinite only from the extra-sentential context.

There exists also an independent reason why Valakinek in Valakinek várnía kell may not be deleted. Consider sentence (37.c): várnía kell 'He/she must wait.' This sentence can only be understood as a case of deictic ellipsis, i.e. it can only be used when both the speaker and the hearer know who must wait, i.e., when the subject of várnía is 'definite' in Shopen's sense. To explain this interpretation we will assume that várnía kell is derived from a sentence with a 3d person singular personal pronoun as deep subject of várnía as in (40).

(40)  [ [PRO-3d. pers.-sg. vární | kell] +DEFINITE ]

The agreement rule will operate producing (41).

(41)  [ [PRO-3d. pers.-sg. várnía | kell] +DEFINITE ]

In Hungarian, as in many other languages, there is normally no pronominal specification of the subject. Personal pronouns are only employed under contrastive or emphatic conditions. We assume, then,
that the pronominal form in (41), the underlying structure of (37.c), will simply be deleted after agreement has applied. Such a deletion is obviously recoverable in the sense of Chomsky's "condition on recoverability." To avoid deriving (c) from (b), with which it is not synonymous, we will assume that kell would not be marked as allowing deletion of an indefinite subject on its complement. This, then, is a second case in which indefinite pronoun deletion would lead to semantically incorrect results.

In sum, the EST would account for the sentences in (37) by assuming that the infinitives in each case are derived from full sentences. In (a) and (b) the subject is overtly present on the surface, in (c) the subject is a pro-form specified for person and number, in (d) the subject remains "empty" in deep structure. Furthermore, the EST would make the subject-verb agreement rule dependent upon the presence of a subject in deep structure, whether an actual lexical item, or a pronominal form. If the subject remains "empty" the agreement rule is inoperative. The missing subject in (c) is explained in terms of a very general rule which deletes pronominal subjects when not emphasized. Such a rule is required anyway in simplex subjects when the subject is not stressed: Várok 'I am waiting' vs. Én várok 'I am waiting' with emphasis on Én 'I). Such a solution provides an explanation why the infinitive should show up with an inflexion in (c) and without one in (d).

In Shopen's grammar, the word is of primary importance. He would enter each inflected form separately in the lexicon. He would therefore have to treat all the inflected forms of the infinitive (of which there are six) plus the uninflected one as separate lexical entries.
The relation between these separate lexical entries is represented by what he calls The Main Verb Paradigm. This seems a reasonable way of doing it, since inflexional paradigms must be made available in any grammar. Now in Shopen's grammar, agreement is "checked" on surface structures by means of semantic rules of interpretation. For purposes of discussion, let us consider the three sentences (42) which are different surface manifestation of the basic sentence \textit{NP must wait}.

(42) a. Neki várnia kell. 'He/she must wait' (emphasized subject)
   (he/she-DAT wait-(INF + INFLECT) must)

   b. Várnia kell. 'He/she must wait' (definite subject, no emphasis)
   (wait-(INF + INFLECT) must)

   c. Várni kell. 'It is necessary to wait'
   (indeterminate subject)

In Shopen's framework we must have one agreement rule to "check" subject-verb agreement in (a) where the subject is overtly present in the sentence, and another kind of rule to determine agreement in sentences like (b) and (c) where there is no surface subject. In the latter two cases, in fact, it is not a question of checking agreement, but a question of assigning the correct subject to várnia and várni respectively. This can of course be done, since in the case of várnia, the rule would simply state that the subject must be understood as 3d person singular and definite, while in the case of várni the rule would state that the person, number, and definiteness of the subject cannot be grammatically determined, which correctly describes the facts of these sentences. However, it is clear that Shopen needs at least two, possibly three, different "agreement" rules for the sentences in (42).
Having such different rules is tantamount to making the claim that there exists no generalization governing the distribution of inflectional endings on the embedded verb. This is to claim that it is an accident that the same endings show up in sentences with overt subjects and in sentences with subjects that are grammatically indeterminate, i.e., that the occurrence of the ending a in (42.b) has nothing whatever to do with the occurrence of the same ending in (42.a). If the primary aim of a grammarian is to express whatever regularities he finds in language, then Shopen's approach certainly misses some very fundamental generalizations at least as far as Hungarian is concerned, namely that vární can be predicated of all persons, and that agreement only takes place when the infinitive has an underlying subject which is either a lexical noun or a pronominal form.

There is another point worth noting. We have seen that the subject of a sentence like (42.b) is, in Shopen's grammar, assigned the correct person and number reading on the basis of the endings on the verb. This seems to claim that number and person of subjects are determined by the number and person on verbs. But number and person are nominal categories which, if they are manifest in a given language, may be marked, inflexionally or otherwise, in the surface structure of the verb-phrase, and not the other way around. There are languages in which nouns can manifest the categories of person and number, but the verb need not. Besides, it seems quite natural to assume that person and number are noun categories, since it is persons, animals, and objects, which can be enumerated and referred to, individually and collectively, by means of nouns and not by means of verbs.
In this section I have extended Shopen's arguments against grammars employing deletion rules to infinitival complements with indeterminate subjects. We have found that Shopen's intuitions are correct: a grammar such as the one proposed by Katz and Postal which allows deletions of meaning-bearing constituents provided such deletions are recoverable, cannot in all cases account for the way in which infinitives with indeterminate subjects are understood. In particular, such a grammar cannot account for cases of what Shopen calls 'definite ellipsis.' We have seen that many of the facts discussed above go against the assumptions of the Katz-Postal theory and argue for an interpretive treatment. The answer to our initial question: "Is a deletion analysis viable?" must be NO. But from a fact that a deletion analysis is wrong, it does not necessarily follow that Shopen's particular approach is right. That the Standard Theory is inadequate has been known for some time now, and efforts to rectify its inadequacies have led Chomsky (1969, 1971b) to the formulation of the Extended Standard Theory (EST), in which certain aspects of interpretation are taken care of at some level in the derivation other than the deep level. Shopen's theory differs from the EST in that the first requires that all semantic interpretation be done on surface structures (which in his theory are considered to be deep structures), while in the EST only certain aspects (it has never been made quite clear just which aspects) of meaning are accounted for on the surface. The two theories differ fundamentally in their view of 'deep structure,' and it is therefore necessary at this point to discuss them in more detail in the light of evidence from English and other languages.
4.0 Infinitival complements on adjectives

In the previous section we have seen that the interpretation of infinitives with grammatically indeterminate subjects depends largely on context. Sometimes the missing subjects are interpreted as definite, and sometimes as indefinite. In this section we shall be concerned with a further aspect of complement subject interpretation, one which has to do with the notion of "control," as discussed in Postal (1970). The discussion will center around constructions of the type

(1) It BE ADJ INF X

but will be embedded within the wider context of related constructions of the type

(2) It BE ADJ PREP NP (PREP NP) INF X

Adjectives which can appear in the surface formula (1) seem to fall into at least two broad classes which differ both semantically and syntactically along several parameters:

Class A adjectives include:

- brave, kind, ridiculous, foolish, wise, absurd, stupid,
- vexing, nice, silly, odd, peculiar, smart, clever, honorable.

Class B adjectives include:

- inappropriate, impossible, easy, difficult, pleasant, good,
- simple, hard, dangerous, tough, important, necessary,
- advisable, inconceivable.

The following are some examples illustrating the most obvious syntactic difference between the two classes, namely, the fact that Class A accepts of-phrases where Class B accepts for-phrases.
(3) **Class A**

a. It was kind (of Peter) to call the doctor at once.
b. It was ridiculous (of Peter) to leave so soon.
c. It was foolish (of Peter) to go swimming.
d. It was wise (of Peter) to keep quiet.
e. It was absurd (of Peter) to insist on going.
f. It was nice (of Peter) to help you.

(4) **Class B**

a. It is necessary (for him) to call the doctor.
b. It is inappropriate (for her) to wear this dress.
c. It was impossible (for me) to read this book.
d. It was pleasant (for us) to walk on wet sand.
e. It was easy (for us) to keep working.
f. It was difficult (for us) to keep working.
g. It is dangerous (for anyone) to swim in this river.

In the following subsections the two classes will be considered separately:

4.1 **Class A adjectives**

The sentences with Class A adjectives represent value judgments. When I say **it was kind of Peter to call the doctor**, I am attributing a certain quality of kindness to Peter. At the same time I seem to judge the act of calling the doctor to be a kind act. In other words, in sentences like the above the same value judgment seems to be made of both the actor and the act. This seems to be the case even if the actor is not expressed in the surface, namely in the sentence
It was kind to call the doctor. In the syntax, the act is expressed by the infinitival complement, and the actor by the NP of the of-phrase, if lexically present. Notice that all Class A predicates accept an of-phrase, and that when this of-phrase is present, its NP is understood to function also as the subject of the infinitival complement. Sentences like the following are impossible:

(5)  a. *It was kind of Peter for John to call the doctor.
    b. *It was ridiculous of Peter for Mary to leave so soon.
    c. *It was foolish of Peter for John to go swimming.
    d. *It was wise of Peter for John to keep quiet.
    e. *It was absurd of Peter for John to insist on going.
    f. *It was nice of Peter for John to help you.

What the above sentences show is that the NP in the of-phrase and the subject of the infinitive cannot vary independently. We conclude that Class A adjectives require coreferentiality between the NP which is part of the of-phrase and the understood subject of the infinitive. We shall say that in a sentence like It was kind of Peter to go the subject of to go has a "controlled interpretation."

Now compare sentences (5) with sentences (6) below, which differ from (5) only in that we have removed the of-phrase:

(6)  a. ?*It was kind for John to call the doctor.
    b. ?It was foolish for John to go swimming.
    c. ?It was wise for John to keep quiet.
    d. It was ridiculous for Mary to leave so soon.
    e. It was absurd for John to insist on going.
    f. It was nice for John to help you.

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The kind-sentence seems to be unacceptable to most speakers; this would indicate that kind always requires an of-phrase. The sentences with foolish and wise were judged marginal, but not completely unacceptable. The remaining sentences, however, were readily accepted by all speakers I have asked. This would indicate that ridiculous, absurd, and nice can occur without an of-phrase. Notice that there are other differences between these two groups. While kind denotes a quality which is only predicatable of animate beings, the other adjectives can be predicated of actions alone, without necessarily affecting the actor. For example, (6.d) does not necessarily imply that Mary herself is ridiculous. To account for these facts, the lexical entry for kind would contain an obligatory of-phrase, while in the lexical entry for ridiculous, absurd, and nice, the of-phrase would be optional.

Now consider the two sentences with nice below:

(7) a. It was nice of Peter to help you.

b. It was nice for Peter to help you.

In the (a)-sentence nice behaves like a Class A adjective. But now consider the behaviour of nice in the (b)-sentence. The latter has two interpretations. On one reading the for-phrase is interpreted as a "benefactive" and the sentence means something like "To help you was nice for Peter." On a second reading we understand the sentence to mean "For Peter to help you was nice," where nice is predicated of the entire complement. In neither case does nice behave as a Class A predicate. The (b)-sentence cannot mean "It was nice of Peter to help you." In the (b)-sentence, then, nice exhibits what we shall later see are Class B characteristics.
Another adjective which behaves like nice is good. Observe the sentences in (8):

(8) a. It would be good of you to help me.

b. It would be good for you to help me.

In (8.a) good behaves like a Class A predicate. Sentence (8.b), on the other hand, can be understood in two ways. On the one reading, good is predicated of the complement, it means something like 'It would be a good thing for you to help me.' On a second reading, (8.b) can be interpreted to mean something like 'It would be good for you if you were to help me,' i.e., on the second reading good behaves like a Class B adjective. Good and nice are adjectives with a very general meaning, and it is therefore not surprising that they exhibit characteristics of both Class A and Class B. Notice that the two classes intersect just in the area where the meaning of its members is very wishy-washy.

Now consider sentences with Class A adjectives in which there is no prepositional phrase at all. We will represent such sentences by the general formula (9):

(9) It BE ADJ [+Class A] INF X

Consider the two sentences (10)

(10) a. It would be kind to help them.

b. It would be silly to help them.
The interpretation of the understood subject of the infinitive seems to depend in large part on extra-sentential context. The only requirement imposed by the main predicate is that the subject be at least +ANIMATE; in the case of kind, wise, etc., the subject has to be +HUMAN. Take, for example, sentence (10.a). It depends on the context whether the subject is understood as definite or indefinite (in Shopen's sense) i.e., whether we understand the sentence to mean something like (11.a) or (11.b):

(11) a. It would be kind of you to help them.
    (definite interpretation).

    b. It would be kind of anybody to help them.
    (indefinite interpretation).

Depending upon the speech situation, the subject of the infinitive in (11.a) could be any proper noun or pronoun designating a person or persons which are "in common focus" for both speaker and hearer. The same observations can be made about sentence (10.b). The latter can also be understood to mean something like either (12.a) or (12.b):

(12) a. It would be silly of you to help them.

    b. It would be silly of anybody to help them.

But now notice that the two interpretations in (12) are not the only interpretations for (10.b). The silly-sentence has another reading, not possible with (10.a) namely, one in which silly is predicated of the proposition for NP to help them as illustrated below:

(13) a. It would be silly for you to help them.

    b. It would be silly for anybody to help them.

The potential interpretations of sentences like (10.b), namely, the
interpretations suggested in (12) and (13), correlate with the ability
of adjectives like silly to appear with or without an of-phrase in the
environment of a for-phrase. This option is not available with kind
(cf. (6.a)).

In order to account for the facts discussed so far within the
Extended Standard Theory, we need to distinguish between adjectives for
which the of-phrase is mandatory (kind, foolish) and those for which it
is not (silly, nice, good). The kind-class will be subcategorized as
in (14.a), while the silly-class will be subcategorized as in (14.b):

(14) a. ADJ [+Class A₁]/ [it BE ___ of \[NP
\[HUMAN \] ] S] (kind-class)
b. ADJ [+Class A₂]/ [it BE ___ (of \[NP
\[ANIM \] ) S] (silly-
class)

We must also state somewhere in the grammar that if the of-phrase
appears in the sentence its NP must be coreferential with the subject
of the embedded sentence (or more correctly, as we shall see, with the
subject of the infinitive).

Notice that by positing (14) as the deep structure environment for
Class A adjectives we have followed Emonds (1970) and have consequently
somewhat departed from the more traditional analyses in which the com-
plement clause is assumed to originate in subject position and the
'expletive' it is introduced transformationally.

For purposes of illustration we will now consider the derivation
of sentences (12.a), (13.a), and (10.b) in that order. We will indicate
coreferentiality in deep structure by means of indices on NPs without,
however, wishing to commit ourselves as to the correct method of

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assigning these indices. That means that we will talk about EQUI without wishing to discuss whether it is a deletion transformation or a coreference rule (cf. Jackendoff 1969, 1972). Finally, for the sake of simplicity, we will leave out BE and would in the trees.

Consider now the derivation of (12.a).

(12.a) It would be silly of you to help them.

whose deep structure is (15)

(15) \[
\begin{array}{c}
\text{So} \\
\text{NP} \\
\text{it} \\
\text{silly} \\
\text{PP} \\
\text{of} \\
\text{NP}_i \\
\text{you} \\
\text{NP}_i \\
\text{help them} \\
\text{you} \\
\end{array}
\]

(12.a) results from EQUI which removes the embedded subject in (15).

(13.a) is generated from the same structure (15) but without the PP (remember the PP is optional for silly). The only additional machinery needed is a complementizer placement transformation.

(106) It would be silly to help them

will arise from the following deep structure:

(16) \[
\begin{array}{c}
\text{S} \\
\text{NP} \\
\text{it} \\
\text{silly} \\
\text{NP} \\
\text{help them} \\
\Delta \\
\end{array}
\]
Structure (16) does not represent the fact that sentences like (10.b) have two potential readings (cf. (12) and (13)). It is simply the underlying structure which provides the most economical derivation for surface structures of the form (9). To account for the ambiguity of such sentences in deep structure one might propose to derive them from structures like (17.a) and (17.b).

(17) a.

```
S
  /\  \
/   \  /
NP   VP
  /\  /\  \
/   /   \  
NP it silly PP
   /\  /\   \
  /   /   \  
  NP i i
```

b.

```
S
  /\  \
/   \  /
NP   VP
  /\  /\  \
/   /   \  
NP it silly S
   /\  \
  /   \  
  NP i
```
Although such underlying structures correctly represent our semantic intuitions about sentences like (10.b), it is doubtful whether (17.a) could be justified on independent grounds. Notice that it would involve the deletion of the preposition which seems rather ad hoc, and seems also not to conform to the constraints on deletion argued for earlier. The position adopted in this work is that surface structures be generated from syntactically motivated underlying structures, and our intuitions, when they are not in one-to-one correspondence with syntactic structure, should be represented in semantic structure. The proposal then is that the two interpretations of sentences like (10.b) should be determined post-transformationally by means of rules of semantic interpretation. One such rule will say that silly, when occurring in surface structures like (9), is understood to be predicated of both the actor and the action, and another will say that silly is understood to be predicated of the action only. For this purpose we will make an attempt to adapt Shopen's proposal concerning lexical entries to the description of Class A adjectives. That is, we will enter the necessary information for the correct interpretation of sentences with Class A adjectives into the lexical entry for these adjectives. Such an approach corresponds to our intuition, which we share with Shopen, that it is the main predicate in such constructions which is in greater part responsible for the correct interpretation of the sentence in which it appears.

At this point one might raise the question: if our grammar contains rules of derived structure interpretation anyway, why bother deriving infinitives from sentential sources at all? Why not simply
adopt Shopen's proposal in its entirety, i.e., generate infinitival complements in the base and leave it to rules of derived structure interpretation to assign the correct reading to the resulting sentences. We do not adopt such a position, because it is our conviction that giving up deriving infinitives from sentential sources would, in many cases, lead to a great loss in generality. For some syntactic arguments in favor of a desentential derivation for infinitival complements the reader is referred to Section 5 of Part I.

Let us now return to our consideration of the properties of Class A adjectives. One very important cooccurrence restriction of Class A adjectives is that the complement verb may never be stative. Class A adjectives may be said to express a value judgment about an action. This restriction must be incorporated into the lexical entry for this class of adjectives.

It is interesting to note that, although Class A adjectives are semantically "factive," only a few satisfy the syntactic criteria for factivity in the sense of Kiparsky and Kiparsky (1971). For example, all of them satisfy the negation test, i.e., the presupposition that the complement is "true" remains constant under negation:

(18) a. It was wise of Peter to follow directions.
    b. It was not wise of Peter to follow directions.

(19) a. It was odd of Peter to remain silent.
    b. It was not odd of Peter to remain silent.

The presupposition that 'Peter followed directions' in (18) and the presupposition that 'Peter remained silent' in (19) accompany both the affirmative and the negative version of the two sets of sentences,
respectively. On the other hand, all, except odd, peculiar, and a few others, allow RAISING subject-to-subject, which, according to the Kiparskys' is characteristic only of non-factive predicates:

(20)   a. Peter was brave, kind, foolish, to leave so soon.

b. *Peter was odd, absurd, peculiar, to leave so soon.

Under the Kiparsky's analysis, the ungrammaticality of (20.b) is explained in terms of an underlying head noun fact and Ross' Complex NP Constraint (cf. Ross, 1967). It is obvious from sentences (20.a) that an analysis on the lines of the Kiparsky's will not work for adjectives like wise, brave, kind, foolish, etc. if we assume that sentences (20.a) are derived by means of raising operations. Our structure (15) may not be completely satisfactory from that point of view, and we will therefore only regard it as an approximation. It will serve our present purposes which are to study the interpretation of complements whose subjects are missing in surface structure.

The "EQUI analysis" described above encounters a serious problem which has to do with the requirement that the matrix NP be coreferential with the surface subject of the infinitive. Notice that under this analysis the deleted subject of the infinitive may originate either as deep subject or as deep object as evidenced by the sentence pair:

(21)   a. It was foolish of Peter to run away.

b. It was foolish of Peter to be caught.

It is worth noting that there seem to be some doubts as to whether Class A adjectives really allow passive complements. For most speakers sentences like the following are totally ungrammatical:

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(22) a. *It was wise of Peter to be persuaded (by Mary).
    b. *It was brave for an endangered animal to be rescued
       (by Peter).

(21.b), on the other hand, seems to be more easily accepted with a
reading something like "For Peter to have allowed himself to be caught
was foolish."\textsuperscript{9}

Let us then assume that sentences like (21.b) must be accounted
for in the grammar. If we assume that they arise through the Passive
transformation (some, including Shopen, would no longer regard the
Passive as a transformation), then the coreferentiality constraint
under discussion must be stated at the surface level. But if we can't
state the constraint at the deep level, the grammar will generate sen-
tences like (23.a) from both (23.b) and (23.c).

(23) a. It was kind of Peter to call the doctor.
    b. [It was kind of Peter [Peter call the doctor.]]
    c. [It was kind of Peter [\(\Delta\) call the doctor]]

This is a most undesirable situation, given that (23.a) is certainly
not structurally ambiguous. Moreover, (23.c) is semantically anomalous:
it predicts the meaning that 'it was kind of Peter for somebody else to
call the doctor.' This is a serious problem for the Extended Standard
Theory for which I can only see an \textit{ad hoc} solution. We will briefly
discuss the use of empty nodes at the end of this section. Furthermore,
the grammar would also generate sentences like (24), which is even more
undesirable:

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(24)  
a. *It was kind of Peter for John to call the doctor.

   b. *It was foolish of Peter for John to be caught.

   c. *It was foolish of Peter for somebody to catch him.

Notice that the ungrammaticality of sentences (24) cannot be attribu-
ted to the failure of Equi-NP-Deletion to apply, since they do not meet
the structural description of Equi, which is therefore not supposed to
apply. We might try to state the constraint excluding (24) at the
surface level in some form like (25).

(25) Mark as ungrammatical all sentences in which Class A adjec-
tives are followed by two prepositional phrases.

This solves this particular problem but does not explain it. I would
therefore not regard it as a desirable solution.

The statement of obligatory coreference is one of the thorniest
problems facing any analysis employing deletion rules, and which, so
far, has eluded a satisfactory solution. The problem has received
ample attention in the literature and has led to a number of different
proposals. As far back as 1965, Lakoff (1965, 1970a) developed his
theory of 'absolute exceptions.' Later, Perlmutter (1971) demon-
strated Lakoff's proposal to be observationally inadequate, and offered
his own solution in the form of 'deep structure constraints.' The
latter proposal was in turn criticized by Fisher and Marshall (1969),
Jackendoff (1969, 1972), and Newmeyer (1969). Many linguists today
tend to believe that obligatory identity is not a syntactic constraint
at all, but that it is semantic in nature. This is also Shopen's view.

The notion of "control" is only meaningful in a framework which
allows deletion rules. It therefore makes no sense to talk about
control in Shopen's system. However, the properties of predicates described in terms of control must be accounted for in any theory and it is therefore of interest to inquire how Shopen would do it. He does not consider structures of the form It BE ADJ INF X in his dissertation. However, it is possible, I think, to conjecture from his other work how he might have treated the sentence types discussed so far. These are listed below in (26) with the adjective kind:

(26) a. It was kind to call the doctor.
    b. It was kind of Peter to call the doctor.
    c. Peter was kind to call the doctor.

It was suggested at the beginning of the discussion of Class A adjectives that sentences containing such adjectives embody value judgments of both the actor, represented by the NP of the of-phrase, and the action described in the complement. Class A predicates might, therefore, in Shopen's notation, be represented by the following semantic formula:

(27) [VALUE JUDGMENT (x \& [ACTION x])]

where the symbol "\&" is to be read as "and." The surface structures of the sentences in (26) can be represented by the surface formulae (28) and (29) as follows:

(28) It BE ___ (of NP) IP for sentences (26.a,b)

(29) NP BE ___ IP for sentences (26.c).

The lexical entry for kind would contain both the syntactic information represented in (28) and (29) and the semantic information in (27). The correspondences between the syntax and the semantics of kind might be set up as follows:

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(30)

\[ \text{kind, +ADJ (Class A)} \quad \text{[It BE (of NP) IP]} \quad \text{(i)} \]
\[ x \quad y \]
\[ \text{[NP BE IP]} \quad \text{(ii)} \]
\[ x \quad y \]
\[ \text{[VALUE JUDGMENT (x \& [ACTION x])]} \quad \text{(iii)} \]
\[ y \]

where \( x \) represents the ACTOR
and \( x \) = unspecified if ellipted; either definite or indefinite, according to context.

The semantic rule (part iii) tells us that whether \text{kind} appears in a
surface structure of type (i) or (ii), the NP indexed with \( x \) corre-
ponds to the actor in semantic structure, and also functions as the
subject of the infinitive (indexed with y).\(^{11}\) Notice that Shopen's
approach presents a definite advantage in that it avoids the problems
connected with the statement of the coreferentiality requirement
encountered in the "EQUI analysis."

The lexical entry for \text{silly} would differ somewhat from that of
\text{kind}. For example, it would have to say that \text{silly} is capable of
occurring in the following syntactic environments:

(31) \text{silly, ADJ (Class A)} / [It BE (of NP) IP] \quad \text{(i)}
\[ \text{[It BE (for NP) IP]} \quad \text{(ii)} \]
\[ \text{[NP BE IP]} \quad \text{(iii)} \]

Each syntactic environment will have an interpretive rule associated
with it. For environment (i) we can imagine a rule identical to the
one posited for \text{kind} (cf. (30.iii). For (ii), the semantic part will
have to be simplified. It might look like the following:

\[ \text{[VALUE JUDGMENT [ACTION x]]} \]

where \( x \) refers to the object of the preposition \text{for} in (31.ii).
Environment (iii) would presumably be associated with the rule for environment (i). The entry for silly might then take the following form:

(32)

\[
\text{silly, } \text{+ADJ(Class A2)},
\]

\[
\begin{align*}
\text{[It BE } & \text{(of NP) IP]} \quad \text{[VALUE JUDGMENT } (x \land \lbrack \text{ACTION } x \rbrack )] \quad (i) \\
\text{x} & \quad \text{y} \\
\text{[It BE } & \text{(for NP) IP]} \quad \text{[VALUE JUDGMENT } \lbrack \text{ACTION } x \rbrack ] \quad (ii) \\
\text{x} & \quad \text{y} \\
\text{[NP BE } & \text{IP]} \quad \text{[as for (i)]} \quad (iii) \\
\text{x} & \quad \text{y}
\end{align*}
\]

where \( x \) represents the ACTOR, and

\( x = \) unspecified if ellipted; either definite or indefinite, according to context.

Notice that rules (i) and (ii) with NP(x) ellipted explain the two potential interpretations of sentences like (10.b).

A proponent of the transformational approach would voice the objection that Shopen's theory unduly increases the number of possible deep structure types by defining parts (i) and (ii) of lexical entry (30) and parts (i), (ii) and (iii) of lexical entry (32) as syntactically independent sentences. Shopen's answer to such objections is that the relatedness of multiple patterns governed by the same lexical item is captured in his grammar by Word Structure Conditions with the same adequacy as it is captured in the standard approach by transformations.

The only kind of Word Structure Condition he actually illustrates in his dissertation is the one that relates active sentences with their
passive counterpart. This Word Structure Condition has the following form:

\[(33)\]
\[V(\text{+AF})/ [NP_1 X \_NP_2 X] \equiv V(\text{+EN})/ [NP_2 X \text{ be} (\text{by NP}_1) X]\]

(Shopen 1972, p. 197)

This says that given a lexical entry containing the information on the left hand side of the equivalence sign, there is another with the information on the right side and the same \(V\), and vice versa. On the basis of this example, we might construct a Word Structure Condition for say, the sentences (26.b) and (26.c) in the following manner:

\[(34)\]
\[\text{ADJ} [+\text{Class A}] / [\text{It BE} \_ \text{NP IP}] \equiv \text{ADJ} [+\text{Class A}] / [\text{NPBE} \_ \text{IP}]\]

This would predict that for every Class A adjective appearing in the environment on the left hand side of the equivalence sign, the environment on the right is also possible. Similar Word Structure Conditions would have to be constructed for the remaining environments in which Class A adjectives can appear. For example, we would want to relate such sentence pairs as "Calling the doctor was kind of Peter" to "Peter was kind to call the doctor." So far, this seems a perfectly satisfactory alternative to the transformational approach. We must ask, however, how such Word Structure Conditions would take into account the recursive property of language, specifically, how they could account for, say, the two sentences in (35):

\[(35)\]
\[a. \text{ Calling the doctor is believed to be liable to turn out to have been selfish of Peter.}\]
\[b. \text{ It is believed to be liable to turn out to have been}\]

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selfish of Peter to have called the doctor.

This question will be investigated in some detail in Part II, Section 3.2. To anticipate our findings, it would seem that, irrespective of whether or not we could write a Word Structure Condition to relate sentences (35.a) and (35.b), Shopen's system, in its present form, cannot adequately handle sentences with infinitival complements with embeddings deeper than one.

At this point it might be profitable to take a brief look at analogous constructions with Class A adjectives in German, French, and Romanian.

Sentences like It was kind of Peter to call the doctor turn up with the equivalents of 'on his part,' except in German, which uses a von-phrase (equivalent to an of-phrase in English) with a non-pronominal NP, and either von-phrase or an 'on his part' construction with a pronominal NP.

(36) a. Es war sehr nett von Peter den Arzt zu rufen.
       (It was very kind of Peter the doctor to call.)

       b. Es war seinerseits sehr nett den Arzt zu rufen.
          (also nett von ihm)
          (It was on-his-part very kind the doctor to call.)

(37) a. C'est aimable de la part de Pierre d'appeler le docteur.
       (It is very kind on the part of Pierre to call the doctor.)

       b. C'est bien aimable de sa part d'appeler le docteur.
          (It is very kind on his part to call the doctor.)
Shopen would have no trouble in accounting for these sentences, since as was pointed out above, each sentence would be generated in its surface structure form, and each surface structure would be associated with a rule of semantic interpretation which simply states which NP is to be assigned as the subject of the infinitive in semantic structure. Under the "EQUI analysis" the base rules would have to generate structures like (39) below. The problems in each language are essentially the same as those touched upon for English.

(39)

The equivalents of the English sentence Peter was kind to call the doctor are more "natural" when translated as sentence conjunctions, although in many cases an infinitival construction is possible:
German

(40) a. Peter war so nett und hat den Arzt gerufen.
   (conjunction).
   (Peter was so kind and has the doctor called.)
   'Peter was kind to call the doctor.'

b. Seien Sie so gut und rufen Sie mir den Arzt.
   (conjunction).
   (Be you so good and call you for me the doctor)
   'Be kind enough to call the doctor.'

c. Seien Sie so liebenswürdig mich arbeiten zu lassen.
   (infinitive).
   (Be you so kind me work to let)
   'Be so kind as to let me work.'

French

(41) a. Pierre est très aimable de me faire savoir ceci.
   (infinitive)
   'Pierre is very kind to let me know this.'

b. Pierre a été très gentil et a appelé le docteur.
   (conjunction)
   'Pierre was very kind to call the doctor.'

c. Soyez gentil et appelez-moi le docteur. (conjunction).
   'Be so kind as to call me the doctor.'

d. Soyez aimable et laissez-moi travailler. (conjunction).
   'Be kind enough to let me work.'
(42) a. Petru a fost amabil și a chemat doctorul. (conjunction).
   (Petru was kind and called the doctor-DEF)

   b. Fi amabil și chiamă doctorul. (conjunction).
   (Be kind and call doctor-DEF)

   c. *Fi amabil să chiemi doctorul. (subjunctive).
   (Be kind to call the doctor)

4.2 Class B adjectives

Class B adjectives, as opposed to Class A adjectives, are characterized by their ability to occur in the environment of for-phrases both in simplexes and in complex sentences as illustrated below:

(43) a. This book is too difficult for her.

   b. This book is inappropriate for her.

   c. This task seems too easy for her.

   d. Keeping quiet is impossible for her.

   e. It is unpleasant for Mary for her husband to be out of work.

   f. It would be easier for me for you to do this than for me to do it myself.

   g. It would be unpleasant for us for it to rain now.

   h. It would be difficult for Al for one of his aides to talk now.

   i. It would be embarrassing for me for my son to fail his exam.

   j. For my son to fail his exam, would be embarrassing for me.
In the above sentences the for-phrase immediately following the adjective is clearly a constituent of the main clause. From the semantic point of view, the main clause NP is understood to function as an "experiencer" or "beneficiary." If something can be described as difficult, it is so because somebody is experiencing the difficulty; if something is unpleasant, it is so because it is unpleasant for somebody. Notice, also, that in contrast to Class A adjectives the matrix NP and the subject of the embedded clause can vary independently.

Let us now consider sentences with one for-phrase:

(44) a. It is difficult for Peter to beat the champion.
   b. It is inappropriate for Mary to read this book.
   c. It is tough for Mary to keep quiet.

In sentences like (44) it is not immediately obvious whether the for-phrase is a constituent of the main clause, or whether it is the subject of the for-to complement.

Some of the tests proposed to help decide this matter involve movement rules. For example, the possibility of moving the whole string for NP VP to the front of the sentence indicates that the for-phrase is part of the embedded clause:

(45) a. For Peter to beat the champion is difficult.
   b. For Mary to read this book is inappropriate.
   c. For Mary to keep quiet is tough.

Preposing the infinitive phrase alone, on the other hand, shows that the for-phrase is part of the upper sentence:

(46) a. To beat the champion is difficult for Peter.
   b. To read this book is inappropriate for Mary.
c. To keep quiet is tough for Mary.

Further evidence that the for-phrase can be part of the main clause is provided by sentences in which the for-phrase is fronted:

(47) a. For Peter, it is difficult to beat the champion.
    b. For Mary, it is inappropriate to read this book.
    c. For Mary, it is tough to keep quiet.

The fact that (45-47) are well-formed indicates that sentences like (44) are structurally ambiguous. In one instance the for-phrase is understood as a constituent of the matrix, i.e., it functions as an "experiencer"; in the other, the for-phrase is understood to function as the subject of the embedded clause, without any "experiencer" being specified. This view is supported by the fact that all the sentences in (44) have at least two possible intonation breaks, one after the for-phrase, and one before, as shown in (48)

(48) a. It BE ADJ --------for NP INF
    Class B
    b. It BE ADJ for NP-------INF
    Class B

Notice also that each sentence in (44) yields two clefted structures:

(49) a. What is difficult is for Peter to beat the champion.
    b. What is difficult for Peter is to beat the champion.

(50) a. What is inappropriate is for Mary to read this book.
    b. What is inappropriate for Mary is to read this book.

(51) a. What is impossible is for Mary to keep quiet.
    b. What is impossible for Mary is to keep quiet.

The facts presented above suggest that sentences like (44) containing only one for-phrase and in which the NP following for is ANIMATE
are structurally ambiguous along the lines of (48). We would expect to find that they have two readings corresponding to the two underlying structures represented in (48), i.e., one interpretation on which the for-phrase is understood to be a constituent of the main clause, in which case it "controls" the subject of the immediately following infinitive, and a second interpretation on which we understand the for-phrase to be the subject of the embedded clause. This expectation is not always borne out by the facts. A sentence like (44.a) "It is difficult for Peter to beat the champion" seems to have only the reading in which the for-phrase is understood to be in the upper clause, i.e., it can only mean that "it is difficult for Peter, for himself to beat the champion." Sentences like (52), on the other hand, are clearly ambiguous:

(52)  
a. It is dangerous for Dean to talk.
   b. It is dangerous for the Godfather to get angry.

Under one reading of (52.a) we understand the danger to be incumbent upon Dean, while on a second reading Dean's talking is clearly dangerous for some unspecified person(s) other than Dean himself. (52.b) can be interpreted in a similar manner. On one reading it could be dangerous for Godfather himself to get angry, while on the other, the danger is understood to be incumbent upon those who anger him. The generalization would seem to be then, that sentences with class B adjectives with only one for-phrase, and in which the NP following the for is ANIMATE, are at least potentially two-way ambiguous, although, as noted above, in some cases it is very difficult to find clear examples.

Consider now a sentence in which the NP of the for-phrase is

71
INANIMATE:

(53) It would seem difficult for anything like this to happen again.

Notice that in (53) the only sharp intonation break occurs after the adjective. An intonation break after the for-phrase seems rather unnatural, which tends to argue that the for-phrase is not part of the main clause. The phrase for anything can only be understood as the (overt) subject of the infinitive and not as an "experiencer." Notice that the same observation holds for sentences with other Class B adjectives when the NP of the for-phrase is INANIMATE.

(54) a. It is\{important\} for dinner to be ready for 6 p.m.
    \{impossible\}
    \{easy\}

b. It is\{dangerous\} for the dishes to be piled two feet high.
    \{good\}

In (54) the only sharp intonation break occurs before the for-phrase. Now, while sentences like (44), where the matrix NP is ANIMATE, yielded two clefted structures, a sentence like (54) where the NP of the for-phrase in INANIMATE only yields one.

(55) a. What is important is for dinner to be ready by 6.
    
    b. *What is important for dinner is to be ready by 6.\textsuperscript{13}

We conclude that sentences like (54) in which the NP following the for is INANIMATE have only one underlying structure, namely the one represented in (48.a). The generalization with respect to the correct interpretation of sentences with Class B adjectives can now be stated as follows:
(56) An ANIMATE NP occurring in the environment
\[\text{[it BE ADJ for INF X]}\] can be interpreted as:
Class B

(i) the subject of the infinitive
(ii) an "experiencer," in which case the ellipted subject
of the infinitive is taken to be coreferential with it.
An INANIMATE NP occurring in this environment can only
have the first interpretation.

This is equivalent to saying that Class B adjectives allow an overt for-
phrase in the matrix only if the NP in the for-phrase is ANIMATE. In
the standard approach this would have to be taken care of by subcate-
gorizing Class B adjectives as follows:

(57) ADJ
\[\text{[It BE (for } [\text{NP} +\text{ANIM} ] ) S]?\]
Class B

Let us now consider how Shopen might account for the generalization
set out in (56). Recollect that Shopen explicitly expresses the view
that "in and of themselves they (infinitives) are always indeterminate,
that when they are generated they demand a subject to be supplied from
without, and sometimes the subject is supplied in the linguistic con-
text, and sometimes not." (Shopen, 1972, p. 273). According to the
above statement, a sentence like \text{It is difficult for Peter to beat the}
\text{champion} would be generated in the base as an unstructured string. His
interpretive rule would have to be defined on a formula like (58)

(58) \text{It BE ADJ (+Class B) for NP IP}

He would most probably have two interpretive rules, one for NPs in
general, whether animate or inanimate, and one for animate NPs alone.
The first rule would point to a semantic structure where the NP would
function as the subject of the infinitive, while the second would point to another semantic structure in which the NP would function both as the "experiencer" and as the subject of the infinitive. So far, the two interpretive rules needed are equivalent to the two subcategorization features abbreviated in (57). Shopen's rules have the advantage, however, that they also tell us what the semantic structure of the sentences is. But advantages must be weighed against disadvantages in the context of the analysis as a whole.

There are some adjectives for which it is very difficult to establish whether they really belong to Class B or not. Such an adjective is necessary. Necessary seems to allow a for-phrase in the main clause:

(59) a. This money is absolutely necessary for me.
    b. It is necessary for me that my children pass their exams as soon as possible.
    c. It is necessary for me for you to fetch the children today.

Although it seems that these sentences are possible, i.e., there are some speakers who do not totally reject them, most speakers feel uncomfortable with them. The usual response to such sentences as in (59) is "Why do you want to say this at all? What is wrong with I need this money very badly, or I need you to fetch the children today"?

Also, notice that the analogues of (46) and (47) are of equally doubtful acceptability:

(60) a. ?To read this book is necessary for me.
    b. ??For me, to read this book is necessary.
On the other hand, sentence (61) is ambiguous on the lines of (48).

(61) It is necessary for me to leave at once.

It can be interpreted as meaning that the necessity of leaving is incumbent upon me, or that it is necessary for the well-being of some unspecified person that I leave at once. There is another difference between necessary and the other adjectives in this class which is worth noting. While all the other adjectives listed allow Tough Movement, necessary does not. Observe (62):

(62) a. This book is [inappropriate] for her to read.
    {necessary}

b. This book is [impossible] for me to read.
   {necessary}

c. This horse is [hard] for anyone to ride.
   {necessary}

d. John is [difficult] for anyone to talk to.
   {necessary}

e. This river is [dangerous] to swim in.
   {necessary}

Two other adjectives that behave somewhat like necessary are inconceivable and advisable. Under very special conditions advisable allows a for-phrase in the matrix as evidenced by the possibility of the two clefted structures below:

(63) a. What is advisable is for you to go to Paris.

b. What is advisable for you is to go to Paris.

Inconceivable, on the other hand, seems never to allow a for-phrase in matrix. Neither inconceivable nor advisable allow Tough Movement:
(64) a. *This book is advisable for her to read.
   b. *This book is inconceivable for her to read.

The German equivalent of the English necessary, namely notwendig, and the French nécessaire are unequivocally Class B adjectives. Sentences like the following are quite natural:

(65) a. Es ist für mich notwendig, dass Du sofort kommst.
       (It is for me necessary that you at once come—indicative)
       'It is necessary for me that you should come at once.'
   b. Es ist für uns notwendig, dass wir gleich abfahren.
       (It is for us necessary that we immediately leave—indicative)
       'It is necessary for us to leave at once.'
   c. Es ist für uns notwendig gleich abzufahren.
       (It is for us necessary immediately to leave—infinitive)
       'It is necessary for us to leave at once.'
   d. Es ist notwendig für uns gleich abzufahren.
       (translation like (c)).

(66) a. Il m'est absolument nécessaire qu'il aille à la poste.
       (It to me is absolutely necessary that he go—subj. to the post-office.)
       'It is absolutely necessary for me that he go to the post-office.'
   b. Il m'est absolument nécessaire d'aller à la poste.
       (It to me is absolutely necessary to go—infinitive to the post-office)
       'It is absolutely necessary for me to go to the post-office.'
It is worth noting that in French and German the equivalent of the English for-phrase is never understood to function as the overt subject of an infinitival complement. It is always understood as part of the main clause. In a sentence like (65.a) für mich 'for me' is clearly a constituent of the main clause, since the complement is a dass-clause with a finite verb and a subject of its own. The same can be said about (65.b) which differs formally from (65.a) only in that the NP following für is coreferential with the subject of the sentential complement. (65.c) differs from (65.b) only in that Equi has applied with subsequent infinitivalization of the embedded verb. The für-phrase in (65.c) can also appear after notwendig as in (65.d) without any change in meaning at all. Not even in this position can für uns be understood to function as the surface subject of abzufahren. In contrast to the corresponding English sentences with necessary then, sentences like (65.d) are structurally unambiguous. The subject of the infinitive can only be interpreted as coreferential with the NP following für, i.e., the subject of the infinitive receives a controlled interpretation.

Similar observations apply to the French sentences in (66), in which it is hardly possible to imagine anybody interpreting the m' as the overt subject of the infinitive. Class B adjectives in French can take the equivalent of for-phrases which, just like in German, are constituents of the main clause:

(67) a. Il est dangereux pour elle de nager la nuit.
   'It's dangerous for her to swim at night.'

   b. Il n'est pas bon pour la santé de fumer 100 cigarettes par jour.
'It's not good for your health to smoke 100 cigarettes a day.'

In neither case can the pour-phrase be interpreted as the overt subject of the infinitive. In (67.a) the infinitival subject is taken to be coreferential with elle, and (67.b) might be analyzed as in (68) where the infinitival subject is taken to be coreferential with an NP (missing in surface structure) following santé:

(68) [Il n'est pas bon pour la santé de NP [NP₁ fume 100. . . jour]]

In Romanian, on the other hand, the equivalent of the English necessary, namely necesar, may never take the equivalent of a for-phrase in the same clause. According to reliable sources a sentence like (69) is ungrammatical, while (70) is perfectly good.¹⁴

(69) *Mi-e necesar să fac cutare lucrui.

(To me—is necessary that do—(subjunctive) such and such a thing)

'It is necessary for me—to do such and such a thing.'

(70) E necesar să fac cutare lucrui.¹⁵ (without the dative)

(Is necessary do—subjunctive such and such a thing)

'It is necessary—for me to do such and such a thing.'

Class B adjectives like greu 'difficult' and plăcut 'pleasant' do allow a DATIVE in the matrix, just like their English, German, and French counterparts. The equivalent of the English for-NP is pentru-NP. The following examples will serve by way of illustration:

(71) a. Pentru Ion e greu să învețe franceza.

(for Ion is difficult learn-subjunctive French)

'It is difficult for Ion to learn French.'
b. Pentru Ion e placut sa se plimbe cu Ileana.

(for Ion is pleasant walk-subjunctive with Ileana)

'It is pleasant for Ion to walk with Ileana.'

Romanian differs from English, and resembles German and French, in that the *pentru*-phrase can only be construed as being a constituent of the matrix. The NP after *pentru* functions as an 'experiencer.'

Let us now return to English and consider sentences with Class B adjectives which contain no overt *for*-phrase at all:

(72) a. It is difficult to beat the champion.

b. It is inappropriate to phone people after midnight.

c. It is impossible to read this book.

d. It is unpleasant to be immobile for so long.

It would seem that sentences like (72) can only be interpreted on the lines of "It is ADJ for x for x to IP." For example, sentence (72.a) can only mean that whoever attempts to beat the champion is the one that also experiences the difficulty, i.e., such a sentence cannot be interpreted as meaning "It is difficult for x for y to beat the champion." Following Thompson (1973), we might propose that sentences like (72.a) be derived from underlying structures approximately like (73) in which there is an unspecified matrix *for*-phrase which is coreferential with the unspecified embedded subject.
Deriving (72.a) from such a structure would, however, require an ad hoc rule for deleting the preposition for in the matrix, in order to avoid getting a sentence like (74):

(74) *It is difficult for to beat the champion.

As pointed out to me by Paul Schachter, there is no syntactic motivation for positing a for-phrase in the underlying structure of sentences like (72). Perhaps the most reasonable approach to these sentences would be to generate them from structures like (73), without the for-phrase, and to account for our intuitions about their interpretation by means of derived structure interpretive rules as was suggested in the case of Class A adjectives. Such an analysis is not so very different from Thompson's, since she claims to need surface interpretive rules anyway in order to account for the interpretation of the unspecified subject.

Within the framework of the Extended Standard Theory, then, Class B adjectives will have the general subcategorization feature (75)

(75) ADJ
      \[\text{Class B}\]
      \[
      \text{BE}\quad\text{(for}\quad\left[\frac{NP}{+\text{ANIM}}\right]\quad\text{S})
      \]

It would appear that there are some exceptions like inconceivable, which can never take a for-phrase in the matrix. These would have to be subcategorized as in (76).
The class of trees in which Class B adjectives can appear may be represented as in (77).

The fact that some adjectives in this class allow \(NP_1\) and \(NP_2\) to vary independently (for example, *pleasant*), and others do not (*inappropriate*) is, as far as I can determine at this point, a lexical matter which must be stated in the lexicon.

The fact that the PP is optional accounts for the possibility of two different sources for sentences with one *for*-phrase (cf. schema (48). If we have no PP in deep structure, the grammar will generate surface structures like (48.a). Structures like (48.b) arise from deep structures (77) containing a PP when \(NP_1\) and \(NP_2\) happen to be coreferential. Sentence with no *for*-phrase at all arise from (77) in cases where the embedded subject remains "empty" and there is no PP.

The following diagrams illustrate the various cases for adjectives like *pleasant* and *important*.

a. It is \{pleasant\} for John for Mary to do the dishes.
   \{important\}
(78)  
\[ S \rightarrow \text{NP} \rightarrow \text{VP} \rightarrow \text{ADJ(Class B)} \rightarrow \text{it} \rightarrow \{\text{pleasant} \} \rightarrow \{\text{important} \} \rightarrow \text{PP} \rightarrow \text{for} \rightarrow \text{NP}_1 \rightarrow \text{NP}_2 \rightarrow \text{do the dishes} \rightarrow \text{S} \]  

b. It is important for me to leave on time.

(79)  
(i)  
\[ S \rightarrow \text{NP} \rightarrow \text{VP} \rightarrow \text{it} \rightarrow \text{important} \rightarrow \text{PP} \rightarrow \text{for} \rightarrow \text{me} \rightarrow \text{I leave on time} \rightarrow \text{S} \]  

(ii)  
\[ S \rightarrow \text{NP} \rightarrow \text{VP} \rightarrow \text{it} \rightarrow \text{important} \rightarrow \text{I leave on time} \rightarrow \text{S} \]  

c. It is important to leave on time.

(80)  
\[ S \rightarrow \text{NP} \rightarrow \text{VP} \rightarrow \text{it} \rightarrow \text{important} \rightarrow \text{NP} \rightarrow \text{leave on time} \rightarrow \text{S} \rightarrow \Delta \]  

It needs to be pointed out that the grammar will generate a fourth structure which causes difficulties, namely, the structure (81), in
which the matrix NP is lexically realized and the embedded subject remains unspecified.

(81)

Under the standard analysis the grammar would derive from (81) the surface structure *It is important for John to wash the dishes* with the meaning 'It is important for John for some unspecified person to wash the dishes,' which is obviously incorrect, since in a sentence like the above the complement subject either is the NP following *for*, or is interpreted to be coreferential with it. Such problems can be avoided if we adopt Jackendoff's interpretive theory of complement subjects. Under Jackendoff's analysis a Complement Subject Rule assigns the correct reading to an "empty" complement subject node provided certain structural relations hold between this empty node and some other NP in the matrix. The major difference between Jackendoff's approach and Shopen's theory is that Jackendoff defines his interpretive rule on structures in which the subject is represented as an empty node in the syntax, while Shopen assigns the correct reading in semantic structure. There is, of course, a further difference. Shopen simply states in the lexical entry of each verb which NP in surface structure corresponds to the complement subject in semantic structure, while Jackendoff goes beyond simple description. He makes an attempt to explain the choice of
the antecedent of the complement subject in terms of two independent
semantic factors, networks of coreference and assignment of responsibil-
ity.

Much more work has to be done in the area of coreference before one
can even attempt to evaluate the two proposals.

Summary and Conclusions

In this section we have investigated a class of adjectives which
can appear in the surface structure formula

(82) IT BE ADJ (PREP NP) (PREP NP) INF X

The primary purpose of this investigation was to explain the possible
interpretations of the subject of the INF (infinitive) when it (the
subject) is missing in surface structure.

We have found that adjectives capable of occurring in the surface
structure formula (82) fall into at least two broad classes which we
have arbitrarily labeled Class A and Class B. We have found that these
two classes differ both syntactically and semantically along several
parameters. We will now set out the differentiating characteristics
side by side:
<table>
<thead>
<tr>
<th>Specific surface structure formula</th>
<th>CLASS A</th>
<th>CLASS B</th>
</tr>
</thead>
<tbody>
<tr>
<td>RAISE-subject-to subject</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>RAISE-object-to subject, or Tough Movement</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>factivity:</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Complement interpretation</td>
<td>ACTION</td>
<td>Indifferent</td>
</tr>
</tbody>
</table>

In this section I have presented the following generalizations:

I. **Class A adjectives:**

An NP occurring in the environment

/it BE ADJ \_ of \_ INF X

Class A

is always interpreted as the antecedent of the complement subject (the "controller").

II. **Class B adjectives:**

An ANIMATE NP occurring in the environment

/it BE ADJ \_ for \_ INF X

Class B

can be interpreted as:

(i) the subject of the infinitive,

(ii) an "experiencer" in which case it is also
understood to function as the "controller" of the complement subject.

An INANIMATE NP occurring in this environment can only have the first interpretation.

We have explored the possibility of accounting for these properties of Class A and Class B adjectives in both the Extended Standard framework and in Shopen's interpretive theory.

In order to account for the syntactic properties of the two classes within the standard framework we have proposed the following deep structures:

Class A

(i) \[ \text{it BE}_\text{of } \left[ \begin{array}{c} \text{NP} \\ \text{+ANIM} \end{array} \right] S \]

for all those adjectives which can only be predicated of human beings: kind, wise, . . .

(ii) \[ \text{it BE}_\text{(of} \left[ \begin{array}{c} \text{NP} \\ \text{+ANIM} \end{array} \right] ) S \]

for all others.

Conditions: the matrix NP and the subject of the embedded S cannot vary independently.

Class B

(i) \[ \text{it BE}_\text{(for} \left[ \begin{array}{c} \text{NP} \\ \text{+ANIM} \end{array} \right] ) S \]

(ii) \[ \text{it BE}_\text{ } S \]

for a few like inconceivable,
The discussion in this section has brought to light two major problems facing the Extended Standard Theory. Both are general problems, that is, not connected specifically with the kind of constructions investigated here. The first has to do with the statement of obligatory coreference between noun phrases, and has been touched upon above. The second has to do with what appears to be a totally unconstrained power of the grammar to randomly generate "empty" nodes in deep structure. Shopen argues that, although there might be some syntactic motivation for "empty" nodes in deep structure (see Emonds, 1970), the semantics of constituent ellipsis cannot be accounted for in this manner. His remarks are directed specifically against Emonds' theory in which "empty" nodes are used as dummy place-holders into which lexical material may be moved by transformations. They are not directed against a theory like Jackendoff's, in which empty nodes undergo the same transformations and are subject to the same interpretive rules as are lexically filled nodes.

To avoid the problems that must arise if empty nodes are generated randomly, Jackendoff suggests that the grammar contain a well-formedness condition which would reject any structure which has not been given a reading by rules of semantic interpretation. In other words, any structure in which an empty node has not been given semantic interpretation will be marked as semantically ill-formed.

Under Shopen's analysis such problems do not arise. The problems relating to coreferentiality are bypassed by simply stating in each lexical entry for main predicates which NP is to be assigned as subject to the infinitival complement. Shopen's theory, then, adequately
describes the facts. Notice, however, that such a description is not an explanation, and in this respect Shopen's theory is therefore not superior to any other proposal known to me. The questions relating to empty nodes are irrelevant in Shopen's framework, since he never would generate empty nodes. It was pointed out above that in his grammar Word Structure Conditions (WSC) do the work of transformations and the question was raised whether such WSC can in fact account for all the data that come within their scope. The question was not pursued any further because it appears to be the case that Shopen's grammar cannot account for the whole set of well-formed complement structures for reasons independent of the mechanism in question (see Part II, Section 3.2).

Finally, it must be noted that much of what has been said here in connection with the analysis of adjectives as it would be carried out in Shopen's grammar is based upon conjecture. In the absence of any positive indication from him, it is hard to be sure that one's guesses are indeed in accord with his views. We will therefore not attempt to evaluate the two conflicting proposals until we tread on firmer ground.

5.0 Arguments for a sentential source for infinitival complements

In previous sections we were concerned mainly with infinitival complements with grammatically indeterminate subjects, i.e., complements whose subjects cannot receive a specific interpretation within the context of the sentence alone, as for example in (1)

(1) It is absurd to act upon unfounded rumours.

The surface structure of such a sentence does not contain any
constituent representing the understood subject of the infinitive.

Much more common in the languages considered here are sentences with infinitival complements whose subjects are grammatically determine, i.e., sentences which contain some noun phrase which is felt to function also as the subject of the infinitive. Such sentences are (2.a) and its equivalents in German, French, and Hungarian:

(2) a. I want to go to Europe.
   b. Ich will nach Europa fahren. (G)
   c. Je veux partir en Europe. (F)
   d. Akarok Europába menni. (H)
   (I-want Europe-to go-INF)

In (2.a), for example, I, the subject noun phrase of the main sentence, is felt to be coreferential with the understood subject of the infinitive.

All analyses of sentential complementation proposed within the standard framework of generative grammar regard infinitival complements such as those occurring in (2) as derived from full embedded sentences. Under such an analysis sentence (2.a) has an underlying structure approximately as in (3), or more generally as in (4).

(3) \[s[I want s[I go to Europe]]
   NP V S

Under Jackendoff's (1969, 1972) proposal the identity relation between the complement subject (which appears in the base in the form of an unexpanded non-terminal node) and the matrix noun phrase with which it is coreferential is handled by means of rules of semantic interpretation. The point of interest here is that, even though Jackendoff's
approach represents a departure from Standard Theory, insofar as it no longer requires a rule of complement subject deletion, infinitival complements are still regarded as arising from underlying sentences. Shopen, as we have seen, would totally deny any syntactic relation between infinitival complements and full sentences. The reader is reminded that Shopen's main arguments for generating infinitives in the base are based upon his observation that the full range of meaning of elliptical structures can very often not be accounted for in a grammar which would derive them from fully specified underlying sentences by means of deletion rules. Recollect also that by 'deletion' Shopen means deletion of meaning-bearing items, i.e. real words. Shopen does, however, recognize that even under an analysis which allows deletion of meaning-bearing constituents, the derivation of sentences such as (2), in which the subject of the infinitive is grammatically determinate, can never lead to unrecoverable deletions. He does briefly consider what seems an obvious alternative solution, namely, that all infinitives with indeterminate subjects be generated directly in the base, while infinitives with determinate subjects be transformationally derived, but he rejects this compromise position on the grounds that it would lead to inconsistency in the grammar. It is clear, then, that his claim that all infinitives should be generated in the base in their surface form is based not upon specific arguments against deletion in cases where the subject of the infinitive is determinate, but upon a desire for uniformity of treatment of infinitives in general.

In what follows, I shall present evidence from English and several other languages in support of the more traditional transformational view.
that infinitives with determinate subjects be derived from underlying sentences. Among other things, I shall consider phenomena such as selec-
tional restrictions, gender agreement, and reflexive marking, all of which fall within the scope of the notion 'context-sensitivity.' I will attempt to show that generating infinitives independently in the base leads to a loss in generality. The reader is reminded that in Shopen's theory all those aspects that in Standard Theory fall under the notion 'cooccurrence' or 'context-sensitivity,' are accounted for by means of interpretive rules defined upon surface structure. In his theory there are no feature-changing rules and no second lexical look-up. Formatives that in Standard Theory are inserted on second lexical look-up are inserted freely in the first lexical look-up with a context-free proce-
dure where only category symbols matter. The interpretive rules not only impose semantic interpretation upon utterances, but they also act like a set of well-formedness conditions which check utterances to see if all subparts match and agree with each other properly.

To anticipate our results, I will attempt to show that when data from other languages are brought into consideration, an analysis in which infinitival complements are derived from underlying sentences appears to have more promise than one in which infinitives are regarded as an independent base category.

5.1 The following argument is from Postal (1970). He considers sentences like (5) in which the subject of the infinitival complement appears overtly in the surface structure:
(5) a. Joan wants Barbara to get married.
    b. Joan wants Lucille to visit Betty.

(Postal 1970, p. 445, ex. #9)

What the sentences in (5) show is that independently of sentences with
subjectless infinitives like (2.a) the base rules must also generate
complements with subjects. In other words, a structure like (4) is
required in the grammar on independent grounds. Supporting evidence
that verbs like want can take sentence-like complements comes from
pseudo-cleft constructions like (6), and from sentence pairs like (7):

(6) a. What I want most is that I should be left in peace.
    b. What I would prefer is that Joan should say it and not me.
    c. What I would like is that Joan should hurry up with her
work and finish.

(7) a. Peter desires that Mary should be on time.
    b. Peter desires Mary to be on time.

There are languages in which the equivalent of want takes senten-
tial complements in a productive fashion. Notice, by the way, that
French, Hungarian and Romanian require the subjunctive in the complement
clause while German takes the indicative.

(8) a. Joan veut que Barbara se marie. (subjunctive).
    b. Joan (azt) akarja hogy Barbara menj férjhez. (subj)

        [PRO]    [COMP]
    'Joan wants Barbara to get married.'

    c. Joan vrea ca Barbara să se mărite. (subjunctive).

        [COMP]
'Joan wants Barbara to get married.'

d. Joan will dass Barbara sich verheiratet. (indicative).

It would appear, then, that in all languages considered here (but not English) want and its equivalents take sentential complements freely, i.e., each language requires underlying structures like (4).

It is worth pointing out that an analysis based on (4) is also supported by our semantic intuition that want is a two-place predicate, that is, a relation between the individual who experiences a wish and the wish itself described by the complement sentence. Shopen, of course, would not deny this, but he would represent this intuition in the semantic structure of want-sentences and not in the syntax. Neither would he deny that Barbara and Lucille in (5) are the subjects of to get married and to visit Betty respectively. But once again, for him these relations are semantic and need therefore not be reflected by the syntax. His underlying structures for sentences like those in (5) and (7.b) would be like those schematized in (9), while underlying structures for sentences like those in (8) and (7.a) would contain an S as in (10)

(9) NP V NP IP
(10) NP V S

In structures like (10) the complement subject is part of the embedded sentence, while in structures like (9) an interpretive rule would have to assign the second NP as the subject of the IP in semantic structure. Different semantic rules are then needed for complement subject interpretation. This complication, both of the phrase structure component, and of the interpretive component, does not necessarily mean

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that Shopen's analysis is incorrect. If it could be shown to be super-
ior to an analysis based upon (4) on grounds of descriptive adequacy,
then it would obviously have to be preferred in spite of the formal
complications it entails. However, whatever advantages Shopen's
approach might present for the analysis of other constructions in
English, they are certainly not apparent in the case under discussion.
Shopen's approach, for example, seems to go against our syntactic
intuition that the complements in (5) as well as the complements in (8)
are both very much sentence-like structures. It is clear then that the
burden of proof is very much on Shopen.

5.2 In some languages, some verbs allow sentential complements to
be used interchangeably with infinitival complements with no or very
little meaning difference. The following are some illustrative examples:

French:

(11) a. Pierre croit qu'il est intelligent.
    b. Pierre croit être intelligent.
       'Pierre believes that he is intelligent.'

(12) a. Elle affirme qu'elle est belle.
    b. Elle affirme être belle.
       'She asserts that she is beautiful.'

(13) a. Jean déclare qu'il a faim.
    b. Jean déclare avoir faim.
       'Jean says that he is hungry.'

(14) a. J'ai su par Pierre que je m'étais trompé.
    b. J'ai su par Pierre m'être trompé.
       'I found out through Pierre that I was wrong.'
Romanian

(15) a. Când aveam şase ani am învățat [a cēti. (infinitive)]
    [sā cītest. (subjunctive)]

    (When I had six years have learned to read)
    'When I was six years old I learned to read.'

b. A început [a vorbi. (infinitive)]
    [sā vorbească. (subjunctive)]

    (he/she started to talk)
    'He/she started to talk.'

c. Nu ştie [a vorbi. (infinitive)]
    [sā vorbească. (subjunctive)]

    (Not knows to talk)
    'He/she doesn't know how to talk.'

In Romanian the infinitival complement and the subjunctive complement
(the Romanian equivalent of the English that-clause after the want-class)
are completely interchangeable for those verbs that can still take
infinitival complements. There is no meaning difference at all between
the two forms.

Vulgar Latin

A similar situation seems to have obtained in Vulgar Latin where,
according to Lakoff 1968, sentence pairs like those listed below were in
free variation.

(16) a. Licet abeas. 'You may go away'

    b. Licet to abire. (inf.)

(17) a. Dico quod venit. 'I say that he is coming.'

    b. Dico eum venire. (inf.)

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One last example from Cicero, quoted in Lyons (1969):

(18) a. Dico te venisse in Marci Laecae domum. (inf.)
    b. Dico tu venisti in Marci Laecae domum.

'I assert that you came into Marcus Laeca's house.'

Examples of this kind are more difficult to find in English. (The that-clause is normally in the subjunctive).

(19) a. I would prefer that Mary say it.
    b. I would prefer for Mary to say it.

(20) a. I found that Mary is unreliable.
    b. I found Mary to be unreliable.

(21) a. I believe that Mary is beautiful.
    b. I believe Mary to be beautiful.

(22) a. I desire that Mary be on time.
    b. I desire Mary to be on time.

While in the standard approach the relation between sentence-pairs like those cited in (11-22) is accounted for transformationally, in Shopen's grammar they would be generated by separate base rules and their relatedness would be accounted for in the semanatics. In other words, Shopen would generate the that-clauses in the form of sentences and the infinitival complements in the form of infinitives. He would then define two interpretive rules on the surface structures of the sentences thus generated, and would make them converge onto the same semantic structure, or in cases where the synonymy is not complete, on to very similar semantic structures. From the point of view of complexity the two approaches to the cases considered here seem to be equivalent. It is therefore necessary to consider further arguments for and against
the two approaches.

5.3 The "gap in the paradigm" argument.

The arguments for an underlying sentential source for infinitival complements are even stronger in French and German, for example, since, as we have seen above, in both these languages the equivalent of want can be followed by que- and dass-clauses in a productive fashion. Consider the following paradigms:

(23) Je veux que Marie parte.
    Tu veux que Marie parte.
    Il veut que Marie parte.
    Nous voulons que Marie parte.
    Vous voulez que Marie parte.
    Ils veulent que Marie parte.

(24) Ich will dass Marie geht.
    Du willst dass Marie geht.
    Er will dass Marie geht.
    Wir wollen dass Marie geht.
    Ihr wollt dass Marie geht.
    Sie wollen dass Marie geht.

Notice, however, that there is a striking gap in the two paradigms. (Since German wollen works exactly like French vouloir, we will only list the vouloir paradigm):
(25) *Je veux que je parte. (26) Je veux partir.
*Tu veux que tu partes. Tu veux partir.
*Il veut que il parte. Il veut partir.
*Nous voulons que nous partions. Nous voulons partir.
*Vous voulez que vous partiez. Vous voulez partir.
*Ils veulent qu'ils partent. Ils veulent partir.

What the examples in (25) and (26) show is that vouloir cannot take que-clauses just in those cases where its subject is coreferential with the subject of its complement. In all these cases it must be followed by an infinitive.

In the Standard Theory the facts of (23–26) are accounted for in the following fashion. The occurrence of vouloir with que-clauses is taken to be basic. The reasons for considering the que-clause as basic are (i) que-clause complements occur more frequently than other complement types and (ii) the structure of the embedded sentence is closest to the structure of an independent sentence. For these reasons, vouloir is entered in the lexicon with the strict subcategorization feature +[___S]. All the sentences in (23) are accounted for as simple expansions of phrase structure rules, and the kind of transformations that apply to simplexes (agreement rules, etc.). The sentences in (26) are assumed to be related to their ungrammatical sources (25) by EQUI or some other mechanism which correctly reflects the constraint in question.
A similar situation obtains in English, of course, in the class of sentences like (5) where verbs like want are followed by complements with subjects. Thus, sentences like (27) are impossible:

(27) a. *I want me to go to Europe.
    b. *You want you to go to Europe, etc.

The only possible form for these sentences is (28).

(28) a. I want to go to Europe.
    b. You want to go to Europe, etc.

Facts like these are usually taken as evidence for EQUI-NP-Deletion. The argument usually has the following form: Want can take sentential complements with subjects as in "I want Joan to go to Europe." Sentences like (27) in which the complement subject is identical with the main subject are ill-formed. Hence, if sentences like (28) are derived from structures like (27), the non-occurrence of sentences like (27) is explained, since structures like (27) are automatically subject to EQUI which converts them into structures like (28). Insofar as this argument is valid, it supports our claim for underlying sentential sources for infinitives.

Let us now return to the French data and inquire how Shopen would account for it. It is clear that in his system the lexical entry for vouloir must have at least the following two subcategorization features:

(29) vouloir/ \( \{ [+_{-S}] \} \) \( [+_{-IP}] \)

where IP stands for 'infinitive phrase.'

Notice, by the way, that what this rule in effect implies, is that the cooccurrence of vouloir with infinitives and with sentential
complements is an accidental fact of language. It completely fails to express the generality of the relation between members of paradigm (23) and paradigm (26).

Now notice that by subcategorizing the verb as I imagine he would do, Shopen will generate all sentences in (23) and (26), as well as those in (25) which are ungrammatical. Notice also that a sentence like *Je veux que je parte cannot be prevented from arising at the point in the derivation where lexical items are inserted into trees, for the simple reason that in Shopen's theory lexical insertion is context-free. Shopen would have to "filter out" such ungrammatical sentences by some kind of surface structure constraint. As mentioned before, in his system all these aspects of the grammar that fall under the notion of 'cooccurrence' must be accounted for interpretively. Shopen therefore needs an interpretive rule to mark sentences like *Je veux que je parte ungrammatical.

Shopen argues that the Standard Theory is "doing things twice" by marking verbs in the lexicon with respect to which NPs must be coreferential for EQUI to apply, and then using EQUI to delete the subject of the embedded sentence just in case the conditions of coreferraliality are satisfied. His theory, he argues, need only mark the verb in the lexicon with respect to which NP in the main sentence will be assigned as subject to the infinitive phrase. Notice that in the case of the French data under discussion Shopen would also be "doing things twice": he would be generating sentences which in the Standard Theory serve as source for the infinitival complements, and would subsequently apply surface structure interpretation rules to filter the ungrammatical

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sentences out.

In sum, then, we might point out that Shopen requires two mechanisms for the description of sentences (23) and (26), (i) the PS rules, which generate the verb with either an S complement or an IP complement and (ii), a 'Blocking convention' for identical NPs. These mechanisms permit Shopen to generate the correct output, but do not allow him to account for the obvious interdependence of the two devices. Finally, it is clear that Shopen's theory does not avoid the problems relating to defining coreference relations between noun phrases. He chooses to state the relevant relations in the lexical entry for each predicate in relation to each environment. Shopen's theory then seems to present no obvious advantages with respect to the analysis of verbs like want. I take the facts discussed above to weigh heavily in favour of a sentential source for infinitival complements.

5.4 Selectional restrictions

It has often been observed that in sentences like (2.a) there exist certain selectional restrictions between the subject of the main clause and the infinitival complement. For example, while (30.a) is grammatical, the rest of the sentences in (30) are ill-formed:

(30) a. I want to go to Europe.
   b. *I want to gather around the fire.
   c. *I want to elapse.
   d. *I want to be solved.

Next, we observe that the same restrictions hold in simplexes in which the subject is the same as the subject of want:
(31) a. I go.
   b. *I gather around the fire.
   c. *I elapse.
   d. *I am solved.

To capture the parallelism between (30) and (31), there should be a single rule to cover both cases. For there to be only one single rule, i.e., for selectional restrictions to be stated just once in the grammar, sentences (30) must be analyzed as shown in (4). The ungrammaticality of (30.b-d) then follows from the ungrammaticality of (31.b-d). If, on the other hand, sentences (30) are generated independently of sentences (31), then the selectional restrictions between the subject of the main sentence and the complement verb would have to be stated twice, once as holding between the subject and the predicate of a simple sentence, and once "across" want, as holding between the subject of the main sentence and the infinitival complement. Two mechanisms are thus needed in order to exclude from the grammar sentences like (32):

(32) a. *I elapse.
   b. *I want to elapse.

Shopen does not discuss his proposed mechanisms for accounting for selectional restrictions. He simply states that it will take the form of semantic interpretive rules which "check" surface structures for well-formedness. I am therefore unable to evaluate his proposal in detail. The only additional comment one might offer is that the statement of such interpretive rules to "check" cooccurrence restrictions may become unduly complicated, if not altogether impossible, as the complexity of the sentence to be "checked out" increases. Consider the
following examples, in which cooccurrence relations have to be checked across several intervening verbal forms:

(33) a. I want to be allowed \{to go. \}
    \{*to elapse. \}

    b. I want to try to begin \{to learn Judo. \}
    \{*to elapse. \}

We conclude that until such time as Shopen demonstrates that his interpretive rules can capture the facts pertaining to selectional restrictions in at least as elegant a manner as the analysis based upon a sentential source for infinitives, the latter is to be preferred.

5.5 Gender agreement

Another kind of argument for the derivation of infinitives from sentential sources comes from languages which make a distinction in gender. In French, for example, adjectives must agree in gender (and number) with the noun they describe. Consider the following sentences:

(34) a. Marie désire être belle. ¹⁹  (b) Marie est belle.

'Marie wants to be beautiful.'  'Marie is beautiful.'

* Belle agrees in gender (and number) with Marie, the subject of the main sentence. These facts can be accounted for very simply if we assume that sentence (34.a) has the underlying structure (35).

(35) s[Marie désire  s[Marie ETRE belle]]

We then only need one agreement rule which would account for both (34.a) and (34.b).

There is nothing in Shopen's grammar to exclude generating a sentence like (36):

(36) *Marie désire être beau. (where beau is the masculine
counterpart of \textit{belle}.)

As in the case of selectional restrictions, we can argue that trying to account for this kind of agreement interpretively would lead to unduly complicated rules.

5.6 Reflexives

The following is additional evidence from English for the presence of a subject in the underlying structure of infinitival complements:

(37) Mary wants John to treat \{ himself \} to a day off.  \{ *herself \}

(38) Mary wants to treat \{ herself \} to a day off.  \{ *himself \}

Reflexives have two basic properties: (i) they always require an antecedent in the linguistic context and (ii) it is necessary for both the reflexive and its antecedent to be in the same simplex sentence.

In Shopen's system both conditions are fulfilled by both sentences above. In both sentences the reflexive pronoun is understood as referring to a noun phrase previously mentioned in the sentence, and in his system both sentences are simplexes. This is so, because Shopen's grammar generates IPs under VP nodes, and not under S nodes. Shopen can therefore explain why in (38) only the pronoun \textit{herself} is possible. But now notice that according to the conditions stated above both \textit{himself} and \textit{herself} should be possible in (37). It is clear that Shopen needs to have a different account of reflexization from the one given in the Standard Theory in order to exclude the ungrammatical \textit{herself} in (37). For such cases he would possibly have to restate his reflexive
rule in terms of IPs instead of Ss. But since he would need to have a
reflexive rule for simplexes anyway, most probably very much like the
standard reflexive rule, this seems to entail a complication of the
grammar. It is not at all clear how Shopen would arrive at a principled
description of the facts in terms of superficial syntactic structure
alone. So once more, the burden of proof is on him.

There is also evidence from other languages which supports the
hypothesis that infinitives must come from underlying sentences. Con-
sider, for example, the following sentence from Romanian:

(11) Tu i-ai interzis băiatului a se face marină.

(You him-have forbidded boy to himself make sailor)

'You forbade the boy to become a sailor.'

Now consider the string a se face marină 'to become a sailor.' The
string consists of the infinitive a face 'to make,' the reflexive pro-
noun se (third person sg. accusative) equivalent to 'himself' and the
noun marină 'sailor.' Literally the string translates as 'to make him-
self a sailor.' In Romanian there is a very general rule, as there is
in German or English, which states that the reflexive pronoun must
agree in gender and number with the subject of the sentence. If
infinitives were introduced in deep structure there would be no way of
explaining the occurrence of se since in such a case the subject of the
sentence would be tu 'you.' Hence, generating infinitives in deep
structure would result in the loss of generality of the reflexivization
rule.

By assuming a sentential source for a se face marină and by
assuming that agreement between subject and the coreferential object
takes place on the cycle of the embedded sentence, that is, before the deletion of the subject of the embedded sentence, we have a natural explanation for the reflexive pronoun *se*.

In summary, we have presented evidence from English and several other languages in favor of the hypothesis that infinitival complements with determinate subjects are underlyingly full sentences. We hope to have shown on the one hand that there is no evidence in support of Shopen's claim that infinitives with determinate subjects should be generated in the base, and on the other, that in certain cases an interpretive approach such as Shopen's leads to a considerable loss in generality.\(^{20}\)
FOOTNOTES TO PART I

1 Following Jackendoff (1972) Shopen makes use of the predicate CHANGE for both predicates of motion and predicates of change of state. Shopen's characterization of the predicate CHANGE in terms of THEME, SOURCE AND GOAL is due to Gruber (1965).

2 Constituent ellipsis was defined as an aspect of semantic structure for which there is no corresponding syntactic constituent. (See Section 2).

3 For some discussion of unspecified object deletion see Katz and Postal (1964, p. 80) and G. Lakoff (1970a, p. 47).

4 I shall be concerned with Shopen's analysis of passives only as far as it is relevant to the treatment of infinitives.

5 Subject-infinitive agreement is only operative with a certain limited class of intransitive verbs, and even with those it is not mandatory.

6 The "control problem" has to do with which NP's in the upper clause are permissible as coreferents of the complement subject. The NP selected as coreferent is called the "controller": it controls the deletion of the embedded subject.

7 The parentheses indicate that the prepositional phrase contained within them is optional.

8 For an attempt to solve the problem of how to account for "factive" adjectives in a uniform manner, see Wilkinson (1970).
The same problem exists throughout English. For example, we can have (i) but not (ii):

(i) I tried to be caught.

(ii) *I tried to be given a book by Mary.

The generalization is a semantic one having to do with passives over which the "patient" can exercise control and isn't peculiar to the case in point.

For an especially enlightening critique of Perlmutter's "deep structure constraints" see also Robinson (1973).

I wish to make it quite clear that lexical entry (30) as it stands is to be taken as no more than a guess (from the formal point of view, perhaps a less than perfect guess), at how Shopen would construct it.

Sentences like (43f) are possibly mentioned for the first time in Jackendoff (1969, 1972).

I will leave it to the reader to apply the clefting test to the remaining cases in (54).

In this case the source was Maria Manoliu, Professor of Romance Languages, University of Bucharest.

Pronominal subjects can be deleted after agreement has applied.

The notation (A / B) means "either A or B" but not both (exclusive "or"), although both can be missing in surface structure.

This is also true of Spanish, Portuguese, and even of a language as remote from Romance as Hungarian.

Spanish works just like French as illustrated in the following paradigm:
(i) Quiero ir. 'I want to go.'
Juan quiere ir. 'Juan wants to go.'
Quiero que Juan vaya. 'I want Juan to go.'

Hungarian:

(ii) Akarok elmenni. 'I want to go.'
(I-want go-Inf)
János elmeni akar. 'Janos wants to go.'
(Janos go-Inf wants)
(Azt) akorom hogy János elmenjen. 'I want Janos to go.'
(That I-want that János go-subjunctive)
[+pro] [+comp]

18 Latin is another language which makes this distinction:

Julia mavult esse pulchra. (*pulcher)

'Julia prefers to be beautiful.'

Examples are from R. Lakoff (1968). So are Italian, Romanian, Spanish, Russian, and many others.

19 For several other arguments against an interpretive theory such as Shopen’s the reader is referred to Ross (1969).
PART II

INFINITIVES FROM RAISING RULES

1. Aims

Part II of this work is concerned with the relation between sets of sentences like those in (1) – (5), which in Standard Theory are analyzed in terms of raising operations:

(1) a. It seems that the problem is fairly complicated.
    b. The problem seems to be fairly complicated.

(2) a. It is certain that John will come.
    b. John is certain to come.

(3) a. It is not easy to solve the problem.
    b. The problem is not easy to solve.

(4) a. Sellars believes that there is a girl in his soup.
    b. Sellars believes there to be a girl in his soup.

(5) a. It is reported that there is a fiesta in Indio.
    b. There is reported to be a fiesta in Indio.
    c. Someone reports there is a fiesta in Indio.

The chapter begins with a brief review of previous studies concerned with the relation between the sentences above. This is followed by a discussion of raising constructions in English in the light of the two competing hypotheses to be considered here. Next, we will bring evidence to bear on the question of the existence of a rule of RAISING from German, French, Hungarian, and Romanian. We shall argue throughout that the transformational view is essentially correct, and that RAISING should be retained in the syntax, while its semantic effects, where they exist,
should be accounted for by means of derived structure interpretation rules.

2. **Background**

The syntactic processes relating sets of sentences like those in (1) – (5) were noted and described by many grammarians long before they were formalized within the transformational framework.

Poutsma (1928) discusses the phenomenon under the heading "the shifting of subject". The following are some of his examples:

(6) a. It is difficult to describe this.
    b. This is difficult to describe.

(7) a. It happened that I knew the man.
    b. I happened to know the man.

Other predicates he discusses are: **chance, seem, appear, turn out, certain, (un)likely, sure, and safe.**

Jespersen (1927, 1937, 1940) refers to constructions like the ones in (6) and (7) as well as to sentences like (8) with verbs like **believe, report**, etc., as "split subject" constructions:

(8) a. He was believed to have a bedroom at the back.
    b. He is reported to have lost five pounds.

Since Poutsma and Jespersen, the shifting of subject has been discussed by other grammarians, both in traditional, and more recently, in transformational terms.

Lees (1968, p. 63) talks about sentences such as (9) as "second passives" of **that-clause complements**:

(9) a. Bill is said to have worked.
    b. He is thought to be rich by me.
Thus, in order to derive (9b) from an underlying structure with a that-clause complement, he proposes the following steps:

(10) a. I think that he is rich.  
      (that-clause)

   b. That he is rich is thought by me.(?)  (1st passive)

   c. He is thought to be rich by me.  (2nd passive)

   but not

   d. *I think him to be rich.  (complement)

Lees' analysis, as we shall see later, is not unlike the one recently suggested by Chomsky (1971a) in "Conditions on Transformations".

The first systematic treatment of the subject within the transformational framework is to be found in Rosenbaum (1967), in his Grammar of English Predicate Complement Constructions. Rosenbaum was the first to analyze sentence pairs like those in (1) - (4) in terms of transformational processes. His analysis is briefly the following: Sentences (a) and (b) are posited to have the same deep structure. They are syntactically related by transformational rules which optionally shift a noun phrase of the complement sentence into either subject or object position in the main sentence. These processes entail a change in the form of the embedded verb which loses tense and turns up in its infinitival form. Sentences (1b) and (2b) are the result of shifting the subject of the embedded sentence into superordinate subject position. Sentence (3b), on the other hand, is the result of shifting the object of the embedded sentence into main subject position. In (4b) the subject of the complement clause becomes object of the main verb. Rosenbaum named the rule relating the sentence pairs in (1), (2), and (4) PRONOUN REPLACEMENT. Although he was the first to formulate the transformation needed to account for sentence pairs such as (3), he did not give it a
name. Postal (1971) refers to it as TOUGH MOVEMENT, while Stockwell et al. (1973) call it RAISE-object-to-subject.

The paradigm in (5) illustrates the reanalysis of the "second passive" in terms of PRONOUN REPLACEMENT (PR) and several other transformations:

Both (5a) and (5b) are derived from a common underlying source approximately as in (5c).

The following illustrates the derivation of (5a):

i. Someone reports there is a fiesta in Indio.

ii. Someone reports that there is a fiesta in Indio.

(THAT-INSERTION)

iii. That there is a fiesta in Indio is reported.

(PASSIVE and UNSPECIFIED AGENT DELETION)

iv. It is reported that there is a fiesta in Indio.

(EXTRAPosition)

Sentence (5b), on the other hand, is derived as follows:

i. Someone reports there is a fiesta in Indio.

ii. Someone reports there to be a fiesta in Indio. (PR)

iii. There is reported to be a fiesta in Indio. (PASSive)

In summary, we have seen that there are three distinct raising operations: the first raises an embedded subject to matrix subject position (cf. examples (1) and (2)); the second shifts the object of the embedded clause into matrix subject position (cf. example (3)); and the third raises the embedded subject to main object position (cf. example (4)).

For several years after Rosenbaum's analysis of English complement structures PRONOUN REPLACEMENT remained a topic much argued about in
transformational literature. Ross (1967) discusses the rule under the
name IT REPLACEMENT, others have used the name SUBJECT RAISING, Stockwell
et al. (1973) refer to it as RAISE-subject-to-subject, RAISE-object-to-
subject, and RAISE-to-object, and finally Kiparsky and Kiparsky (1971)
call it simply RAISING. In this study we shall adopt the Kiparskys'
terminology and refer to the rule as RAISING. The main problem with
Rosenbaum's analysis was that, although raising seems intuitively to be
a unitary process, it was impossible within the framework of standard
transformational grammar to account for the various mappings involved
by a single rule. Various objections and counterproposals to Rosenbaum's
initial formulation of the rule can be found in such works as Ross (1967),
R. Lakoff (1968), and McCawley (1970), who, by assuming English to be a
VSO language, provided an analysis in which the subcases of raising
could be stated as a single operation.\(^1\) An excellent review of the ar-
guments concerning the controversy over the proper formulation of the
RAISING rule is given in Postal (to appear), Part I. In the present
work we shall refer to the analysis briefly described above as the Stan-
dard Approach to RAISING. In spite of formal differences, they all em-
body the basic assumption that the relations between sentence pairs like
those in (1) - (4) are a function of a transformational rule of RAISING.

McCawley's analysis, although providing what seemed the long-awaited
solution to the problem, has by no means managed to put an end to the
controversy over RAISING. There are two other current approaches to
the constructions in question which differ in fundamental respects from
the Standard Theory. The first is advocated by Chomsky (1971a) and the
second by Shopen (1972).

Chomsky's innovating proposal is developed in his recent paper
"Conditions on Transformations" (1971a), where he seems to accept a RAISING analysis for sentences with intransitive predcations like those in (1) – (3), but questions the existence of raising operations in cases involving what we have called RAISE-to-object constructions as in (11).

(11) a. Mary believes that Bill is rich.
    b. Mary believes Bill to be rich.

For the above cases he proposes an entirely novel analysis based upon the assumption that the two sentences have the same derived structure in terms of major categorial nodes, the only difference being that in underlying structure the embedded verb of the first is finite, while the second is non-finite. In derived structure the tensed complement clause takes a that-complementizer, while its infinitival counterpart takes a to-complementizer. Chomsky says there is no other change in the constituent structure of the two sentences, i.e., the string Bill to be rich in (11b) remains an S in derived structure. Under such an analysis, Bill is not considered as part of the higher clause before the passive and other rules can apply, i.e., the passive is here assumed to operate across clause boundaries. Chomsky's new proposal is discussed in depth and subsequently rejected in Postal (to appear) where some twenty arguments are given at once in support of RAISING and against this proposal of Chomsky.

The third approach to constructions like those in (1) – (5), and the one we shall be interested in here, is the one presented in Shopen (1972). In his grammar there is no transformational rule of RAISING at all; the sentences in each set are generated separately in the base in a form very much like their surface form. For example, his theory claims that Bill in sentence (11b) is never part of an embedded clause.
at all. In Shopen's analysis, **Bill** is generated as the direct object of **believe** and is therefore always part of the same simplex as the main verb. The two sentences (11a) and (11b) have the underlying structures NP Verb S, and NP Verb NP INF X respectively. As we have seen in Part I, section 2, the correspondences between the main subject and the logical subject of the "subjectless" infinitives are established by means of semantic interpretive rules. Shopen rejects all raising operations, not just those supposed to underlie RAISE-to-object constructions. The difficulties the Standard Theory encounters in trying to express the various subcases of RAISING as a unitary process do not arise in his theory. His approach, does, however, have important consequences for a large area of English grammar. It leads to an entirely new view of what the set of base structures in English are, and also to a much richer theory of the lexicon, since, in his system, verbs that are commonly assumed to trigger RAISING, must be subcategorized for several entirely different environments. For these reasons it is of considerable interest to submit Shopen's hypothesis to close scrutiny.

3. **Raising in English**

3.1 **Some arguments for and against RAISING in English**

Before discussing Shopen's proposal in detail, I shall consider very briefly the main reasons for claiming that there exists a rule of RAISING in English, and some of the arguments against such a rule. For this purpose I shall adopt Stockwell et al.'s division of raising operations into two main classes: (i) RAISE-to-subject operations, and (ii) RAISE-to-object operations.
3.1.1 RAISE-to-subject

Within this class we shall distinguish the usual two sub-cases of raising: (i) RAISE-object-to-subject, and (ii) RAISE-subject-to-subject. Both operations involve matrix subjects that are derived from embedded sentences.

3.1.1.1 RAISE-object-to-subject

RAISE-object-to-subject (or TOUGH MOVEMENT) is the rule which lifts a non-subject noun phrase out of the complement sentence and places it in surface subject position, roughly as indicated in (1):

(1) [It is easy [ Δ please Peter] ] → Peter is easy to please.

Since the embedded verb has no subject to agree with, it will automatically turn up in its infinitival form (Kiparsky and Kiparsky 1971). The class of predicates which allows this rule includes such adjectives as: difficult, easy, hard, tough, impossible, pleasant, good. These are also known as Tough Movement adjectives (Postal 1971). Some of the characteristic properties of these adjectives were discussed in Part I, section 4.0 where we referred to them as Class B adjectives. Here we will be concerned mainly with arguments for and against the existence of the raising rule in question. The following is a formal syntactic argument for the raising rule based upon co-occurrences of lexical items in various sentence patterns.

Observe the following paradigm:

(2) a. John is easy to please.
    b. It is easy to please John.
    c. To please John is easy.
    d. *John is easy to please Bill.
The first point that might be made is that John in (2a) is understood to be the object of please. Sentences (b) and (c), which are usually taken to be synonymous with the (a) sentences, show that John actually turns up as the object of please. Sentence (d), which is ill-formed, shows that please cannot have an object of its own just in case there is a surface subject which is understood to function as the object of the complement verb. In order to account for these facts, the three sentences (a–c) are assumed to have the same deep structure. In most standard analyses the deep structure is postulated to be approximately as in (3a). More recently Emonds (1970) has argued for a deep structure like (3b):

(3) a. [[NP AUX please John] is easy]]
   b. [It is easy [△ pleases John]]

Under both proposals the relation between the sentences in (2) is considered to be transformational. In particular, the relation between the (a) and (b) sentences is a function of the rule of RAISE-object-to-subject described above. The rule is subject to several restrictions. First, it was pointed out in Rosenbaum (1967, p. 107) that RAISING may not apply when the sentence contains two for-phrases, one in the matrix, and one functioning as the subject of the embedded sentence as in (4):

(4) It was difficult for John for him to pass the exam.²

(Rosenbaum, 1967, p. 106)

We do not have a sentence like (5), but (6) is grammatical:

(5) *The exam was difficult for John for him to pass.

(6) The exam was difficult for John to pass.

Rosenbaum suggests that RAISING must be ordered after whatever rule deletes the matrix prepositional phrase. He further suggests that such a
rule is needed anyway in the derivation of sentences like (7) which
behave similarly in this respect:

(7) a. *It was wise of John for him to leave early.

[Question mark mine.]

b. *John was wise of him to leave early.

c. John was wise to leave early.

For an extensive discussion of adjectives like difficult and wise the
reader is referred to Part I, section 4 of this work.

A second restriction, for which I cannot see an obvious explanation,
is pointed out in Postal (1971). Not all noun phrases in complement
sentences can be raised (the grammaticality judgments are Postal's).

(8) a. Mary is easy for Bill to visit.

b. *Mary is difficult for Bill to take a picture of.

c. *Mary is difficult for Jack to get disgusted with.

d. *Mary is difficult for John to give the book.

e. Mary is difficult for John to give the book to.

f. *The handsome doctor was difficult for Mary to become well

known to. 

(Postal 1971, p. 28)

Finally, Postal points out that raising cannot generally apply to
indefinite noun phrases, as witnessed by the following examples:

(9) a. *A car which I gave Bill is difficult for him to drive

slowly.

b. The car which I gave Bill is difficult for him to drive

slowly.

c. *Sm cheese is tough for Jack to eat slowly.

d. Some cheese is tough for Jack to eat slowly.

(Postal 1971, p. 29)
The Sm in (c) is interpreted as the non-specific indefinite article, while Some in (d) is the stressed form referring to some specific cheese. Next, Postal gives the following generic sentences in which we can have an indefinite superficial subject and points out that these are well-formed because "generics are structurally definite in some sense even with superficially indefinite forms (Postal 1966)." Sentences like (10) which have a generic interpretation are perfectly good:

(10) a. Cars are tough to park in Manhattan.

b. A fox is very easy to lure into a box.

It can be shown, I think, that the restrictions on raising indefinite noun phrases in non-generic sentences are a natural consequence of a very general principle which functions in English (and other languages) independently of any assumptions about the raising transformation. Informally, this principle can be stated as

(11) The topic of a sentence must usually be definite.

"Topic" is a term introduced by Hockett (1963, p. 201) to describe the person or thing about which something is said in a sentence. The statement made about this person or thing is the "comment".

In English and the more familiar European languages topics are usually also grammatical subjects and comments are predicates. The topic of a sentence is usually definite even in those languages that do not have a definite article, as for example, in Latin. Here the topic of a sentence correlates (among other things) with word order. In the following two examples only in (13), in which Liber is placed at the head of a sentence and therefore understood as the "topic", can Liber be translated with the definite article:
(12) Est Johanni liber.
    (is John–DAT book–NOM)
    'John has a book.'

(13) Liber est Johanni.
    (book–NOM is John–DAT)
    'The book is John's.' (Lyons 1969, p. 392)

Now notice that although sentences like (14) can be used in English they sound much better when the subject noun phrase is shifted out of topic position as in (15).

(14) a. Lions are in Africa.
    b. A book is on the table.

(15) a. There are lions in Africa.
    b. There is a book on the table.

Now consider sentences (9a) and (9c). To allow RAISING with indefinite noun phrases in non-generic sentences would mean that we are creating topics which are indefinite. This is at variance with principle (11), which explains the ill-formedness of (9a) and (9c).³

The syntactic arguments advanced in the literature against the transformation RAISE–object–to–subject are very much grammar–dependent. A few are reviewed in Partee (1968), who notes that they are largely inconclusive. Since I agree with Partee's judgment, I shall not reproduce them here.

To sum up so far, we have presented one syntactic argument for a RAISING analysis of the adjectives in question; we have pointed out that there are some inconclusive syntactic arguments against it, and that the rule is subject to certain restrictions, some of them not fully understood.
The semantic arguments against the analysis have to do with the meaning differences between sentences like (2a) and (2b).

(2) a. John is easy to please.

b. It is easy to please John.

(2a) is a sentence about John, i.e., John is "topic". The fact that it is easy to please John seems to be attributed directly to some property of John when John is in surface structure subject position. Sentence (2b), on the other hand, is much nearer in meaning to some sentence like "It is easy for anybody to please John." It is a far more general statement, and certainly assigns no special property to John due to which one might regard the task of pleasing him to be easy. But, so the argument continues, if sentence pairs such as (2a,b) are non-synonymous they cannot have the same deep structure. I would agree that the sentences in question are not entirely synonymous. I would say, however, that an argument such as the one set out above is only valid within a framework which incorporates the Katz-Postal hypothesis, which assumes that transformations are meaning-preserving. The argument does therefore not necessarily have to apply within a framework such as the Extended Standard Theory which offers the possibility of accounting for certain meaning contrasts by means of derived structure interpretive rules. I will argue in section 5 that the meaning differences involved here are not of the kind that should be represented in deep structure, and that a more appropriate way for accounting for them is by means of post-transformational interpretive rules.

3.1.1.2 RAISE-subject-to-subject

By RAISE-subject-to-subject constructions we understand sentences
in which the surface subject is understood to be deep structure subject of the complement clause, as in (16) below:

(16) a. John is likely to come.
    b. Paul happens to know the answer.
    c. Mary seems to be working hard.
    d. There appears to be some snow on the mountains.

Predicates like likely, certain, happen, seem, appear, are usually analyzed as intransitive and subject-embedding. For example, consider the following paradigm with likely:

(17) a. John is likely to come.
    b. *John is likely for Bill to come.
    c. That John will come is likely.
    d. It is likely that John will come.

In (17a) John is understood as the subject of to come, and in (17c) and (17d) John actually turns up as the subject of the embedded verb. (17b) shows that to come cannot have any other subject of its own. It was facts like these that led Rosenbaum to postulate an intransitive analysis for adjectives in the likely class, and to analyze the relations between the sentences in paradigm (17) in terms of transformational rules.

Next, consider verbs like begin, start, continue, stop, cease, finish and resume which share important properties with the adjectives just discussed. Semantically, they are understood to function as one place predicates. Consider the following sentences:

(18) a. It began to rain.
    b. It continued to rain all night.
    c. It ceased to rain.

In (18a) begin asserts the occurrence of rain after a presupposed non-
occurrence. In (18b) continue asserts the occurrence of rain with respect to a point in time before which we presuppose the occurrence of rain. In (18c) cease tells us that at some point in time there is no rain, and presupposes that before that point in time it had been raining. Semantically, then, the verbs in this class are understood to say something about their entire complement. 4

The deep structure of sentences containing these verbs is somewhat controversial. Perlmutter (1970), who was working within the Aspects framework claimed that they must occur in two different deep structures, one transitive and object-embedding, the other intransitive and subject-embedding. Newmeyer (1969) argues that there is no need for the transitive analysis, provided one is prepared to accept a more "abstract" deep structure than that posited by Perlmutter. We shall not be concerned with this controversy here, but simply list the main arguments for an intransitive analysis. The strongest arguments for an intransitive analysis have to do with the fact that the surface subject position of a begin-sentence can only be occupied by an NP which is selectionally compatible with the complement verb. This point is illustrated below for both likely- and begin-sentences in order to bring out their marked similarity in syntactic behavior.

(19) a. There is likely to be a heavy storm.
    b. It is likely to rain heavily tomorrow.
    c. Heed is likely to be taken of his warning.

(20) a. There began to be much noise in the classroom.
    b. It began to rain heavily in the mountains.
    c. Heed began to be taken of his warning.

In the (a) sentences both likely and begin appear with the surface
structure subject there. There is general agreement that there is an unlikely deep subject for likely, or begin, or most other verbs, for that matter. It is a well known fact that there has a very restricted distribution. It is usually only found in the environment of be and a small number of other verbs like arise, develop, exist, followed by an indefinite noun phrase. It is just these conditions which are satisfied by the (a) sentences. But unless we assume an analysis in which there originates in the lower sentence and is later moved into the main sentence by a raising rule, it becomes difficult to explain its occurrence as subject of the main verb just in those cases when the selectional restrictions between it and the infinitival complement are satisfied. The same kind of argument applies to the sentences with 'weather it' and idiom parts. For example, the word heed cannot occur freely as an NP. It usually only occurs as the direct object of verbs like pay or take. In order to explain the idiomatic meaning of sentences like (19c) and (20c), heed must be a deep structure object. Now observe that heed can become subject only through passivization:

(21) a. Everybody took heed of his warning.
   b. Heed was taken of his warning by everybody.

Without a raising analysis the occurrence of heed in matrix subject position becomes very difficult to explain.

A further argument for a raising analysis for verbs like begin has to do with the synonymy of sentence pairs like those in (22):

(22) a. Napoleon began to shoot at the Russians.
   b. The Russians began to be shot at by Napoleon.

In order to explain the cognitive synonymy of the two sentences above the Standard Theory would derive them from the same deep structure by means
of transformations which include raising rules.

Further evidence for the existence of a rule of RAISING in the grammar of English is provided by sentences with verbs like seem, appear, turn out, and happen. The most convincing argument in this case, as in the case of the likely and begin class, is the existence of sentences like (23) which show that there, 'weather it', and idiom fragments can only occupy surface subject position if they could have been subjects of the complement clause, whether deep or derived subjects.

(23) a. There appears to be a storm moving this way.

b. It appears to be snowing in the mountains.

c. Heed appears to have been taken of his warning.

The literature contains some counterarguments to raising analyses with predicates such as likely, begin, seem, appear, and others. A number of them are reviewed in Partee (1968), where it is pointed out that in some cases, a raising analysis tends to lead to some conflicts in the syntax. The relevance of the arguments against RAISING as a syntactic process, however, depends very much upon the framework of assumptions adopted. Several arguments in Partee presuppose the existence of such transformational rules as PASSIVE, CONJUNCTION REDUCTION, and the COMPARATIVE. The status of these rules is not as clear now as has previously been thought, and it is for this reason that we shall not go into the details of these arguments here. The same applies to some other well known syntactic arguments against RAISING, such as those due to Perlmutter (1971), which are based upon the assumption that there exists a deep structure constraint on the identity of matrix and constituent subjects for verbs like try, condescend, and confess. The existence of such a constraint has been questioned, for example, in Stockwell et al.
(1973), and in Jackendoff (1969, 1972).

More recently, Freidin (1970) also argued against RAISING. His argument can be summarized as follows: The Standard analysis derives sentences like (24) from a common deep structure like (25):

(24) a. Jim seems to be worried.
    b. Jim seems worried.

(25)

```
( S NP [it S NP [Jim V be ADJ worried] V seems] VP )
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Sentence (24a) is derived by RAISING. Sentence (24b) is derived by the same rule plus "to be"-deletion. This derivation leads to some empirical difficulties with sentences (26):

(26) a. Jim seems to me to be worried.
    b. Jim seems worried to me.

The putative common underlying structure for the sentences in (26) would be as in (27):

(27)

```
( S NP [it S NP [Jim be worried] V seems] VP PP NP [P to me] )
```

The derivation of (26a) involves only RAISING as does (24a). Sentence (26b), on the other hand, requires an additional rule that must

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move the adjective worried inside the VP and attach it just before the prepositional phrase to me. Such a rule, Freidin claims, is only necessary for seem and appear and is not independently motivated elsewhere in the grammar. The entire analysis, he says, is therefore weak. If, on the other hand, it were assumed that the (b) sentences in (24) and (26) come from underlying structures with simple NP subjects, one would weaken the subject complementation argument for a subject raising transformation. He does not say exactly which Subject Complementation Argument he has in mind. I assume that what he refers to is that we would have an odd situation in the grammar where sentences like (26b) are derived from deep structures with simple NP subjects while sentences like (24b) can be derived both by means of RAISING or from deep structures with simple NP subjects. But (24b) is structurally unambiguous and should therefore only have one underlying source. It seems undesirable to have to posit different underlying structures for the variants of (24) depending on whether to me is present in the structure or not.

Another apparent solution would be to derive all the sentences in (24) and (26) from structures with simple NP subjects. This, however, would leave us with no simple way of explaining sentences like (28) with existential there subjects, since there is generally considered to be an unlikely deep structure subject in any construction.

(28) There seems to be much ado about nothing.

This seems to me a very undesirable situation, and one without an obvious solution. Freidin's argument, of course, rests upon the assumption that sentences like "Jim seems to me worried", as opposed to "Jim seems worried to me" are ungrammatical. According to some speakers the first version, namely "Jim seems to me worried" is perfectly acceptable. If
this is the case, I suggest that the movement of the adjective across the to-phrase in sentences like (26b) is optional, and therefore a kind of stylistic rule and not a matter of a constraint upon the RAISING transformation. I conclude that Freidin's argument against RAISING does not hold up.

There are also some semantic counterarguments to analyses employing raising rules based upon the fact that the raising rule often induces semantic contrasts. We will postpone a discussion of the meaning differences induced by RAISING and their theoretical implications until section 5, where I will take the position that RAISING is part of the grammar of English and several other languages I have surveyed, and that the semantic effects of the raising transformation should be dealt with by derived structure interpretive rules.

To sum up so far, I have given the classical syntactic arguments in favor of a raising analysis of adjectives like easy, likely, certain, and verbs like seem, appear, happen, begin, and have noted that a raising analysis is not without problems. It is worth pointing out that the examples presented in this subsection by no means exhaust the evidence presently available in support of RAISING. For a considerable number of additional arguments the reader is referred to Postal (to appear). Finally, I take the position that raising rules should be retained in the grammar, since they seem to provide the simplest explanation for sentences like (29):

(29) a. This is difficult to do.
   b. There is certain to be much ado about this.
   c. It seems to be too late to repent.
   d. Heed happens to have been taken of his warning at last.

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I suggested that the meaning changes brought about by raising operations are a matter of derived structure interpretation.

3.1.2. RAISE-subject-to-object

English has a large number of verbs that are generally assumed to trigger the RAISE-subject-to-object transformation. As the name implies, this rule lifts the complement subject into main object position. Some of the verbs in question are:

(30) believe, prove, find, report, prefer, intend, want, expect, consider, say, rumor, suppose.

This rule is optional for most verbs in this class, but obligatory with a few like consider, which do not take that-clauses. The process involved is illustrated schematically for the sentence pair (31).

(31) a. Mary believes that Bill is rich.
    b. Mary believes Bill to be rich.

(32) a.

    S  
    /\  
   /   
  VP   S  
    /\  /\  
   /  NP NP  
  V  believe  
     /\    /\  
    NP S  NP  
   /\  /\  /\  
  Mary believes Bill is rich

b.

    S  
    /\  
   /   
  VP   S  
    /\  /\  
   /  NP NP  
  V  believes Bill  
     /\      /\  
    NP S   VP  
   /\  /\     /\  
  Mary believes Bill to be rich
The classical arguments for a raising analysis with the verbs in (30) are embodied in the sentences below:

(33) a. Mary believed herself to be beautiful.
    (REFLEXIVE argument)

b. Mary is believed to be beautiful.
    (PASSIVE argument)

c. They believed each other to be intelligent.
    (RECIPROCAL argument)

d. I believe there to be much reason for doubt.

The first three arguments depend upon the assumption that reflexive marking, passivization, and reciprocal marking are exclusively clause-internal operations. Therefore, Mary, the embedded subject of to be beautiful in (a) must have been raised into main object position for reflexivization to take place. Similarly, Mary in (b) must have been lifted into matrix object position for passivization to apply. The reciprocal argument is very similar to that involving reflexivization. In sentence (d) the existential there, which normally is only inserted in subject position, appears as the surface object of believe. The facts listed above were taken to support a raising analysis of sentences with the verbs under discussion.

Since Rosenbaum's analysis many more facts supporting raising for these verbs have been brought to light. For a full in-depth analysis of RAISE-to-object constructions the reader is referred to Postal's impressive document 'On Raising' (to appear).

There exist two major counterarguments to the RAISE-to-object rule, both due to Chomsky (1971a). These are discussed at great length in Postal (to appear) and will only be summarized here. Chomsky's first
argument is based upon the claim that proper subparts of subject noun phrases cannot in general be moved out of their containing noun phrase, so that we can have a sentence like (34a) but not (34b,c):

(34) a. Who did you see pictures of last night?
    b. *Who did pictures of lay on the table?
    c. *Who did you expect stories about to terrify John?

The fact that sentences like (34c) are ungrammatical argues that there is no raising rule which lifts the subject of the embedded clause stories about who into matrix object position, because, Chomsky says, if there were such a rule, wh-movement should apply giving (34c) analogous to (34a), or "Who did you tell stories about last night?", which are perfectly grammatical. Chomsky concludes that there is no rule of RAISE-subject-to-object.

Postal's counterargument runs roughly as follows: The constraint upon extraction from complex subjects should be restated in terms not of the notion "subject", but "cyclic subject". He defines a "cyclic subject" as follows: An NP at any point in the derivation is a cyclic subject if it was the subject of a clause at the end of some cycle. The constraint in question would then be reformulated as follows:

(35) No NP can be extracted from a complex NP, N, where N is a cyclical subject.

Postal points out that if the constraint is stated in terms of the notion cyclic subject, whether by means of a "global rule" or in terms of some arbitrary syntactic feature assigned by a last-cyclic rule, the argument against RAISING collapses.

Questions about global constraints are still very controversial. Arbitrary syntactic features, on the other hand, are certainly a
generally accepted device within Chomsky's framework, and it seems therefore clear that Chomsky's argument against RAISING is not as strong as it appeared to be on first sight. Even if RAISING applied, the extraction constraint would still work, provided the raised NP is marked as a "cyclic subject".

Chomsky's second argument against RAISE-subject-to-object is based upon some observations of the interaction of this rule and the rule we have referred to as RAISE-object-to-subject (Tough Movement). Several people have observed that a noun phrase which originates as the subject of an embedded complement clause and is raised to matrix object position may not subsequently be moved into its superordinate sentence by RAISE-object-to-subject. Chomsky's examples are:

(36) a. It was easy for Jones to force Smith to recover.
    b. Smith was easy for Jones to force to recover.

(37) a. It was easy for Jones to expect Smith to recover.
    b. *Smith was easy for Jones to expect to recover.

Chomsky points out that in a grammar which allows the subject of an embedded sentence to be raised to main object position, sentences (36a) and (37a) are identical in structure at the point when RAISE-object-to-subject applies, and both the (b) sentences should be grammatical, which is obviously not the case. If there is no RAISE-subject-to-object rule, then, Smith in (37a) would never be object of expect, and would therefore not be subject to Tough Movement, and the ungrammaticality of (37b) would be explained.

Postal then argues that the contrast in grammaticality between (36b) and (37b) is not due to the application of RAISE-object-to-subject to the output of RAISE-subject-to-object, but rather to a much more general
constraint which has to do with the number of to's that happen to be generated in the course of a derivation. The larger the number, the less acceptable the output. For example, in each sentence triplet below, the sentence with the to be becomes acceptable as soon as the to be is deleted:

(38) a. It is hard to consider Jones (to be) competent.
    b. *Jones is hard to consider to be competent.
    c. Jones is hard to consider competent.

(39) a. It is easy to prove Melvin (to be) guilty.
    b. *Melvin is easy to prove to be guilty.
    c. Melvin is easy to prove guilty.

(Postal to appear, p. 132)

At this point it might be useful to pause and consider the merits of each argument in turn. Consider first Chomsky's sentence (36b): "Smith was easy for Jones to force to recover". Some people would say that it is no better, and possibly worse, than a sentence like "This argument is easy to prove invalid" which, given the raising analysis, and Chomsky's generalization, should be worse. It would seem then, that Chomsky's argument can be questioned on empirical grounds.

Postal's central claim was that the ungrammaticality of Chomsky's examples has nothing to do with RAISING at all, but that it is due to the presence of too many to's which, he claims, generally decrease sentence acceptability. But sentences (36b) and (37b) involve exactly the same number of to's, and I therefore fail to see the relevance of Postal's observation to the case in point. Furthermore, one might question whether it is indeed the number of to's that lie at the root of the unacceptability of the sentences in question. Observe, for example, the
following sentences which Postal quotes in support of his claim that
the constraint on multiple to's operates independently of Tough Move-
ment:

(40)  a. *I prayed for there to be certain to be a riot.
      b. *I arranged for there to be sure to be witnesses present.
      c. *It would be impossible for there to be about to be a riot.
      d. *It is not nice for John to be believed to be insane.

One might question whether it is indeed the multiple to's which make the
sentences in (40) unacceptable. Consider, for example, the sentence-
pair in (41) suggested to me by Paul Schachter:

(41)  a. ?I prayed for it to be certain that there would be a riot.
      b. I prayed for it to begin to rain.

In summary then, we conclude (1) that Postal's argument is totally
irrelevant to the issue at hand, and (2), that Chomsky's argument can be
challenged on empirical grounds and does therefore, in my view, not con-
stitute evidence against RAISING.

A third argument against RAISING, also due to Chomsky (1971a), is
based upon the assumption that there is a rule of each-movement. This
rule is very controversial, and I shall therefore not reproduce the ar-
gument here. The interested reader is referred to page 66, footnote 33,
of Chomsky (1971a), and Postal's evaluation of it in Postal (to appear).

On the basis of evidence presented in this subsection we conclude
that there is no reason to believe that there is not a rule of RAISE-
subject-to-object in the grammar of English. In the next section we will
examine Shopen's main arguments against RAISING.
3.2 Shopen's Counterproposal

One of the main features of Shopen's theory is the complete rejection of a passive transformation. In his system passive sentences are generated in their surface form so that the deep structure of a sentence like (42)

(42) John was expected to come to the party (by everyone).

(Shopen 1972, ex. 84, p. 216)
is posited to be very much like its surface structure, with John as the deep subject of expected. As mentioned before, in Shopen's system active and passive verb forms are entered separately in the lexicon, and each entry contains the necessary information for the semantic interpretation of the structures in which they occur. The relation between active sentences and the corresponding passives is accounted for by a Word Structure Condition which is viewed as a kind of lexical redundancy rule. Such a position leads Shopen to a rejection of the transformational rule of RAISING as described in the previous section.

In what follows I shall present and evaluate Shopen's proposal in detail. The first point to be made is that Shopen's arguments against RAISING revolve mainly about the verb expect. He does not consider any of the verbs which in standard theory are assumed to trigger the rule RAISE-to-subject. Shopen's approach is at variance with much of the Standard Theory. In his grammar, sentences which in Standard Theory are a function of raising operations are generated in their surface form:

(43) a. John expects heed to be paid to his warning.

b. Heed was expected to be paid by all students to the dean's recent announcement.
(43) c. The hour is believed to be reported to be expected to be ripe. (Shopen's ex. (121), p. 230)

d. There is believed to be a storm coming this way.

e. John expects there to be much excitement at the office.

In Standard Theory the above sentences are generally regarded as arising from complex underlying structures. In the (a) sentence, for example, heed is analyzed as originating in a lower clause, approximately as in (44):

(44) [John expects[NF pays need to his warning]]

Such a structure allows the co-occurrence restrictions of the noun heed to be stated within the domain of a simplex sentence. The occurrence of heed as the object of expect is then explained in terms of RAISING, as was discussed in the previous section.

In Shopen's system the noun heed in (43a) is generated directly as the object of the verb expect. Now the noun heed has a very limited distribution, and this fact must be accounted for in any grammar. In order to see how Shopen proposes to account for it, it is necessary to review his approach to the lexicon.

We shall first be concerned with Shopen's explanation of the sentences (43a,b,c) and discuss the last two sentences in (43) involving the existential there immediately after.

The lexical entry for the active form of expect was explained in detail in Part I, section 2, and I shall therefore review it only briefly here, and then explain the passive entry. To account for sentences of type (43a) Shopen posits the following entry for the verb expect:
(44) \text{expect, } +V, \text{ [NP } \text{ NP IP} \text{ ] [COGNITION } z \text{ [LOCATION } w \text{ y } \text{ ] [ Location } u\text{ ]}}

where \text{u represents the anticipated event}

The syntactic part of the entry is represented by the material in the first pair of square brackets. It must be read as follows: If \text{expect} is found to occur in a tree in which it is preceded by a noun phrase and followed by a noun phrase which itself is followed by an infinitive phrase, then the structure may be interpreted as indicated in the semantic part of the entry. The material within the second pair of square brackets represents the semantic structure of the verb \text{expect}. The latter is analyzed by Shopen as a two place predicate \text{COGNITION x y}, where the first argument is the \text{THINKER} and the second the \text{THOUGHT}. \text{COGNITION x y} must be read "\text{THINKER x has THOUGHT y}". Furthermore, the \text{THOUGHT} must be an anticipated state or event. In the case of our infinitival construction, the argument \text{THOUGHT} is itself a proposition, represented here by the two place predicate \text{LOCATION} and its two arguments \text{w y}. \text{LOCATION} is an abstract predicate which expresses the relation between the direct object of \text{expect} and the infinitive. The indices \text{z, w, y} serve to establish the necessary correspondences between the syntactically realized structure and its semantic representation. The lexical entry for \text{expect}, then, tells us something about the meaning of \text{expect}, and also assigns the \text{NP(w) as the subject of the IP(y)}. Now to be able to explain sentence (43b), we need to give the lexical entry for the passive formed \text{expected}, and also the lexical entry for the passive form \text{paid}. These are given in (45) and (46) respectively.

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(45)  

expected, +V  

[NP BE ___ (by NP) IP] 

y z v  

[COGNITION z [LOCATION y v] u  

u = 'anticipated state or event'

(Shopen 1972, entry (226), p. 270)

(46)  

paid, +V [[...heed...] BE ___ [to NP] (by NP)...] (a)  

NP NP PP PP  

'to heed'

(Shopen 1972, entry (118a), p. 228)

The syntactic part of entry (45) states that expected may be preceded by a noun phrase followed by BE, and that it may optionally be followed by a by-phrase, itself followed by an infinitive phrase. If expected is found to occur in this environment, it is subject to the semantic interpretation rule given in part (b) of its lexical entry. Notice that the semantic structure of the passive expected differs from that of the active expect only in the correspondences established between the arguments of the semantic predicates COGNITION and LOCATION, and the noun phrases present in syntactic structure. With the passive expected it is NP(y), the subject of the main sentence, which is assigned as the subject of the infinitives IP(v), and the THINKER is now the NP(z). Lexical entry (46) says that if paid is found in the syntactic environment given, then it will be interpreted as having the meaning of the verb to heed.
We can now explain how the two lexical entries (45) and (46) contribute to the semantic interpretation of sentence (43b):

(43) b. Heed was expected to be paid by all students to the dean's recent announcement.

First, we must check whether the internal organization of the sentence fits the syntactic part of the entry. We notice that the by-phrase, which is supposed to immediately follow the verb expected actually occurs after the infinitive in surface structure. I must assume that at the level at which semantic interpretation takes place, the by-phrase occurred next to expected as in (47):

(47) Heed was expected by all students to be paid to the dean's recent announcement.

and that it got shifted to its surface position by some stylistic rule. The latter, it will be recalled, are the only transformations allowed in Shopen's grammar. The syntactic structure of (47) now matches the syntactic environment specified in the lexical entry for expected and a 'semantic parsing' will result. The semantic part of the lexical entry assigns the subject of the main sentence heed as subject of the infinitive phrase to be paid. At this point the lexical entry for paid is supposed to take over and assign the correct idiomatic meaning to heed to be paid. This is all Shopen has to say about it: "When heed is assigned as subject to the passive verb paid then the portion of its lexical entry (118a) is brought into play, and the expression is necessarily interpreted idiomatically" (Shopen 1972, p. 229). I don't see how the correct interpretation "necessarily" follows from the interplay of the two lexical entries (45) and (46). According to (46), an NP which includes heed must immediately precede be paid. But surely heed was expected to which
precedes be paid in (47) is not an NP. There seems to be a second difficulty with (46), which requires that the by-phrase follow the to-phrase. It is not clear to me how this difficulty can be resolved, since (46) gives no indication where the IP should be located in the syntactic structure; in fact, (46) doesn't seem to allow for the IP at all. There is, in my view, no way in which (46) in its present form could be used to interpret a sentence like (43b).

A further point which needs investigating is how Shopen would account for the very limited distribution of the noun heed. In this respect Shopen suggests two possibilities. His first suggestion is that heed not be entered in the lexicon at all, but that it should be included in the entries for the idioms of which it is part. If this were so, I cannot see how heed would actually get into the tree at all. The second alternative suggested by Shopen is that heed should independently be entered in the lexicon, but that its entry should carry the information that it is for the most part uninterpretable unless in semantic interpretation it is made part of an expression with pay or take as described above. What this solution implies, is that heed is inserted freely under any NP node, and that the containing sentence is thrown out unless in its semantic interpretation it has made use of the information stored in items like pay or take. According to Shopen's suggestions the lexical entry for heed might look something like the following:

(48)

\[
\text{heed},+\text{NP }[\quad\quad]\quad\quad\text{(a)}
\]

\text{Semantic information:}
\begin{align*}
\text{interpretable only via } & \#55, \ldots, \ldots, \text{etc.}
\end{align*}

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Such *via rules* are a further addition to the theory and have hitherto only been proposed within the framework of Natural Phonology (cf. Venne-
mann 1972). Within the Standard Theory there is no need for such com-
plications. The limited distribution of *heed* is accounted for by sub-
categorizing it with respect to the verbs it can co-occur with.

In order to justify his analysis, Shopen points out that RAISING is not a meaning-preserving transformation. His examples are:

(49)  
a. Lloyd expects an eligible young Republican to escort his daughter to the reception.  
b. Lloyd expects his daughter to be escorted to the reception by an eligible young Republican.

(50)  
a. Lloyd expects some of his subordinates to be at the reception.  
b. Lloyd expects there to be some of his subordinates at the reception.

(Shopen 1972, ex. (110) & (111), p.225)

Shopen claims that the meaning differences are particular to sen-
tences with animate direct objects and have to do with whether that ani-
mate object can be thought of as being responsible for the event des-
cribed in the complement. The meaning differences, Shopen says, can be seen clearly in sentences (51) and (52) which, he claims, are para-
phrases of his sentences (49) and (50) respectively.

(51)  
a. Lloyd expects it of an eligible young Republican that he (will) escort his daughter to the reception.  
b. Lloyd expects it of his daughter that she (will) be es-
corted to the reception by an eligible young Republican.
(52) a. Lloyd expects it of some of his subordinates that they (will) be at the reception.

b. *Lloyd expects it of there that there (will) be some of his subordinates at the reception.

Shopen argues that, if his observations about the meaning differences are correct, then there is an interpretation of the "accusative + infinitive" construction in which the "accusative" object receives a distinct semantic function. But since in his system semantic functions can only be assigned in deep structure, and what is more important, only within simplexxes, the "accusative" object must be part of the same simplex as expect in the deep structure.

Meaning contrasts between sentence pairs which differ syntactically only in that in one of them RAISING has applied present a real problem to the transformational analysis, and have been discussed repeatedly in the literature. We shall return to this question and consider it in detail in Section 5.

Shopen's second major argument against RAISING concerns sentences with there subjects and "weather it":

(53) a. There is believed to have been a storm in the mountains.

b. It is reported to be raining in the mountains.

These are precisely the kind of sentences that have been used by proponents of the Standard Theory to justify RAISING. Originally, the THERE-INSERTION transformation was proposed to account for the semantic and syntactic relatedness of sentence pairs like the following:

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(54)  a. A bird is singing in that tree.
      b. There is a bird singing in that tree.

(55)  a. A small child is walking down the road.
      b. There is a small child walking down the road.

Notice that the transformation must be optional. Shopen's first objection to this transformation is that it has never received any serious justification in print. He then points out that in order to account for sentences with the "existential there" as illustrated in (56) – (59) the Standard Theory must posit non-occurring underlying sources and view the transformation as obligatory, which leads to an increased complication of the conditions on THERE INSERTION:

(56)  a. *A teacher my little boy likes a lot is.
       b. There is a teacher my little boy likes a lot.

(57)  a. *A drought is in Australia.
       b. There is a drought in Australia.

(58)  a. *A good movie is at nine o'clock.
       b. There is a good movie at nine o'clock.

(59)  a. *An art exhibition will be next week.
       b. There will be an art exhibition next week.

Note that some of the corresponding sentences with a definite subject are grammatical:

(60)  The drought is in Australia (and not in Japan).

(61)  The art exhibition will be next week (instead of this week).

This can be explained by the semantic principle alluded to in Part I which requires that "topics" be definite.

Shopen points out that THERE INSERTION is further complicated by the fact that sentences such as (53) with there and it subjects are only
grammatical if they involve an agentless passive.

(62) a. *There is believed by my son to have been a storm in the mountains.

b. *It is reported by the radio to be raining in the mountains.

It seems to me that in the Standard Theory this fact would have to be taken care of by some kind of surface filter, and not as a condition on either THERE INSERTION or PASSIVE, since such conditions would have to reach across sentence boundaries.

Shopen's main objection to the transformational insertion of there has to do with the meaning contrast which he claims exists between the source and the derived sentence with there. His sentences are:

(63) a. A man is packing a suitcase.

b. There is a man packing a suitcase.

(64) a. *A blister is on my thumb.

b. There is a blister on my thumb. (Shopen 1972, p. 237)

It is not absolutely clear to me what he means, and I shall therefore reproduce his argument in full:

The (a) utterances cause a 'double take' on the part of the reader or listener. It is necessary to conjure up in one's imagination a scene with dramatis personae which is somehow prior to the utterance in order to accept it. The existence of the referents indicated by indefinite NPs is not presupposed; the use of an indefinite NP as a subject appears to conflict with what is the unmarked semantic value for subject position, i.e., 'topic,' where 'topic' is that among presupposed entities established in a dialogue context that is having new information ('comment') predicated upon it.... Using a construction with there subject does two things: it gets the NP out of subject position, and it adds a deictic and existential effect, pointing to the indefinite NP and

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asserting its existence. It would appear that there is not 'empty' after all, and that it retains some of its semantic force when it functions as subject.

(Shopen 1972, p. 237)

First, for me (64a) is not a possible surface structure. It is a sentence with what has been referred to as the "existential be", and for me all such sentences must obligatorily undergo the THERE INSERTION transformation. As to the first pair, I don't feel that the difference, if there is one, has much to do with asserting the existence of the referent of a man. Both sentences seem to assert that some non-specific man, but nevertheless an existing man, is packing a suitcase. I would agree with Shopen, however, that the (b) sentence is more acceptable than its (a) counterpart. Nevertheless, let us, for the sake of argument, accept Shopen's judgment that the semantic contrast, whatever it might be, exists. Such a contrast, then, Shopen argues, cannot be easily accounted for if there is introduced by a post-lexical transformation. The meaning differences are best represented "in the lexical entry for the main verb that governs them, be". Shopen then proceeds to sketch what the lexical entry would look like, listing the major environments in which be can occur, and giving parallel rules for semantic interpretation.

The relevant portions of the lexical entry for be are reproduced below:
(65)  

\[
\text{be, +V, +AUX} \\
[\text{NP } \text{X---NP} +\text{Indef} \text{x } \{\text{VP} \text{PP} \text{AP}\}[\text{EXIST } x] \& [\text{LOCATION } x \ y] \ (b) \\
\text{There } \text{'deixis'} \\
\text{[NP } \text{X---NP] [EXIST } x] \ (c) \\
\text{There } \text{x} \\
\text{'deixis'}
\]

In (a) and (b) VP must have a participial head, etc.
In (b) AP must be 'heavy'

Notice that be makes explicit mention of there as subject.

(Extract from Shopen 1972, entry (151), p. 241)

Entry (b) characterizes sentences like (66), while entry (c) characterizes sentences of the kind illustrated in (67):  

(66)  

a. There is a student writing his thesis.  
b. There was a student criticized by the press.  
c. There was a student in the kitchen.  

(67)  

a. There was an old man who lived in a shoe.  
b. There are two reasons why we should support this proposal.

(Shopen 1972, p. 240, 241)

In summary, Shopen's position is that there is generated as deep structure subject in the position it occupies on the surface. In a sentence like (53a), for example, the passive entry believed will make its own subject, namely there, subject of the infinitival complement following it. The lexical entry for be provides the necessary information for the correct interpretation of the complement clause.
(53) a. There is believed to have been a storm in the mountains.

It would appear from the foregoing discussion that Shopen's theory can adequately describe both the semantics and the syntax of there-sentences. On closer inspection, however, his grammar does run up against a number of difficulties. The first has to do with the lexical insertion of there. We have noted earlier that in Shopen's theory lexical insertion is context free. There need therefore only be given the categorial feature [+N]. This will ensure its occurrence as a main clause subject. But since lexical insertion is free, there will also occur in other syntactic positions normally occupied by lexical nouns, so that the grammar will also generate sentences like (68) below:

(68) a. *There seems to come a child.
   b. *There is likely to buy spinach today.
   c. *Peter expects there today.
   d. *Peter intends there to die.
   e. *It's pleasant to sit in the there.

A potential problem for Shopen's theory might be how to block sentences like (68). Remember that the lexical entry for BE makes specific mention of there. There, on the other hand, like heed, must contain in its lexical entry the information that it is only interpretable in certain limited contexts. Then, whenever there is a there in a sentence, the grammar will make use of some other lexical entry for its interpretation, specifically, the grammar will use the entries of those verbs with which it can co-occur: be, exist, arise, appear, take place, occur, develop, etc. But none of the sentences in (68) corresponds to the syntactic part of the entry for be (or the other verbs). The sentences will not undergo semantic interpretation and will be thrown out. This approach
seems to work in all cases tested. For example, consider sentences in which there is surface object of the main verb.

(69) a. *I forced there to be ready on time.
    b. *I ordered there to be frank about the whole affair.

There is nothing in Shopen's phrase structure rules which would prevent sentences like (69) from being generated. As soon as a there is encountered in syntactic structure, the grammar will search for the occurrence of one of the allowed infinitival verbs. In this case it finds to be. The lexical entry for to be comes into play and searches for an admissible context. But since one of the obligatory constituents required for correct semantic interpretation is an NP immediately following to be, and neither sentence satisfies this condition, they will both remain uninterpreted, and will be thrown out. Sentences like (70), on the other hand, will receive the correct interpretation.

(70) Peter expected there to be a letter for him today.

The latter seems to me an acceptable solution, although somewhat more complicated than the transformational solution which simply stipulates that there may only be inserted in certain contexts. The proposal, however, becomes less attractive when it is realized that the information contained in the lexical entry for be must be repeated (and redundantly so) for each of the verbs that can take there subjects in simple sentences. The class of verbs is quite small, it is true, (some of them were listed above) but repeating the same information even six times over is nevertheless not to be considered the most elegant solution.

But now notice that this method of interpreting there-sentences does not work in complex cases. Consider, for example, Shopen's sentence (179), p. 254, which he uses to demonstrate how sentences with
there subjects receive the "correct" interpretation.

(179) There is reported to be believed to be said to be expected
to be a junta governing the country.

Shopen says on p. 253:

...there will be generated as deep structure subject
in the position it occupies on the surface, and will
by the functional meaning determined by the main verb
in each clause be traced interpretively down to the
subjectless infinitive with be; there, the lexical
entry for be will take over. Since there is determined
by the higher verbs to be the subject of the infinitive
phrase with be, the part of be's lexical entry that
makes explicit mention of there as subject is brought
into play and we understand the special idiomatic mean-
ing of the there construction.

We will now reproduce Shopen's p. 254 in its entirety:
(180) S
  NP [There]
    V is
      VP reported to
        V to
          VP be believed
            V to
              VP be
duplicated
  LEXICAL ENTRY FOR PASSIVE VERB reported MAKES ITS SUBJECT (there) SUBJECT OF ITS INFINITIVE COMPLEMENT (to be believed...)

LEXICAL ENTRY FOR PASSIVE VERB expected MAKES ITS SUBJECT (there) SUBJECT OF ITS INFINITIVE COMPLEMENT (to be...)

LEXICAL ENTRY FOR PASSIVE VERB said MAKES ITS SUBJECT (there) SUBJECT OF ITS INFINITIVE COMPLEMENT (to be expected)

LEXICAL ENTRY FOR be (151c) IS BROUGHT INTO PLAY:

[NP X NP] [EXIST x]
There x 'deixis'

(The NP a junta is governing the country is asserted to exist.)
Let us now follow through Shopen's analysis given in (180) in a little more detail. If the lexical entry for reported is anything like that posited for expected (cf. entry (45)), then the entry for reported makes its subject (there) subject of the infinitive to be believed in semantic structure. This is an interpretive procedure and in no way alters the syntactic structure of the sentence. Next, assuming that the lexical entry for believed is specified in a manner similar to that for expected, there is no way in which there can be regarded to be its subject in syntactic structure. There has not shifted in syntactic structure, and the syntactic environment specified for believed, i.e., NP BE ___ (by) NP IP does not fit the syntactic structure of the sentence. There is no NP BE immediately preceding believed which could be passed down as subject to said, contrary to Shopen's claims in his second paragraph of his description in (180). It is important to remember that there is a syntactic element and that it has not moved from its sentence initial position. It is therefore not at all clear how in syntactic structure, there can ever be passed down the tree until it reaches to be a junta governing the country. It seems to me that Shopen has not followed through the logic of his proposed interpretive strategy, and that his sentence (179), and therefore all sentences with multiple infinitival complements, are not interpretable within his framework. In order to save Shopen's analysis, one might try to expand the lexical entries for the verbs involved to allow for the additional environments. In fact, it would be necessary to list all the environments in which a verb form can occur. But given the recursive property of infinitival complement constructions, it would be impossible to list all the environments. It would seem then, that Shopen's theory in its
present form cannot account for an important class of constructions which fall within its scope.

In the standard analysis the occurrence of there as matrix subject or object follows from the existence of a RAISING rule, and there is no need to make special statements in the lexical entry for there or in the lexical entries of other verbs like report, believe, or expect.

Similar arguments can be made for sentences with the "weather it". It is well known that verbs like rain, snow, thunder, etc., occur only with the subject NP it. 6

(71) a. It is \{snowing \thundering\} .

b. *Snow is snowing.

*Thunder is thundering.

The same restriction is observable across intransitive verbs like seem and happen:

(72) a. It seems to be snowing.

b. *Snow seems to be snowing.

(73) a. It happens to be snowing.

b. *Snow happens to be snowing.

Sentences like (72) and (73) do not present any difficulties in Shopen's analysis beyond what has already been pointed out. The difficulties arise, however, when the verb to be is "embedded" several levels down as in (74).

(74) It seems to be believed to be expected to be snowing in the mountains.

The difficulties are parallel to those discussed for the interpretation of Shopen's sentence (179), and will, therefore, not be restated here.
The occurrence of *it* at the head of a sentence like (74) follows from a RAISING analysis without any special statement.

In sum, we have seen that neither the Standard Theory nor Shopen's interpretive approach are problem-free. It is clear that RAISING has a semantic effect, and the main problem facing the Standard Theory is how to account for the relation between RAISING and meaning. (For a detailed consideration of this problem see section 5.) Shopen solves the problem by positing different deep structures for what in the standard approach would be considered the source and the derived sentence. This allows Shopen to capture the semantic differences between related sentence patterns in the lexical entry for main predicates. Shopen's proposal, however, has been shown to fail in a set of important cases and we are forced to conclude that at least in those cases his proposals must be regarded as incorrect.

4. **RAISING in other languages**

Up to this point we have been concerned almost exclusively with the facts of English. In the next few subsections we shall investigate relevant data from German, French, and Hungarian, with a view toward determining whether or not those languages can be said to have a rule of RAISING similar to the English rule. Rumanian has very few verbs that allow infinitival complements. There is, however, a certain amount of evidence for RAISING, especially from constructions involving verbs of perception as main verbs, in which case we get gerundive complements. Since the Romanian data doesn't fall directly under the scope of our study of infinitival complements, we will only deal with it tangentially in the section devoted to French.
4.1. German

Raising operations seem much more restricted in German than in English. As in English, there are some adjectives that might be said to trigger RAISING. For example,

(1) a. Es ist nicht leicht Johann zu befriedigen.
   'It is not easy to please Johann'.

   b. Johann ist nicht leicht zu befriedigen.
   'Johann is not easy to please.'

(2) a. Es ist schwer Johann zu befriedigen.
   'It is difficult to please Johann'.

   b. Johann ist schwer zu befriedigen.
   'Johann is difficult to please.'

The (a) and (b) sentences in each pair above exhibit meaning-differences which are very close to those discussed in connection with the English adjectives easy and difficult. While in the (a) sentences the speaker makes a comment about a whole proposition, in the (b) sentences he places the subject of the subordinate clause into the foreground and makes a comment about it. This is the kind of semantic contrast that does not affect the understood grammatical relations (in each case Johann is understood as the deep object of befriedigen) and need therefore not be represented in deep structure.

We have seen that in English there are strong syntactic arguments (based upon cooccurrence restrictions) for assigning a single deep structure to the (a)/(b) pairs in sentences analogous to those in (1) and (2). I will assume that the same arguments hold for German. Since the (a) and (b) sentences in each pair are close enough in meaning, I
suggest that they be analyzed in terms of RAISING (Tough Movement).

Other adjectives that can be said to allow RAISING are very difficult to find. For example, wahrscheinlich, the translational equivalent of likely, does not occur with simple NP subjects:

(3) a. Es ist nicht wahrscheinlich, dass Peter kommen wird.
   'It is not likely that Peter will come.'
   b. *Peter ist nicht wahrscheinlich zu kommen.
   'Peter is not likely to come.'

Now consider sentences with the adjective sicher 'certain/sure':

(4) a. Es ist sicher, dass Johann heute kommt.
   'It is certain that Johann will come today.'
   b. *Johann ist sicher heute zu kommen.
   'Johann is certain to come today.'
   c. *Johann ist sicher, dass er heute kommt.
   'Johann is certain that he is coming today.'

(5) a. Es ist sicher, dass Johann heute kommen kann.
   'It is certain that Johann can come today.'
   b. Johann ist sicher, heute kommen zu können.
   'Johann is sure of being able to come today.'
   c. Johann ist sicher, dass er heute kommen kann.
   'Johann is sure that he can come today.'

(6) a. Es ist sicher, dass Johann heute Abend müde sein wird.
   'It is certain that Johann will be tired tonight.'
   b. *Johann ist sicher, heute Abend müde zu sein.
   'Johann is sure to be tired tonight.'
   c. *Johann ist sicher dass er heute Abend müde ist.
   'Johann is sure that he is tired tonight.'
(6) d. Johann ist sicher, dass er heute Abend müde sein wird.

'Johann is sure that he will be tired tonight.'

The *sicher* sentences do not seem to allow RAISING either. Notice first of all the distinct non-synonymy of pairs like (5a) and (5b). Sentence (5a) is interpreted as being an expression of the speaker's opinion, while (5b) is a statement to the effect that "Johann knows for sure that he will be able to come today". A further example exhibiting the same semantic contrast is (7):

(7) a. Es ist sicher, dass Johann Mary noch bei der Arbeit finden wird.

'It is certain that Johann will find Mary still at work.'

b. Johann ist sicher Mary noch bei der Arbeit zu finden.

'Johann is certain of finding Mary still at work.'

Once again, in (7a), it is the speaker who is sure that Johann will find Mary still at work, while in (7b) the speaker asserts that Johann is sure of the contents of the complement. The two sentences are not synonymous. This semantic contrast is very clear in German as opposed to English, where, for analogous sentences, judgments are usually uncertain.

According to my judgment, and that of my native informant, the (b) sentences are synonymous with the (c) sentences. (5b) is synonymous with (5c) and (7b) is synonymous with (7c) below:

(7) b. Johan ist sicher Mary noch bei der Arbeit zu finden.

c. Johann ist sicher, dass er Mary noch bei der Arbeit finden wird.

'Johann is sure that he will find Mary still at work.'

I therefore propose that sentences like (5b) and (7b) should be derived via EQUI from structures underlying (5c) and (7c) respectively. The
underlying structure for (7b) and (7c) would be approximately as in (8):

(8)  
    S  
    /\ 
   NP VP 
  /   \   
 Johann sicher 
           
S

Johann findet Mary noch bei der Arbeit

Sentences (4b,c) and (6b,c) are starred not because they are syntactically ill-formed, but because, according to my informant, they are semantically anomalous. It appears that in German it makes no sense to make assertions like "I am sure I am coming now", or "I am sure I am tired now", i.e., to assert that one is sure about something in which one is currently involved. If this is so, then it would explain why assertion (6d) is acceptable, since Johann is not tired at the time at which the assertion is made, but claims to be certain to be tired at some future time. I find this an interesting phenomenon, but have no principled explanation to offer.

French, incidentally, works just like German, where certain is concerned. We can have sentence pairs like:

(9)  
    a. Pierre est certain de réussir.  
    b. Pierre est certain qu'il réussira.

(10)  
    a. Nous sommes bien certains de ne pas avoir mal à la tête.  
    b. Nous sommes bien certains que nous n'avons pas mal à la tête.

But not:

(11)  
    a. *Pierre est certain de venir.  
    b. *Pierre est certain qu'il vient.
(12) a. *Pierre est certain d'être fatigué.
   b. *Pierre est certain qu'il est fatigué.

The above data suggests that sentences with certain (Fr.) should also be analyzed in terms of EQUI and not in terms of RAISING.

In English there are a good number of intransitive verbs like happen, appear, turn out, begin, that allow RAISING. In German, only the equivalent of 'seem', namely scheinen appears to follow this pattern.

(13) a. Es scheint mir, dass Sie den Weg nicht wissen.
    'It seems to me that you don't know the way.'
   b. Sie scheinen den Weg nicht zu wissen.
     'You don't seem to know the way.'

RAISING for scheinen is also supported by the distribution of idiom chunks. Take, for example, an expression like Sein Stündlein hat geschlagen 'His hour has come'. It occurs in sentences like (14):

(14) a. Es scheint mir, dass sein Stündlein geschlagen hat.
    'It seems to me that his hour has come.
   b. Sein Stündlein scheint (mir) geschlagen zu haben.

The occurrence of sein Stündlein in main subject position in (14b) is positive evidence for RAISING with scheinen 'seem'.

In English there are a large number of verbs like believe, find, show, consider, think, fancy, suppose, which we claimed allow the embedded complement subject to be raised onto superordinate.object position. In English the syntactic evidence for RAISE-subject-to-object with these verbs is strong. Among other things, it seems to provide the only presently viable account of sentences like those in (15) and (16):

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(15) John believes there to have been a great disaster in Chile.

(16) Susan believes it to be likely that the universe will fall apart.

German does not have anything that might be likened to the "existential there" constructions in English, and the equivalents of (15) – (16) can only be translated by means of dass-clauses as in (17) and (18) respectively:

(17) John glaubt, dass es in Chili eine grosse Katastrophe gegeben hat.

(18) Susan glaubt, dass es möglich ist, dass die Welt zerfallen wird.

In German, verbs like glauben 'believe', can and do occur in the environment of an "accusative plus infinitive", but only in cases where the accusative noun phrase is understood as the direct object of the infinitive:

(19) a. Ich glaube ihn zu sehen.
I believe him to see

b. *Ich glaube ihn reich zu sein.
I believe him rich to be

'I believe him to be rich.'

Sentence (a) has an underlying structure approximately as in (20):

(20) [Ich glaube [Ich sehe ihn]]

(20) undergoes EQUI-NP-Deletion, giving (21):

(21) Ich glaube zu sehen ihn.

The infinitive is then moved to the end of the sentence by what appears to be a fairly general rule, giving the surface structure (19a). The same tendency for zu-infinitives to appear in sentence-final position
is apparent from the sentences below:

(22)  a. Ich war froh, von einem guten Arzt behandelt zu werden.  
      'I was glad to be treated by a good physician.'

b. Ich habe gestern begonnen jeden Vormittag zu trainieren.  
      'I started yesterday to train every morning.'

c. Er glaubte mit Sicherheit einen Fehler begangen zu haben.  
      'He believed with certainty to have made a mistake.'

It is clear, therefore, that the accusative ihn in (19a) remains a constituent of the lower sentence in surface structure, and that such sentences cannot be used in support of RAISING.

Sentence (19b), the German equivalent of the English 'I believe him to be rich', has the underlying structure (23).

(23) [Ich glaube[er ist reich]]

The only possible surface structure is (24):

(24) Ich glaube, dass er reich ist.  
      'I believe that he is rich.'

We must conclude that verbs like glauben do not allow RAISING in German.

In English there is a further class of verbs including want, wish, expect, hate, intend, like, mean, need, prefer, which seem to trigger RAISING. They differ from the believe class, in that they tend to describe "unrealized" states of affairs, and that they trigger the application of EQUI-NP-Deletion when the complement subject is coreferential with the higher clause subject. A further characteristic of this class is that some of them, but not all, may occur with subjunctive that-clauses. For example:

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(25)  a. I want George to come.
        b. I expect George to come.
        c. I want to come.
        d. I expect to come.
        e. I intend that he be there at five.
        f. I prefer that she marry soon.

It is interesting to note that none of the German equivalents of
the English verbs listed above may be said to allow RAISING. Such verbs
only take infinitives when the embedded subject is coreferential with
the main subject.

(26)  a. Ich will, dass Georg kommt.
        'I want Georg to come.'
        b. *Ich will Georg zu kommen.
        c. Er will morgen kommen.
        'He wants to come tomorrow.'

(27)  a. Ich wünsche, dass er geht.
        'I intend him to go.'
        b. *Ich wünsche ihn zu gehen.
        c. Ich wünsche jetzt zu gehen.
        'I intend to go now.'

(28)  a. Ich ziehe vor, dass du morgen kommst.
        'I prefer you to come tomorrow.'
        b. *Ich ziehe dich vor morgen zu kommen.'

So once again, the German equivalent of the English want-class pro-
vides no evidence for RAISING.

Verbs which do suggest that there is a rule of RAISE-subject-to-
object in German are few. Among them are verbs of perception like
sehen 'see', and hören 'hear', fühlen 'to feel', and the verb lassen 'let'. The following examples will serve by way of illustration:

(29)  
   a. Ich lasse mein Kind Klavier spielen.  
        'I let my child play the piano.'
   b. Ich sehe ihn schwimmen.  
        'I see him swim.'
   c. Ich höre ihn Klavier spielen.  
        'I hear him play the piano.'
   d. Er fühlt Zorn in sich aufsteigen.  
        'He feels anger rise within himself.'

Notice that these verbs take "bare" infinitives. Now observe that only sentences with sehen and hören can be passivized. Even then, the passive forms of these sentences, although grammatical, would never be used in ordinary speech. Fühlen 'feel' does not allow passivization and neither does lassen 'let'.

(30)  
   b. Er wird von mir schwimmen gesehen.
   c. Er wird von mir Klavier spielen gehört.
   d. *Der Zorn wird von ihm in sich aufsteigen gefühlt.

The fact that fühlen and lassen do not allow passivization must be attributed to a special constraint associated with the verbs themselves, and is a matter to be dealt with in the lexicon.

Some observations on the German passive are now in order. The German equivalent of be + participle is werden + participle. Verbs in German take either accusative objects, dative objects, or both.

Most verbs taking accusative objects can be passivized:
(31) a. Der Junge isst den Apfel.
    'The boy eats the apple.'

b. Der Apfel wird von dem Jungen gegessen.
    'The apple is eaten by the boy.'

Verbs with a single object in the dative case may not be passivized. Sentence (32) has no passive counterpart:

(32) a. Der Schüler antwortet dem Lehrer.
    'The student answers the teacher.'

b. *Der Lehrer wird von dem Schüler geantwortet.

Some verbs take two objects, one in the dative, the other in the accusative case. Since there exists an accusative object, passivization is possible. The dative object remains in the dative case:

(33) a. Die Verkäuferin gibt der Dame das Paket. (active)
    'The sales girl gives the parcel to the lady.'

b. Das Paket wird der Dame von der Verkäuferin gegeben.
    (passive)
    'The parcel is given to the lady by the salesgirl.'

When the agent is unspecified it can be deleted:

(34) a. Man sagte ihm.... (active)
    'They told him....

b. Ihm wurde gesagt....(passive)
    'He was told....'

Notice that the dative object of sagte remains in the dative case (ihm). Sentences like the English he was told, where the dative turns up in the nominative case after passivization, have no equivalent in German:

(35) He was told.
    *Er wurde gesagt.
(36) He was given a book.

*Er wurde ein Buch gegeben.

The generalization is that in German the passive transformation is only allowed by verbs with accusative objects.

Let us now return to the verbs sehen, hören, lassen, and fühlen. Observe that the RAISING argument based upon reflexivization is applicable to these verbs:

(37) a. Er lässt sich von dir überzeugen.

'He lets himself be convinced by you.'

b. Lise sieht sich im Spiegel tanzen.

'Lise sees herself dance in the mirror.'

c. Lise hört sich am Radio Klavier spielen.

'Lise hears herself play the piano on the radio.'

d. Jeder von uns fühlte sich angespernt.

'Each one of us felt himself encouraged.'

I have also found some examples of sentences with verbs of saying that provide evidence for RAISING:

(38) a. Er erklärte sich bereit die Verantwortung zu übernehmen.

'He declared himself willing to take over the responsibility.'

Erklären 'to declare' is not a verb that could possibly be analyzed as taking two objects in deep structure, and the sich in (38a) therefore can only be construed as the deep structure subject of bereit, which underwent reflexivization after being raised into matrix object position.

As a last example, consider the sentence pair below:

(39) a. Er fühlte Zorn in sich aufsteigen.

'He felt anger rise within himself.'

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(39) b. Er fühlte das Rad sich drehen.  
'He felt the wheel turn round.'

Notice that in the (a) sentence the reflexive pronoun sich refers to the main subject er. In the (b) sentence the same pronoun refers to the direct object of fühlte, namely, das Rad. The way in which we understand the two sentences can easily be explained if we derive them from deep structures approximately as in (40).

(40) a. [Er fühlte [Zorn steigt in ihm auf]]

b. [Er fühlte [das Rad dreht sich]]

Sentence (39a) is derived from (40a) by RAISE-subject-to-object and subsequent pronoun agreement. (39b) results from RAISING alone. Now notice that both sentences in (39) have the same surface structure in terms of major categorical nodes, i.e., \( \text{NP}_1 \text{V}_1 \text{NP}_2 \text{sich} \text{V}_2 \). If we assumed with Shopen that both sentences are generated in their surface form, it is not at all clear by what principle we would assign the correct interpretation to the two instances of sich. Until such time as he demonstrates that this is possible with at least as much elegance as in the standard approach, we take the examples discussed as evidence in support of a desentential derivation of the infinitives in question.

**Summary and Discussion**

Our brief survey of the German data relevant to RAISING shows:

(i) There are only a very few adjectives in German that are susceptible to a RAISING analysis. There might be only two: leicht 'easy' and schwer 'difficult'.

(ii) Another verb for which a RAISING analysis can be maintained is scheinen 'seem'.

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(iii) The only other verbs which are susceptible to a RAISING analysis are some verbs of saying (erklären 'to declare'), lassen 'let', and some stative verbs of physical perception (sehen 'see', hören 'hear', and fühlen 'feel').

We have seen that there is some evidence for RAISING in German, although it is not very strong. The strongest arguments for RAISING in English were based upon the distribution of there, "weather it", and idiom chunks. German has nothing comparable to the English there, although I have found some idioms that can be separated on the pattern of the hour is ripe when in construction with scheinen 'seem'.

The evidence for RAISING with the verbs of perception sehen 'see', hören 'hear', and fühlen 'feel', and for the verb lassen 'let' is not quite so strong.

We have seen that although the reflexivization argument applies to them all, only sehen and hören allow the passive. None allow idiom chunks as direct objects in surface structure. These tests show only that the putative subject of the embedded sentence is at the time of the application of reflexivization a main object. The same results can be achieved by positing an analysis in which sentences like (37b) would contain a complement structure containing a subject noun phrase which is coreferent with the-main clause object:

(41) a. [Lise sieht Lise im Spiegel [Lise tanzt]]
    [Lise sees Lise in the mirror [Lise dances]]

    b. [Lise hört Lise am Radio [Lise spielt Klavier]]
    [Lise hears Lise on the radio [Lise plays the piano]]
(41)  c. [Jeder von uns fühle jeden von uns [Jeder von uns ist angespornt]]
     [Each of us feel each of use [each of us is encouraged]]

Such an analysis would derive the surface structure in (37b) by EQUI-NP-Deletion and Reflexivization.

My only objection to such an analysis is that it does not seem semantically relevant. When we perceive something we perceive the situation as a whole. For example, when Lise sees herself dancing in the mirror, she does not see herself first and then that she is dancing. Or, when Lise hears herself play the piano on the radio, it is not herself that she hears accompanied by a parallel perception of her playing, but she hears the performance as a whole. Semantically, therefore, there is no reason to assume that the structure of the sentences in (37b–d) or similar sentences involve two occurrences of Lise. This semantic inadequacy is particularly apparent in sentence (c) which involves quantifiers. On these grounds, then, a RAISING analysis is to be preferred for the verbs of perception.

The same, I feel, applies to sentences with lassen. Although an EQUI analysis would give the desired syntactic results, as shown in (42), one can argue on semantic grounds that such an analysis is misguided:

(42)  Ich lasse mich von dir überzeugen
   i. [Ich lasse ich [du Überzeugst ich]]
   ii. [Ich lasse ich [ich werde von dir Überzeugt]] (passive)
   iii. [Ich lasse ich [werde von dir Überzeugen]] (EQUI)
   iv. Ich lasse ich von dir Überzeugen (werden-deletion)
   v. Ich lasse mich von dir Überzeugen. (reflexivization)

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Lassen in the sense of 'allow', as it is used here, expresses a binary relation between an individual with power and an event. For example, when I say "Ich werde es nicht geschehen lassen" 'I will not let it happen', it does not mean that I will prevent es 'it' from doing something. Consider several additional examples:

(43) a. Ich lasse die Lampe brennen.
   'I leave the light on (to burn)'.
 b. Ich lasse das Buch fallen.
   'I let the book fall./I dropped the book.'
 c. Ich lasse Peter warten.
   'I let Peter wait./I keep Peter waiting.'

In each case we understand the subject to allow a certain thing to happen. It doesn't make sense to posit an EQUI-analysis, since in none of these cases do we understand the second noun phrase to function as the deep object of lassen. I consider the semantic reasons given above sufficiently strong to tilt the balance in favor of a RAISING analysis for lassen.

I conclude these remarks by suggesting that although there is far less evidence in German for a rule of RAISING than we have found in English, the evidence seems to be sufficiently strong to assert the existence of such a rule.

4.2 French and Romanian

We have seen that the strongest support for RAISING in English comes from sentences with existential there, "weather it", and idiom parts. French, like German, has no equivalent of the existential there construction, but evidence for RAISING in French can be found with
sentences involving idioms and the equivalent of "weather it". Arguments for RAISING can also be based upon other kinds of co-occurrence restrictions. We shall give examples of both kinds. Our discussion of RAISING in French shall follow the general pattern adopted, namely, we shall present evidence for RAISE-object-to-subject, RAISE-subject-to-subject, and RAISE-subject-to-object in turn.

There seem to be very few adjectives in French that allow the rule RAISE-object-to-subject. The only ones I could find are facile 'easy', difficile 'difficult', impossible 'impossible', and perhaps bon 'good'. Observe the following sentences:

(44) a. Il est facile de convaincre Pierre.
   'It is easy to convince Pierre.'

   b. Pierre est facile à convaincre.
   'Pierre is easy to convince.'

(45) a. Il est difficile de résoudre ce problème.
   'It is difficult to solve this problem.'

   b. Ce problème est difficile à résoudre.
   'This problem is difficult to solve.'

(46) a. Il est difficile de rendre justice.
   'It is difficult to render justice.'

   b. Justice est difficile à rendre.
   'Justice is difficult to render.'

   (Ruwet 1972, p. 60)

(47) a. Il est bon de manger ceci.
   'It is good to eat this.'

   b. Ceci est bon à manger.
   'This is good to eat.'
However, notice that as in English there are some (ill-understood) restrictions on the RAISING rule:

(48) a. C'est bon de te revoir.
    'It is good to see you again.'

    b. *Tu es bonne a revoir.

French must allow RAISE-object-to-subject because of sentences like (46). The argument in support of RAISING goes approximately like this. Common nouns in French cannot normally appear in an NP position without being preceded by an article, as evidenced by the examples below:

(49) \[
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RAISE-object-to-subject or Tough Movement.

A similar argument based upon sentences with idioms can be made for RAISE-subject-to-subject. Observe that some idioms can undergo the PASSIVE:

(51) a. Charlemagne a rendu justice sur la place.
    'Charlemagne rendered justice on the square.'

    b. Justice a été rendue par Charlemagne sur la place.
    'Justice was rendered by Charlemagne on the square.'

(based on an example in Ruwet (1972))

Even though sentences like (51) might not be heard too often in ordinary conversation, according to Ruwet (1972) and Mitsou Ronat (personal communication), they are perfectly grammatical. Now notice that a noun like justice can only occur without a determiner in sentences like (51), (1) as the object of a specific verb, in this case rendre, if the sentence is active, and (2) as the subject of the same verb, if the sentence is passive.

Consider now the sentences in (52) for which the only natural explanation seems to lie in the acceptance of a rule of RAISING:

(52) a. Charlemagne semble avoir rendu justice sur la place.
    'Charlemagne seems to have rendered justice on the square.'

    b. Justice semble avoir été rendue par Charlemagne sur la place.
    'Justice seems to have been rendered on the square by Charlemagne.'

The following is an additional example of the same kind:
(53) a. Il semble que tort a été donné à la police.
    b. Tort semble avoir été donné à la police.
    'It seems that the blame was put on the police.'
    (Ruwet 1972, p. 60)

There is evidence that RAISING cannot apply when there is a pre-
positional phrase in the matrix sentence. Notice that while the (a) sen-
tences below are grammatical, their raised versions are ill-formed:
(54) a. Il semble aux français que Charlemagne ait rendu justice
    sur la place.
    'It seems to the French that Charlemagne rendered justice
    on the square.'
    b. *Charlemagne semble aux français avoir rendu justice sur
    la place.
    'Charlemagne seems to the French to have rendered justice
    on the square.'

(55) a. Il semble à Pierre que tort a été donné à la police.
    'It seems to Pierre that the police were blamed.'
    b. *Tort semble à Pierre avoir été donné à la police.
    'Blame seems to Pierre to have been put on the police.'

In part I, section 4 we suggested that there may be some adjectives
in French which allow RAISE-subject-to-subject as illustrated in (56):
(56) a. C'est gentil de la part de Pierre de m'apporter ce livre.
    'It is nice on Pierre's part to bring me this book.'
    b. Pierre est gentil de m'apporter ce livre.
    'Pierre is nice to bring me this book.'

Before considering further classes of verbs which are susceptible to a
raising analysis in French, I will pause and present some data from
Romanian that seem to support RAISING. Consider the following sentences:

(57) a. E imposibil să crezi acest lucru.
   Is impossible you-believe-subjunctive this thing
   'It is impossible to believe this thing.'

b. Acest lucru e imposibil de crezut.
   This thing is impossible believe-supine
   'This thing is impossible to believe.'

Several points need clarification. First of all, note that in sentence (57a) the form să crezi is the second person singular form of the subjunctive of a crede 'to believe'. This is a form which is often used to express the impersonal idea. The subjunctive is required by the main predicate imposibil. (In French the word impossible also governs the subjunctive in its complement: "Il est impossible qu'il soit si bête" 'It is impossible for him to be so stupid.') Now notice that when the direct object of să crezi is raised into main subject position as in (57b), the form of the embedded verb changes to de crezut. This is a form which Romanian has retained from Latin. It is called the supine. The supine is formed from the invariable masculine past participle preceded by any of a number of prepositions, in this case de. The Romanian supine is more or less equivalent to the English infinitive (with which we have translated it in (57b). It has very often the force of a noun and presents the action it describes without any reference to time. The following are some additional examples:

(58) a. Ion e greu de convins. (from (58b))
   Ion is difficult convince-supine
   'Ion is difficult to convince.'

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(58) b. E greu să-l convingi pe Ion.
   Is difficult you-convince-subjunctive him Ion-ACC
   'It is difficult to convince Ion.'

(59) a. Problema e ușor de rezolvat. (from (59b))
   Problem-DEF is easy solve-supine
   'The problem is easy to solve.'

b. E ușor să rezolvezi problema.
   Is easy you-solve-subjunctive problem-DEF
   'It is easy to solve the problem.'

(60) a. De văzut e ușor, de explicat e greu.
   See-supine is easy, explain-supine is difficult
   'To see is easy, to explain is difficult.'

It is worth noting that while the derivation of sentences like (57)–
(60) entails a change from the subjunctive to the supine, in French, the
derivation of analogous sentences entails a change in preposition from
de to à in addition to the change of the embedded verb from a finite
form to a non-finite form. Recall sentences like "Il est difficile de
convaincre Pierre" versus "Pierre est difficile à convaincre". To the
best of my knowledge this de/à change has resisted a principled "explan-
ation". All we can do is to describe it in some ad hoc way, such as mak-
ing it a condition on RAISING with the class of adjectives in question.
The Romanian adjectives would have to be marked in the lexicon as requir-
ing a change of the embedded verb to the supine when RAISING applies.
Another way of doing it would be to generate the supine in the base in
the form of a categorial node SUP, or a complementizer SUP, and then make
the raising transformation dependent upon it. The relevant adjectives
would still have to be marked as to whether they allow a supine
complement or not.

Another point worth noting is that, just as in the case of sembler, RAISING cannot apply when the main sentence contains a "dative" ("experiencer "): 

(61) a. Il est facile pour nous de convaincre Pierre. 'It is easy for us to convince Pierre.'

b. *Pierre est facile pour nous à convaincre. 'Pierre is easy for us to convince.'

(62) a. Il est difficile pour nous de résoudre ce problème. 'It is difficult for us to solve this problem'

b. *Ce problème est difficile pour nous à résoudre. 'This problem is difficult for us to solve.'

But (63) is perfectly good:

(63) Ce problème est difficile à résoudre.

The same observation can be made for Romanian:

(64) a. Pentru Ion e greu să învețe franceza. 'For John, it is difficult to learn French.'

b. *Franceza e greu pentru Ion să învețe. 'French is difficult for Ion learn-subjunctive'

French is difficult for Ion learn-subjunctive 'French is difficult for Ion to learn.' (where for Ion is understood as part of the main clause)

In Romanian the "dative" can take a different form as exemplified in (65):

(65) a. Lui Ion (cli) e greu să creadă aceasta. 'For Ion (clitic) is difficult believe-subjunctive this'

'To Ion it is difficult to believe this.'

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(65) b. *Aceasta e greu lui Ion de crezut.

This is difficult for Ion to believe.

'This is difficult for Ion to believe.'

Notice that irrespective of whether the dative in the main sentence takes a prepositional form pentru Ion 'for Ion', or a form with a pronoun lui Ion, literally 'to him Ion', its presence prevents RAISING from applying. To account for these facts, RAISING must be defined on structures without a dative in the main sentence both in French and Romanian. That is, in these languages predicates equivalent to easy and difficult must be subcategorized very much like their English counterparts (for a detailed discussion of these adjectives see Part I, Section 4).

Another point worth noting has to do with the movement of the for-phrase to the front of the sentence, which in English we said was a stylistic transformation:

(66) a. It is difficult for Peter to run fast.

b. For Peter, it is difficult to run fast.

French differs from English on this point. A sentence like (67):

(67) Pour Pierre, résoudre ce problème est difficile.

does not mean "For Pierre, to solve this problem is difficult", but "In Pierre's opinion, it is difficult to solve this problem". Other examples of this kind are:

(68) a. Pour nous, il est facile de convaincre Pierre.

'In our opinion (as far as we are concerned), it is easy (for somebody unspecified) to convince Pierre.'

To express the meaning of the English sentence the French would use the following version of (68a):

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(69) Il nous est facile de convaincre Pierre.

Romanian also allows RAISING with a părea 'to seem' as illustrated in (70):

(70)  a. Se pare că Petru e deștept.  b. Petru pare deștept.

seems that Petru is clever                  Petru seems clever

'It seems that Petru is clever.' 'Petru seems to be clever'

Se pare in (70a) is the third person reflexive of a părea 'to seem' and is another of the several ways available to Romanian to express the impersonal idea.

Notice that here too the raising process entails some changes, namely the deletion of se. The restriction on RAISING with părea is similar to the one with the adjectives discussed above, i.e., RAISING can only apply if there is no "experiencer" in the upper sentence. We can have a sentence like (71a), but not one like (71b):

(71)  a. Mi se pare că Petru e deștept.

to me it seems that Petru is clever

'It seems to me that Petru is clever.'

b. *Petru mi se pare deștept.

Petru to me seems clever

'Petru seems clever to me.'

As the English gloss shows, there is no such restriction in English.

We established earlier in this section that verbs like sembler allow RAISING. For the sake of completeness we will now offer some examples not involving idioms:

(72)  a. Il semble que vous soyez un peu las.

'It seems that you are a little tired.'
(72)  b. Vous sembles être un peu las.
       'You seem to be a little tired.'

(73)  a. Il me semble que Pierre a terminé ses devoirs.
       'It seems to me that Pierre has finished his homework.'
       b. Pierre semble avoir terminé ses devoirs.
       'Pierre seems to have finished his homework.'

(74)  a. Il paraît que Pierre hésite.
       'It seems that Pierre is hesitating.'
       b. Pierre paraît hésiter.
       'Pierre seems to be hesitating.'

Another class of verbs which allows RAISING are the "aspectsuals" (cf. Newmeyer (1969)). They must allow RAISING because of sentences like (75):

(75)  a. Il a commencé à pleuvoir.
       'It started to rain.'
       b. Il a cessé de neiger.
       'It stopped snowing.'

Like their English counterparts, verbs like neiger, pleuvoir, etc., may only take il for a subject. But exactly the same conditions hold across commencer and cesser in (75). Moreover, the two sentences in (75) may not have a subject different from il "weather it".

(76)  a. *Le marquis commence a pleuvoir.
       b. *La nuit cesse de neiger.

This, in my view, constitutes strong evidence for RAISING with the class of verbs which Newmeyer has called the "aspectsuals", and which in French include the verbs commencer, continuer, and cesser.
Finally, in English the synonymy of sentence pairs like (77):

(77) a. The work began to bore Peter.

b. Peter began to be bored by the work.

was taken as a reason to derive them from the same deep structure

(78) [the work bores Peter] begin]

This argument does apply to French, since we have the corresponding near-synonymous sentences:

(79) a. Le travail commence à ennuyer Pierre.

b. Pierre commence à être ennuyé par le travail.

The Romanian verb a începe 'to begin' is one of a small number of verbs that admit infinitival complements. Preferably, however, one would use the subjunctival form for the complement which, by the way, is totally synonymous with its infinitival counterpart. Thus we get parallel constructions like those in (80):

(80) a. A început a ploua. A început să plouă.

began rain-infinitive began rain-subjunctive

b. Maria a început a vorbi. Maria a început să vorbească.

Maria began to talk-inf. Maria began talk-subjunctive

Notice that Romanian does not have an equivalent of the English "weather it". Sentences like (80a) do not provide any evidence at all for RAISING, in fact they suggest an analysis in which the complement clause has an underlying unspecified subject. Constructions with a începe can be found which allow the passive without any change in meaning:

(81) a. Poliția a început să-l chestioneze pe Ion.

police-DEF began him question ACC-part,Ion

'The police began to question Ion.
(81) b.  Ion a început să fie chestionat de către poliție.

Ion began to be questioned by the police.

'Ion began to be questioned by the police.'

The (a) and (b) sentences in (81) are synonymous and can therefore be used as evidence for RAISING. It is not clear to me at this point what the optimal analysis for the Romanian a începe would be.

To sum up so far, we have presented evidence from French and Romanian in support of a rule of RAISE-object-to-subject and a rule of RAISE-subject-to-subject. We have observed that, generally speaking, there are fewer verbs and adjectives in these languages that might be said to trigger RAISING than we have found in English. While both French and Romanian allow RAISING with adjectives like easy and difficult, neither the equivalent of certain nor that of likely can be described in those terms. Both French and Romanian equivalents of the begin-class seem to support RAISING. We therefore conclude that both languages have raising processes similar to the ones described for English.

Let us now turn to verbs appearing in constructions which have been traditionally referred to as the "accusative + infinitive" construction. Gross (1968) discusses a number of examples which all have the surface structure form (82):

\[(82) \text{NP}_1 \text{ V NP}_2 \text{ C(Omplement)}\]

where C is either an adjective, a noun, or an adverb. C has the property that it can always co-occur with NP in sentences of the type \text{NP est C}. It has the further property that it always agrees in number and gender with NP2. Although some of the examples he gives are suggestive of a RAISING analysis, he is careful to state that the source of C is far from clear to him. He considers sentences like (83):
(83) Jean boit son rhum chaud.

'Jean drinks his rum hot.'

If one tries to pronominalize the object noun phrase in (83), one can get the two forms in (84) and (85):

(84) Jean le boit.

(85) Jean le boit chaud.

The fact that (85) is grammatical strongly suggests that son rhum chaud in (83) is not a constituent. In fact, (83) is ambiguous between a reading in which chaud is understood to modify rhum, and a second reading in which chaud is understood as an adverb of manner which can be questioned with comment 'how':

(86) Q. Comment Jean boit-il son rhum?

A. Il le boit chaud.

Or,

(87) Q. Comment est le rhum?

A. Il est chaud.

Notice also that in sentence (83), there is a marked intonation break between rhum and chaud in the one case, and boit and son rhum chaud in the second.

These are the main facts which led Gross to postulate a complex underlying source for sentences of surface form (82). He then tentatively proposes an analysis which involves the following steps:

(88) 1. *Jean boit que son rhum est chaud.

2. *Jean boit son rhum être chaud.

3. Jean boit son rhum chaud.

He says, however, that such an analysis is difficult to justify, and that he is only proposing it because it is analogous to the analysis
needed to describe sentences like (89) which have *que* clause analogues.

(89)  
a. Jean imagine que son rhum est chaud.
   'Jean imagines that his rum is hot.'

b. Jean imagine son rhum chaud.
   'Jean imagines his rum to be hot.'

*Boire* never takes a sentential complement and I would therefore agree with Gross that an analysis such as the one represented in (88) is hard to justify for verbs like *boire*. In fact, I would go further and claim that it is counter-intuitive. I would rather seek an analysis in which *le rhum est chaud* is represented in deep structure as in [Jean boit son rhum [*le rhum est chaud*]]. In my view, then, sentences like (83) do not constitute evidence for RAISING.

There are, however, a number of other verbs which do enter into constructions of type (82), and which do take sentential complements. These include: *aimer* 'love', *détester* 'detest', *exiger* 'demand', *croire* 'believe', *dire* 'say', *estimer* 'consider', *savoir* 'know', and some others. For these a RAISING analysis not out of the question, as the following sentence pairs show:

(90)  
a. Je déteste que ce vin soit glacé.
    'I hate this wine to be chilled.'

b. Je le deteste glacé.
    'I hate it chilled.'

(91)  
a. Je crois que ce vin est frelaté.
    'I believe that this wine is adulterated.

b. Je crois ce vin frelaté.
    'I believe this wine to be adulterated.'

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(92). a. Je sais que cet homme est honnête.
    "I know that this man is honest."

b. Je sais cet homme honnête.
    "I know this man to be honest."

In the course of the derivation of sentences like (90) – (92), the grammar will generate an être which, as the (b) sentences show need not appear in surface structure. Notice also that the (b) sentences are only possible when the complement predicate is a stative adjective. With a verb the "raised" versions would be ungrammatical as evidence by (93) – (97):

(93) a. J'aimerais que cet enfant apprenne à lire.
    "I would like this child to learn to read."

b. *J'aimerais cet enfant apprendre à lire.

(94) a. Je sais que ces sujets l'intéressaient.
    "I know that these subjects interested him"

b. *Je sais ces sujets l'intéresser.

(95) a. Vous dites que ces enfants jouent dans la rue.
    "You say that these children are playing in the street."

b. *Vous dites ces enfants jouer dans la rue.

(96) a. Je déteste que Pierre mange sa viande avec les doigts.
    "I hate it for Pierre to eat his meat with his fingers."

b. *Je déteste Pierre manger sa viande avec les doigts.

(97) a. Je crois que Pierre mange sa viande avec les doigts.
    "I believe that Pierre eats his meat with his fingers."

b. *Je crois Pierre manger sa viande avec les doigts.

The above observations lead to the following hypothesis:
(98) Assertive verbs like *croire* and *savoir*, emotive verbs like *aimer*, *détester*, and verbs of ordering like *vouloir*, *exiger*, allow RAISING only when the predicate of the embedded sentence is *être* plus a stative adjective.

This generalization might be captured in the form of a condition on the application of the raising transformation. The verbs in question might be marked [+RAISING if embedded VP is *être* + stative adj.] in the lexicon.

In Shopen's system sentences like "Je sais cet homme honnête" are generated in the base in their surface form, and verbs like *savoir*, *croire*, etc. would be entered in the lexicon as allowing the environment NP ___ NP ADJ. I do not intend to go into all the consequences of either analysis at this point, but would simply point out one obvious fact, namely, that in Shopen's approach one would be forced to consider sentences like "Je crois cet homme honnête" and "Je le crois honnête" as syntactically completely unrelated. In his system there is no way to express the fact that one sentence is predictable from the other.

There are two independent pieces of evidence which seem to support our hypothesis (98). If the raising operation does indeed assign main object status to the complement subject, then one would expect the raised NP to exhibit the normal behavior of objects with respect to certain transformations. That is, the resulting sentences should undergo at least passivization and reflexivization. The following sentences show that this is indeed the case:

(99) a. Jean est cru honnête par tout le monde. (passive)

'Jean is believed (to be) honest by everybody.'
(99)  b. Ce travail est pensé impossible.  
    'This work is believed (to be) impossible.'

c. Marie se croit belle.  
    'Marie believes herself beautiful.'

d. Jean se sait capable de gagner son pain.  
    'Jean believes himself capable of earning his bread.'

These facts may be taken as strong support for RAISING.

In the previous paragraphs we briefly touched upon the raising properties of verbs of thinking, verbs of wanting, and verbs of saying. Other verbs which appear in surface structures of type (82) are (1) verbs of perception: apercevoir 'to perceive', écouter 'to listen', entendre 'to hear', ouïr 'to hear', regarder 'to look', sentir 'to feel', voir 'to see', etc., and (2) some causatives like empêcher 'to prevent', envoyer 'to send', faire 'to make', laisser 'to let', mener 'to lead', etc. Some of these can also occur with que-clauses though others cannot. The following is a representative list including the ones already discussed:

(100)  I. Verbs that take que-clauses

apercevoir
entendre
détester
exiger
croire
dire
estimer
déclarer
avouer
savoir
sentir
voir
imaginer
se représenter

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II. Verbs that do not take que-clauses

regarder
écouter
laisser
faire
conduire
mener
envoyer

We will now very briefly consider the question of whether verbs of perception in French and Romanian are raising verbs or not. Verbs of perception, at least in the languages considered here, have very special characteristics which set them apart from other verbs admitting infinitival complements. It is not surprising therefore that the literature should contain widely differing proposals for their analysis.

The particular account offered in Gross (1968) is somewhat confusing. First of all, we find some of them (écouter, regarder) classified under his category A (see list (100II) above) which includes verbs which take infinitival complements and have no corresponding que-clause. Others, namely voir, entendre and sentir, come under his category B, i.e. verbs that admit both infinitival complements and que-clauses.

His initial intent is to derive all infinitival complements from full sentences, but later on (p. 122ff) he points out that this would lead to certain difficulties in the grammar. For example, for laisser (which does not allow que-clauses at all) one would have to posit a non-occurring underlying structure; another difficulty is that sentences with que-clauses differ in meaning from analogous sentences with infinitival complements. Thus, "Je vois que tout le monde part" is equivalent to "Je constate que tout le monde part", i.e. it means something like "I take note of the fact that everybody is leaving". "Je vois tout le monde partir ", on the other hand, implies that I actually witness
everybody's departure. The sentence with the que-clause is used here to describe an act of mental perception, while the sentence with the infinitival complement can only be interpreted as describing an act of physical perception, i.e. we understand there to be some direct observation involved. Gross points out several other restrictions upon an analysis which would derive infinitival complements from underlying sentences. For example, the embedded verb may not be one of the following: avoir, être, devoir, pouvoir, and verbs with a negative meaning. Moreover, the action described by the main verb and the embedded verb must be simultaneous. The set of transformations he proposes is as follows:

\[(101)\]

\[N_0V_0 \text{ que } N_2 TV_2 \Omega\]

("avec identité de temps")

extraction de \(N_2\) \[N_0V_0N_2 \text{ que } TV_2 \Omega\]

formation de qui \[N_0V_0N_2 \text{ qui } TV_2 \Omega\]

qui --- \(T_z\) \[N_0V_0N_2 \emptyset V_2 \Omega\]

Note the effect of Gross' rules on the underlying structure (101). The first change, "extraction de \(N_2\)" raises the embedded subject into the main sentence. This process is identical to what we have been referring to as RAISING. The resulting stage in the derivation is ungrammatical. Then follows a rule which changes que to qui. This change results in a surface form which is understood as a relative clause.

Finally, there is a rule which deletes \(T\) (the tense morpheme). As a result of this rule the embedded verb is changed into its infinitival form. Thus, in Gross' analysis an infinitival complement on a sensory verb seems to be the result of the deletion of qui in the relative clause version of the underlying structure (101). Informally we might say

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that from (102)

(102) je vois que l'homme vient

we pass through the stages represented in (103) and (104):

(103) *je vois l'homme que vient

(104) je vois l'homme qui vient (relative clause)

which finally becomes (105):

(105) je vois l'homme venir.

One might mention that an almost identical proposal was made independently in Moreau (1971) and can also be found in Ruwet (1972). 13

It is not clear to me why Gross should choose such an analysis since he himself points out that such an analysis is beset with many problems. First of all, the resulting surface forms are sharply non-synonymous. (104) means "I see the man who is coming" as opposed to the one who isn't, while (105) means "I see the man come", i.e., "I witness his coming." As mentioned earlier, there is also a marked semantic contrast between (102) and (105) inasmuch as (102) describes an act of mental judgment, while (105) describes an act of physical perception.

There is yet another question one might raise in connection with the above derivation, a question raised in a very interesting article by Manoliu (1969), namely, that if the process described in (101) is so regular, why is it that some verbs of perception will allow the infinitival complement but will not permit the relative clause? The following are Manoliu's examples: "J'entends pleuvoir", but *"J'entends qui pleut", and *"Je l'entends qui pleut". Manoliu goes on to suggest that the construction with the relative clause (cf. (104) above) is much closer in meaning to participial constructions also found with other verbs such as, for example, trouver 'find':

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(106) a. Je le trouve qui lit.
    'I find him in the process of reading.'
b. Je le trouve lisant.
    'I find him in the process of reading.'
c. *Je le trouve lire.
    *'I find him to read.'
d. Je trouve qu'il lit (bien, mal).
    'I find that he reads (poorly, well).'</p>

The meaning differences between the various sentences in (106) are very much like the meaning differences conveyed by their English translations. Consider now the paradigm with voir:

(107) a. Je le vois qui lit.
    'I see him (while he is) in the process of reading.'
b. Je le vois lisant.
    'I see him (while he is) in the process of reading.'
c. Je le vois lire.
    'I see him read.'
d. Je vois qu'il lit.
    'I see that he reads.'

Sentences (a) and (b) have, as far as I can determine, the same meaning, the (b) sentence being somewhat bookish. They both describe an event perceived by the speaker as continuing in time.\(^\text{14}\) We must distinguish two properties inherent in these constructions: (1) their complements describe events which are perceived as being simultaneous with the action described by the main verb, and (2) the construction conveys the notion of duration. The (c) sentence, on the other hand, which also presents the action of the main verb and that of the complement as
simultaneous, makes no reference to duration. The distinguishing characteristic between the two types of construction, as Manoliu points out, is the presence or absence of the durative aspect. Manoliu suggests that this difference should be represented in deep structure by means of a marker [D] (durative) which will trigger the appropriate transformations to derive the (a) and (b) sentences, and a marker [S] (simultaneity) which will trigger the transformations necessary to derive (c). Her underlying source for sentences with verbs of perception allowing infinitival complements is approximately as in (108):

(108) \( N_0 V_0 [S] \) que \( N_2 [S] V_2 \)

Notice that the marker [S] appears to be attached both to the main sentence and to the complement clause. In Manoliu's proposal [S] replaces the morpheme T used by Gross. This makes [S] a possible expansion of AUX in the subordinate clause. The [S] in the main clause is to be considered an inherent feature on the main verb \( V_0 \). This is justified on the grounds that it is part of the meaning of verbs of physical perception and of verbs like trouver (with the meaning of judging an event or situation), to require a relation of simultaneity between the action expressed by the main verb and that of the embedded verb. One can only see something if it is taking place within one's field of vision; one can only physically feel something with which one has immediate contact. Manoliu's proposal, then, seems to be very much in accord with our intuitions about the meaning of verbs of perception and their complements. We will leave it to the interested reader to look up the formal details of her analysis and will mention only that it does involve a rule of RAISING.
The raising analysis for verbs of perception receives support from sentences involving the passive and the reflexive as illustrated in (109) and (110) respectively:

(109)  a. Pierre se voit surclasser par tous ses concurrents.
       'Pierre sees himself outclassed by all his opponents.'

       b. Pierre a été entendu chanter dans la plaine.
       'Pierre was heard singing in the plains.'

(110)  a. Pierre ne se voit pas participer à cet rallye.
       'Pierre can't see himself participating in this sports event.'

       b. Pierre s'entend chanter à la radio.
       'Pierre hears himself singing on the radio.'

Some verbs of perception do not have que-clause counterparts at all. Such are for example regarder and écouter.

(111)  a. J'écoute les oiseaux chanter.
       'I listen to the birds sing.'

       b. Je regarde les gens travailler.
       'I look at the people work.'

These verbs will be subcategorized only for the environment $N_0 \Box \text{que } N_2$ [S] $V_2$. Raising will then obligatorily apply and produce the correct surface structures.

If the hypothesis embodied in (108) can be maintained, it would automatically explain why we don't get sentences with verbs of physical perception with past infinitives in the embedded clause.

(112)  a. *Je vois Pierre être venu.
       *'I see Pierre to have come.'
(112) b. *J'entends Pierre avoir chanté.

*I hear Pierre to have sung.'

If AUX is expanded simply as [S] there is no possibility of introducing tense and aspect into the complement clause. The suggestion that underlying sentential sources for infinitives on sensory verbs should be generated without tense was also made to me by Sandra Thompson (personal communication).

It would also explain why a sentence like "Je ne vois pas Pierre ne pas jouer" can only be interpreted in the sense of "I can't see (imagine) Pierre not play (the slot machines once he gets to Las Vegas)" and not in the sense of a sensory experience. It just wouldn't make sense to assert that we are (not) seeing something which is not taking place.

The last question we want to ask is: why a raising analysis, and why not an EQUI analysis? Why not say that "Je vois Pierre partir" in the sense of physical perception, comes from an underlying source with two occurrences of Pierre as in (113):

(113) [Je vois Pierre [Pierre part]]

Such an analysis has been suggested in the literature, in particular by Bierwisch (1963) for German, and by Vasiliu (1969) for Romanian. My main argument against such an underlying structure is semantic. I maintain that a structure like (113) clashes with our intuitions that verbs of perception are relations between an individual and an event represented by the complement sentence. Semantically there is no need for the extra NP in the matrix. From the syntactic point of view a structure like (113) only complicates the derivation, since we would have to state that verbs of physical perception require identity of reference.
between the object of the main verb and the embedded subject. Thus at least one extra statement is necessary.

Romanian verbs of perception do not allow infinitival complements. They co-occur only with că-clauses, the equivalent of the English that-clause, or with gerundive complements.

(114) a.  Vână că vine.
     I-see that he-come-indicative
     'I see that he is coming.'

b.  Îl vână venind.
     him I-see come-gerundive
     'I see him coming.'

The interpretation of the (a) and (b) sentences corresponds closely to the interpretation of infinitival complements vs. que-clause complements in French. (a) is interpreted as "Je constate qu'il vient", 'I am taking note of the fact that he is coming', while the (b) sentence can only be interpreted as the assertion of an act of physical perception. Once again in the (b) sentence there exists a relation of simultaneity between the main predicate and the embedded verb which does not exist in the (a) sentence. The same holds for the verb a aude 'to hear'.

(115) a.  Aude că erai bolnavă.
     I-hear that you-were ill
     'I hear that you have been ill.' '/I am told that you have been ill.'

b.  J'entends que tu a été malade.
     'I hear that you have been ill.'

A aude cannot take the gerundive in Romanian, or the infinitive in English or French, because it is not possible to physically hear somebody
being ill. But we can say something like "I hear you singing":

(116) a. Te aud cântînd (gerundive).
    you I-hear singing
b. Je t'entends chanter (infinitive).
    'I hear you singing.
c. Aud că cântî.
    I-hear that you-sing
    'I hear that you sing, I am told that you sing.'
d. J'entends que tu chantes.
    'I hear that you sing, I am told that you sing.'

As in French, Manoliu suggests that also in Romanian it is the presence of the marker [§] in deep structure which will trigger the transformation resulting in the gerundive.

(117) a. Văd [§] că Petru [§] vine.
    I-see-[§] that Petru comes-indicative-[§]
b. Îl văd pe Petru că vine. (RAISING + clitic placement)
    him I-see Petru-ACC that he-comes-indicative-[§]
c. Îl văd pe Petru venind. (gerundive suffix replaces [§])
    him I-see Petru-ACC come-gerundive

Without assuming a raising operation in Romanian it would be hard to explain the stage (b) in the derivation which actually occurs in surface structure. This is not the case for French, where we do not get sentences like "je le vois que vient".

In sum, a sentence pair like

(118) a. Văd că Petru vine.
    'I see that Petru is coming.'
(118) b. Ți văd pe Petru venind.

'I see Petru coming.'

differ in deep structure in that (b), but not (a), has the simultaneity marker [S] attached to the complement sentence. We hope to have shown that there is reason to believe that Romanian has a rule of RAISING.

Our brief survey of the French data relevant to RAISING shows that

(i) there are only a very few adjectives in French that might be said to allow RAISING. We have found only three: facile, 'easy', difficile 'difficult' and impossible 'impossible'.

(ii) there are a number of intransitive verbs for which a RAISING analysis seems justified (sembler, paraître and aspectuals like commencer, continuer, cesser).

(iii) there are a large number of verbs which occur in the "accusative plus infinitive" construction, not all of which can be analyzed in terms of RAISING. Those for which a raising analysis can be maintained include verbs like aimer, croire, estimer, exiger, dire, savoir, laisser, and a number of verbs of perception.

We have also given some examples from Romanian which support RAISING in that language. We conclude that in spite of the fact that French and Romanian provide less evidence for RAISING than English does, there is nevertheless sufficient justification for positing such a rule.

4.3 Hungarian

It was mentioned at the beginning of this chapter that Hungarian has no equivalent of the English expletive it. There are, therefore, no "impersonal constructions" comparable to the English It be ADJ INF X
in the language.

Observe the following sentences with adjectives that take infinitival complements:

(119) a. Pétert nehéz látni.
Peter-ACC difficult to-see
'It is difficult to see Peter.'
'Peter is difficult to see.'

b. Ezt jó lesz aláírni.
this-ACC good will-be under-to-write
'It's advisable to sign this.'

c. Ezt a problémat egyszerű megoldani.
this-ACC the problem-ACC simple to-solve
'This problem is simple to solve.'

There are two properties of Hungarian which need to be explained which are relevant to the question of whether Hungarian allows RAISING with adjectives equivalent to the English easy and difficult. The first has to do with word order, and the second with case marking.

Word order is fairly free in Hungarian, and according to Tompa (1968, p. 337), there are no fixed syntactic rules governing the order of major constituents in a sentence.16 Word order, however, he observes, is not completely free. It is a function of semantic factors such as focus, emphasis, and rhythm. It is, furthermore, closely bound up with intonation. There is, in Hungarian, a recognized neutral order for major constituents, and that is: Subject-Verb-Object. Whenever a major constituent is singled out by the speaker, he will place it before the verb.

The second point I want to mention has to do with case marking.

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In Hungarian, a direct object will always stand in the accusative case. The characteristic of the accusative is the ending \(-t\). Subjects are unmarked and usually are described as being in the nominative case. We then have the following:

<table>
<thead>
<tr>
<th>NOM</th>
<th>ACC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Péter</td>
<td>Pétert</td>
</tr>
<tr>
<td>ez</td>
<td>ezt</td>
</tr>
<tr>
<td>probléma</td>
<td>problémát</td>
</tr>
</tbody>
</table>

No matter where we move an object in the sentence, it keeps its accusative marking. An accusative noun phrase, even if in sentence-initial position, as in all the sentences in (119), can never be interpreted as subject. We conclude, then, that the occurrences of the accusative noun phrases in sentence initial position in (119) can only be due to movement transformations, and not to RAISING which, as we have seen in other languages, and shall see also for Hungarian, causes "raised" noun phrases to be in the nominative case. Dropping the accusative marking on the fronted noun phrases would cause the sentences to be totally ungrammatical and also to lose all meaning.

(120) a. *Péter nehéz látni.
      b. *Ez jó lesz aláírni.
      c. *Ez a probléma egyszerű megoldani.

I conclude that Hungarian does not allow objects of infinitival complements to be raised to main subject position.

It is interesting to note that, although Hungarian does not allow RAISING with adjectives, it does seem to allow it with impersonal forms of verbs like megszűnni 'to stop; and elkezdeni 'start':

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(121) a. Az eső elkezdett esni.
the rain started to-fall
'It started to rain.'

b. Péter elkezdett dolgozni.
Peter started to-work
'Peter started to work.'

c. A szív megszűnik dobogni.
The heart stops to-beat
'The heart stops beating.'

Notice that the subjects of these sentences are all in the nominative: az eső 'the rain', Péter, a szív 'the heart'. Semantically, these subjects are understood to be subjects of the infinitives, and not subjects of the main verbs. Az eső elkezdett, Péter elkezdett, and a szív megszűnik do not make any sense without the infinitive. I would, therefore, take the above sentences as examples of RAISING.

The only other class of verbs that provide evidence for a RAISING analysis are verbs of physical perception such as látni 'see', nézni 'look', hallgatni 'listen', hallani 'hear', and érezni 'feel', and perhaps one other, namely hagyni 'let, allow', whose analogues we have seen to group with verbs of perception in other languages as well, insofar as they take "bare" infinitives.

Verbs of perception have an impersonal form which may be used intransitively. Used in this fashion they have a passive meaning. (Hungarian has no proper passive forms to speak of.) For example, the impersonal form of the verb látni 'see', is látszik. Now látszik is used in two ways, either on its own, in which case it seems to allow RAISING with subsequent infinitivalization of the embedded verb, or in the
expression úgy látszik, which means something like 'it is perceived in such a manner', in which case it can only co-occur with a hogy-clause, the Hungarian equivalent of the that-clause.

I shall give an example with úgy látszik first:

(122) Úgy látszik hogy a hajó megy.

so it is seen that the ship is going

'It seems that the ship is going.'

The next example shows the corresponding sentence with an infinitival complement:

(123) A hajó menni látszik

the ship to-go-inf. was seen

'The ship seems to be going.'

Below is an example with hallani 'to hear':

(124) A zaj erősödni hallatszik.

the noise to-grow-stronger-inf. is heard

'The noise seems to grow stronger.'

In (123) and (124) the noun phrase a hajó 'the ship' and a zaj 'the noise' are unmarked and therefore in the nominative case. They are understood to function as subjects of their respective sentences. They are also understood to function as the logical subject of the infinitive. These facts are easily explained if we assume that they are derived from a structure approximately like (125) through RAISING:

(125)

```
S[
  NP[Δ]

  VP[
    V[látszik]

  S[a hajó megy]]
```

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Sentences (122) and (123) exhibit meaning differences that are very similar to those observed in the case of German, French, and Romanian, and, of course, English. Not only do we find here the differences described for the verb seem, i.e., in (122) the situation is presented as a whole, while (123) is a sentence about a hajó, but we also find the differences characteristic of sentences with verbs of perception. (122) is understood as an act of mental perception; the sentence is quite appropriate in a situation where the speaker bases his assertion upon some indirect evidence, i.e., he need not physically see the ship at all. (123), on the other hand, can only be uttered if the speaker actually sees the ship moving. Once again we find that sensory verbs require that there be a relation of simultaneity between them and the embedded verb. Following Manoliu's suggestion (see section 4.2 on French and Romanian) we might account for sentences like (122) versus (123) by positing a marker of simultaneity [§] in the deep structure of the latter. RAISING will only apply if that marker is present. Sentence (122) will be derived from a deep structure like (125) in which there is no marker of simultaneity. It is not clear to me at the moment what the best way is to account for the úgy in (122). It may be that the úgy could be introduced in the deep structure under an adverbial node, and then shifted into surface subject position by some adverb-preposing rule (which seems to be needed in the language anyway). Another possibility would be to introduce it transformationally, but úgy does have a meaning of its own, and the solution therefore does not seem too attractive.

For the sake of clarity, I will now give one more example with the intransitive látszik 'it seems' and show each sentence with its underlying representation:

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(126) a. Úgy látszik hogy Péter dolgozik.
    so it seems that Peter is-working
    'It seems that Peter is working.'

b. Péter dolgozni látszik.
    Peter to-work seems
    'Peter seems to work.'

(127) a. Úgy látszik hogy Péter dolgozik.

The following are additional examples with verbs of perception and
hagyni 'let, allow', used transitively:

(128) a. Nem láttam apádat hazajönni még.
    not seen your father home-come yet
    'I have not seen your father come home yet.'

b. Láttam a rózsát virulni.
    I-saw the rose flower (verb)
    'I saw the rose flower.'
(128) c. Hallja Pétert töröklük szólalni.
    he-hears : Peter-ACC Turkish talk
    'He hears Peter talk Turkish.'

d. Hagytam Pétert zongorázni.
    I-let Peter-ACC to-play-the-piano (to pianize!!)
    'I let Peter play the piano.'

Notice that in each of the sentences in (128) the logical subject of the infinitive appears in the accusative case. Since in Hungarian the subject of an independent clause can by definition never be in an oblique case, we must assume that the subject of the subordinate clause has been raised into object position of the main clause where it has subsequently undergone agreement rules. For example, we get independent sentences like (a) and (b) below, but never (c):

(129) a. Nem látta apádat.
    'I have not seen your father.'

b. Apád hazajönn.
    'Your father-NOM is coming home.'

c. *Apádat hazajönn.
    'Your father-ACC is coming home.'

I therefore conclude that verbs of perception and hagyni 'let' are RAISING verbs.

In summary, we have found that:

(i) there are no adjectives in Hungarian that might be said to allow RAISING.

(ii) there is a class of verbs equivalent to the English start and stop class that occur in constructions which can be explained in terms of a RAISING analysis.
(iii) we have also found that there is only one further class of verbs which might be analyzed in terms of RAISING. This class includes some of the verbs of physical perception and  
haqyni 'let'. Verbs of physical perception are used in two ways:

a. In their intransitive use (impersonal forms) they allow RAISING of the embedded subject to main subject position.

b. In their transitive use they allow RAISING of the embedded subject to superordinate object position. 

haqyni 'let', not a verb of perception, also belongs to this class.

We conclude that Hungarian has a rule of RAISING.

5. On the semantic effects of RAISING

It has been noted time and time again throughout this work that raising operations bring about meaning changes. This goes against the once well-established but now disputed Katz-Postal hypothesis that the deep structure established by "purely syntactic motivations" is the only level of syntactic structure relevant to semantic interpretation. RAISING, then, presents a serious problem for a Katz-Postal type of semantic system. The Extended Standard Theory, however, allows rules of semantic interpretation to operate not only at the deep structure level, but also at other points in the derivation, and thus offers a suitable framework within which one might hope to integrate the findings of this work. The main purpose of this section is to survey in a unified manner the meaning contrasts induced by raising operations and to offer a
tentative solution to the problem within the framework of the Extended
Standard Theory.

Some discussion of the semantic effects of RAISING can be found in,
for example, Cantrall (1970), Chomsky (1969), Jackendoff (1969, 1972),
Partee (1968, 1971), Postal (to appear), and Shopen (1972). Among those
who recognize a rule of RAISING, most do not go beyond a simple state-
ment that, in their view, the semantic contrasts induced by the trans-
formation should be handled by derived-structure interpretive rules.
Postal is the only one who goes into a little detail. He suggests what
he calls an "assumption-linkage" analysis. He discusses examples like
the following:

(1) a. Julius Caesar struck me as honest.
    b. It struck me that Julius Caesar was honest.

(2) a. It just now struck me that my wife has been dead two
    years tomorrow.
    b. *My wife just now struck me as having been dead two years
    tomorrow.  (From Cantrall, 1970)

This is what Postal says about them:

Assuming that the term Julius Caesar designates the
well-known Roman figure, there is no context in which,
for example, the present writer can really use (4)a.
(4)b, on the other hand, could naturally be utilized
in a discussion of Rome, famous Romans, etc.

The contextual contrasts are, I claim, a function of
differences in meaning. I cannot use (4)a because to
do so implies (i) that I have in fact had some kind
of perceptual experience of Julius Caesar, and (ii)
the judgment expressed is a function of this experi-
ence, and (i) is false so that (ii) also is. Notice
that (4)a would become natural again in a context of
time travel, etc. On the other hand, (4)b is normal
in ordinary discourse because it makes no assumption
about the speaker's experience vis a vis Julius
Caesar. Observe also that (i) and (ii) explain what

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is wrong with Cantrall's example (10), since the judgment expressed could not have been based on perceptual experience with the entity designated by the raised NP (under normal assumptions about dead people being buried, etc.).

The application of RAISING, then, according to Postal, causes just those meaning differences which exist between the (a) and the (b) sentences in (1) and (2). In (1a) we assume that the speaker makes his assertion on the basis of personal experience with the individual designated by the subject NP, whereas the (b) sentence is not associated with such an assumption.

I feel that Postal's semantic intuitions about the meaning of the two strike sentences is correct. He goes on to suggest, however, that what we have to deal with here is a special feature of natural languages, namely, the linkage of certain assumptions with certain rule applications. He explicitly states that in his view those assumptions are "more properly regarded as linked with RAISING than as part of the meaning of strike." His arguments consist in showing that the assumptions are not under the scope of explicit negations, questioning, or higher predicates. For example, if we say:

(3) Peter did not strike me as honest.

we do not negate the linked assumption that we base our judgment on direct evidence gained through perceptual experience with Peter. Similarly, for (4b,c):

(4) a. Peter struck me as honest.

b. Did Peter strike you as honest?

c. I believe Peter struck you as honest.

Questioning (4a) does not question the associated assumption, nor does embedding place the assumption under the scope of the higher predicate.

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To support his view that the assumptions associated with the "raised" structures are linked with the rule application, and not with the main verb, Postal offers the following examples with the verb find which, I agree, exhibit similar meaning differences to those found with the strike sentences:

(5)  a. I found Julius Caesar (to be) boring.
   b. I found that Julius Caesar was boring.

In short, Postal's position appears to be that the meaning differences are linked ("in some yet technically unspecified way" to be sure), with RAISING and are not part of the meaning of the main verb. Later, in the course of his discussion of the verb allow, he makes the following statement, which seems to contradict his previous claim: "Thus, it seems to me that the aspect of the meaning of allow I have designated Q does pattern like P with strike." In view of this inconsistency in his exposition, it is no longer clear what Postal's position really is, and I will therefore make no further comment on his proposal at this time. Instead, I will present a brief but systematic survey of the meaning contrasts induced by raising operations and will argue that these meaning contrasts are dependent upon the main verb and the nature of the raised NP, and not upon the transformation itself. I will offer a tentative solution to the problem within the framework of the Extended Standard Theory.

Consider, to begin with, the sentences in (6) and (7) which are generally regarded as related by the rule of Tough Movement:

(6)  a. It is difficult to handle this child.
   b. This child is difficult to handle.
(7)  a. It is easy to play sonatas on this violin.
   b. Sonatas are easy to play on this violin.
   c. This violin is easy to play sonatas on.

The sentences in each set are not entirely synonymous. In (6a) difficult is predicated of the entire complement clause, whereas in (6b) the basic predication seems to have changed insofar as the difficulty of handling this child now seems to be attributed to some inherent property of the derived subject. The sentence now receives an additional interpretation parallel to that of a simple sentence like "This child is naughty", which does not, however, destroy the understood deep relations beteen the verb handle and this child. We still understand the relation between handle and this child to be a verb-object relation. On the other hand, the relation between the main predicate difficult and this child is now felt to be much closer than in the (a) sentence. This child in (b) occupies a position of semantic prominence which Chomsky (1965) describes in terms of the surface structure notion of "topic". This child, then, has become the "topic" of the sentence, and the rest of the string is what is known as the "comment".

The sentences in (7), which have been attributed to Klima, and which are discussed in Chomsky (1969), Partee (1968, 1971), Jackendoff (1969, 1972), and G. Lakoff (1971), also appear to differ in topic. Note that Partee and Jackendoff speak about the meaning differences between the sentences in (7) as having to do in some vague sense with focus. I do, however, feel that the term "topic" is more appropriate here. Be that as it may, the main observation that needs to be made about these three sentences is that they differ in meaning in that (a) is an assertion about the entire complement, (b) makes an assertion
about sonatas, and (c) makes an assertion about this violin. Once again we notice that the understood verb-object relation between play, sonatas, and violin remains unaffected by the surface manifestations of the three sentences. Within the framework we have adopted here, the sentences do not have to differ in deep structure.

In sum, the main semantic difference sensed between the "raised" easy/difficult sentences and their non-raised counterparts can, I believe, be described in terms of the notion of "topic". This characterization holds for all the predicates which allow Tough Movement, as illustrated by a number of additional examples:

(8) a. It is inappropriate for Jane to read this book.
    b. This book is inappropriate for Jane to read.

(9) a. It is impossible to solve this puzzle.
    b. This puzzle is impossible to solve.

(10) a. It is a pleasure for Mary to do the dishes.
    b. The dishes are a pleasure for Mary to do.

Sentences with Tough Movement predicates, then, exhibit the kind of correlation between the transformation and the meaning change which would support Postal's hypothesis. It should be noted, however, that Postal (1971) himself expressed some doubts as to the existence of his Tough Movement rule. In a prefatory note to his Crossover Phenomena he suggested that sentence pairs like (6) should be derived from separate underlying structures. If his views on the subject have not changed, then sentences like (6) do not support his hypothesis, since they are not, according to this view, transformationally related. But, if we regard Tough Movement as a transformation, as I would be inclined to do, then it would indeed seem that the meaning changes must be linked with
the transformation. In the remaining part of this section I will show that as soon as we look at the semantic effects of some of the other RAISING operations, this view cannot be upheld.

Consider first sentences which, I would claim, are transformationally related by a rule which raises the subject of the embedded sentence to main subject position (in Stockwell et al. this rule is called RAISE-subject-to-subject). Consider, to begin with, sentences (11) below:

(11) a. It is certain that nobody will pass the exam.

b. Nobody is certain to pass the exam.

These sentences are discussed in Partee (1971), where it is pointed out that they are sharply non-synonymous, even though they seem to differ syntactically only in that in (b) RAISING has applied. I want to exclude sentences containing quantifiers from our discussion of RAISING, since the meaning differences cannot be attributed to the raising operation. They are due to the difference in scope of the negative quantifier nobody. That this is so becomes quite clear from analogous sentences without quantifiers:

(12) a. It is certain that Peter will pass the exam.

b. Peter is certain to pass the exam.

which are near paraphrases of each other.

Jackendoff (1969, 1972) argued that contrasts like those in (11) follow from a general principle relating to the scope of quantifiers in a sentence, namely, left-to-right precedence in surface structure correlates with wider scope in logical structure. To illustrate the generality of this principle, consider

(13) a. Nothing is difficult for Jack to undertake.

b. It is difficult for Jack to undertake nothing.
which are also non-synonymous.

Let us now turn to sentences (14):

(14) a. It appears that John is shooting at Bill.
    b. John appears to be shooting at Bill.
    c. Bill appears to be being shot at by John. (Partee)

According to Partee, the semantic contrast in the appear-sentences seems to involve a difference in point of view of the speaker. In the (a) sentence he is taking in the whole situation, whereas in (b) and (c) he "focusses" on John and Bill respectively. The difference is one of manner of perception, what part of the sentence the speaker wishes to give semantic prominence, and not of the basic meaning. Notice that this is not the only meaning difference between the appear sentences with infinitival complements and their that-clause analogues. There is an obvious similarity between the interpretation of the strike sentences and the appear sentences under discussion. Sentences (14b, c) imply that the speaker actually sees the event taking place. The (a) sentences, on the other hand, would be perfectly appropriate in a context where neither John nor Bill are within the speaker's field of vision. With both verbs, then, the raised sentences are associated with the assumption of perceptual experience with the individual designated by the raised NP. We must now ask whether this connection between the two sets of sentences is due to the raising rule itself, or to the obvious similarity in meaning between the two verbs strike and appear. My claim is that the linked assumptions are verb-dependent, and not a function of the raising rule. To show this, we need to give an example with a predicate that allows RAISE-subject-to-subject, but for which the raised sentence does not exhibit the meaning contrasts found with strike and appear. Such a
predicate is certain. Consider sentences (12) which he have claimed are related by the rule of RAISE-subject-to-subject. Notice that (12b) does not imply that I arrived at the judgment expressed as a result of personal acquaintance with Peter. I can think of situations in which I need never have met or seen Peter in order to assert that he is certain to pass his exam.

My hypothesis then is that the meaning differences under discussion are verb-dependent, that is, that we get one kind of interpretation with some verbs, and another kind with others. If my claim is correct, i.e., that the assumptions are part of the meaning potential of verbs, then this information must be made available for semantic interpretation in the lexical entry for verbs. A verb like appear, or strike, therefore, must contain in its lexical entry two kinds of information: a syntactic part describing the form of the sentence in which it can appear, and a semantic part in the form of a derived structure interpretation rule which is somehow linked with the syntactic information.

So far we have given evidence that the assumptions in question are verb-dependent. We will now show that they are also dependent upon the nature of the raised NP. Notice that appear sentences with there and "weather it" subjects do not differ in interpretation from their that-clause versions:

\[(15)\]
\begin{align*}
a. & \text{It appears that there is much trouble in the Middle East.} \\
b. & \text{There appears to be much trouble in the Middle East.}
\end{align*}

\[(16)\]
\begin{align*}
a. & \text{It appears that it is raining in the mountains.} \\
b. & \text{It appears to be raining in the mountains.}
\end{align*}

Now notice that sentences with idioms have to linked assumptions either:
(17) a. It appears that advantage was taken of his ignorance.
   
   b. Advantage appears to have been taken of his ignorance.
   
   Such facts suggest that appear sentences are only linked with assumptions when the raised NP can be interpreted referentially. To account for this the derived structure interpretive rules must be made sensitive to the nature of the derived subject. Note that this "assumption-linkage" is sometimes obligatory, and sometimes optional. For appear it seems not to be obligatory, as evidence by (18):
   
   (18) John appears to be unhappy.
   
   Such a sentence can be used in a situation where the speaker does not actually see John, for example when he is reporting on what someone else has said about John. It seems to be the case then, that appear sentences with raised subjects that are something "perceptible" are at least potentially ambiguous as between as "assumption-linked" interpretation and one that is not. In the case of strike, however, the assumption-linkage is obligatory. Strike, as is well-known, does not allow RAISING with there, "weather it", or idiom chunks:
   
   (19) a. *There struck me as being much trouble in the Middle East.
   
   b. *It struck me as raining in the mountains.
   
   c. *Heed strikes as being taken of his warning.
   
   Recall that strike sentences like (1) were said to be associated with the assumption that the speaker has had perceptual experience with the entity designated by the raised NP. This, of course, is not possible in sentences (19), where the raised NP is non-referential. As Postal correctly pointed out, sentences like (19) can be explained in terms of violations of the condition that the raised NP must be something
"perceptible", if the assumption-linkage for strike is made obligatory.

In summary, we have observed that sentences with verbs like certain, appear and strike (usually assumed to allow RAISE-subject-to-subject) exhibit certain meaning contrasts between their infinitival and their that-clause versions. The semantic difference between the certain sentences seemed to be one of focus, while the appear and strike sentences were associated with certain assumptions concerning the speaker's perceptual experience with the referent of the main subject NP. Furthermore, the assumptions were optional in the appear cases, and obligatory with the strike sentences. I have argued that the associated assumptions are verb-dependent, and not a function of the raising rule per se, as Postal would have it. I have also shown that the assumption-linkage depends further on the nature of the raised NP. I suggested that the phenomenon be explained in terms of interpretive rules which are optional for some verbs and obligatory for others, and that this be part of the semantic information marked in the lexical entry for verbs.

Let us now turn to sentences arising through the application of the RAISE-subject-to-object rule. Consider first the verb believe, which must be a raising verb because of sentences like (20):

(20) I believe there to be much trouble in the Middle East.

where there can certainly not be regarded as the deep object of believe. Now consider the following example from Partee's recent paper "The semantics of belief-sentences":

(21) a. Tom believes that Cicero denounced Catiline.
   b. Tom believes Cicero to have denounced Catiline.

In her discussion of these sentences, Partee quotes Quine's (1969, p. 145-50) judgment that the two sentences in (21) are not synonymous, in
particular, that only in the (b) sentence is Cicero in purely referential position. She suggests that Quine's semantic intuition may be wrong, since believe also occurs in sentences like (22), where there and it cannot be taken as referential.

(22) a. Tom believes there to have been an earthquake recently.
   b. Susan believes it to be likely that no one will show up.

Partee herself is inclined to regard (21b) ambiguous, with a slightly greater tendency for Cicero to be regarded as referential there than in the (a) sentence. She then offers the following example, which she says is definitely ambiguous.

(23) John believes a Communist to have been at the heart of the plot.

This, in turn, she ways, again argues against Quine's interpretation.

Let us look at several more examples:

(24) a. Mary believes that she is beautiful.
   b. Mary believes herself to be beautiful.

(25) a. Mary believes that John is a liar.
   b. Mary believes John to be a liar.

The difference in meaning in the last two sets seems to me to have much more to do with focus in the Jakobsonian sense than with reference. The raised noun phrase acquires a certain measure of semantic prominence by being moved closer to the main verb. The semantic contrast with believe-sentences, however, is very subtle, and there is even no general agreement whether one exists at all. But notice that for those who can discern a meaning-difference, it only appears with objects that can be understood referentially.

The meaning contrasts induced by RAISING are again different with a
verb like expect. Expect is usually analyzed as taking a whole sentence for its direct object in contrast to persuade which has an NP object plus a sentential complement. The reasons for this analysis have to do with, among other things, contrasts arising when the embedded sentence is passivized (cf. Rosenbaum 1967). Such an analysis is consonant with the semantic intuition that expect expresses a binary relation between an individual and an anticipated event. Expect must be a raising verb because of sentences like:

(26) a. I expected there to be much trouble.
    b. I expected it to rain today.
    c. I expected heed to be taken of his warning.

Consider the sentences below:

(27) a. I expect that John will take Mary to the movies.
    b. I expect John to take Mary to the movies.
    c. I expect Mary to be taken to the movies by John.

Shopen (1972) noticed that the sentences in (27) are not synonymous. He claims that the meaning difference between the (a) sentence and the (b) and (c) sentences amounts to something like expecting it of the individual designated by the derived object noun phrase to bring about the anticipated event described in the complement clause. In the (b) sentence, he says, I expect the event to be brought about by John, while in the (c) sentence I seem to hold Mary responsible for the occurrence of the event.21 If this is indeed the case, then we have further evidence for our claim that the interpretation of the complement depends on the main predicate.

It will be recalled that Shopen disclaims the existence of raising rules in the grammar. The bulk of his work is devoted to building a

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theory of ellipsis, and part of his formalism was developed for the express purpose of accounting for the meaning differences discussed here. His is the only formalism I have encountered in the literature which allows us to link form and meaning at the derived structure level. The following is part of his lexical entry for *expect* which is designed to capture the differences in interpretation mentioned above:

(28)

\[
\text{expect, +}V \\
[\text{NP } \text{NP } \text{IP}] [\text{COGNITION } z [\text{CHANGE [LOCATION } y \text{ v} y z]]] \\
\text{z } y \text{ v} \text{ x} \\
\text{u}
\]

where \( u \) is "anticipated"

\( z \) views \( x \) as his "due" and holds \( y \) responsible.

(Shopen, lexical entry 114, p. 227)

It will be recalled that in Shopen's system lexical entries like (28) are in fact viewed as deep structure interpretive rules. Notice, however, that they are perfectly compatible with the Extended Standard Theory, if viewed as "shallow structure" interpretation rules. This is so because Shopen's "deep structures" are very much closer to the surface than in the standard approach. This is how lexical entry (28) is read:

The predicate COGNITION represents the meaning of the verb *expect*. It has two arguments, one is \( z \), which represents the THINKER, realized in surface structure by the subject NP(z). The second argument is the anticipated event \( u \) or the THOUGHT which itself is a proposition, and is represented by the three place predicate CHANGE. The first argument
of CHANGE is $x = [\text{LOCATION} \ y \ v]$. The predicate LOCATION relates the infinitive phrase $(v)$ and the direct object of the verb expect NP $(y)$. It tells us that NP$(y)$ is the subject of the infinitive phrase IP $(v)$. The second argument of CHANGE is $y$ which refers to the object of the main verb, NP$(y)$, and is the entity held responsible for the event $u$. The third argument of CHANGE is the subject NP$(z)$, at the same time THINKER and GOAL of CHANGE. The additional information given is in fact nothing else but what Postal calls the "assumptions linked with the RAISING application."

It was pointed out to me by Paul Schachter that Shopen's entry as it stands doesn't cover all the possibilities of interpretation with expect sentences. The "expect x of NP(y)" reading, for example, is only possible if the raised NP is capable of being held responsible. For example, while sentences (27b, c) do allow this reading, those in (26) do not. The "expect x" reading, on the other hand, is possible in all cases. But to cover these facts, one needs only to change the last statement in the lexical entry (28) as follows (amendments to (28)):

"expect x of NP (y)" if NP(y) is capable of being held responsible.

"expect x" in all cases.

The proposed amendments correspond exactly to what Postal would call the "assumptions linked with the RAISING application."

Finally, I would like to raise the question whether strike is a raising verb at all, i.e., whether there really is a transformational relationship between the sentences in (29):

(29)  

(a) It struck me that Peter was honest.

(b) Peter struck me as honest.
Notice that RAISING normally leads to an infinitival complement, and not to an as-complement as taken for granted in Postal's examples. But the sentence with the infinitival complement is ungrammatical:

(30) a. *Peter struck me to have been honest.
   b. Peter struck me as (having been) honest.

Furthermore, unlike seem and appear, which are definitely RAISING verbs, strike does not allow existential there, "weather it", or idiom chunks in subject position (cf. (31) – (33)). There are also further differences as illustrated in (34):

(31) a. There appeared to be much trouble in the Middle East.
   b. *There struck me to be much trouble in the Middle East.

(32) a. It appeared to be too late to go shopping.
   b. *It struck me to be too late to go shopping.

(33) a. Heed seemed to be taken of his warning.
   b. *Heed struck me to be taken of his warning.

(34) a. John appears to be passing by.
   b. *John strikes me to be passing by.

Considering strike a raising verb would require at least the following conditions on the transformation:

(i) Strike only allows RAISING with -ing complements.(e.g. It struck me as being too late to go shopping.).

(ii) Strike does not "raise" existential there, "weather it", or idiom parts (cf. examples (30) – (32)).

(iii) Strike only allows RAISING if the embedded predicate is an adjective (e.g. Mary strikes me as being too stupid for words, *Tim strikes me as being a bricklayer, *John strikes me as being passing by).
(iv) RAISING is necessarily linked with as-insertion. A transformation inserting as would be required just for this one predicate and seems to be otherwise unmotivated in the grammar. The facts cited above seem to go against considering strike as a raising predicate. It would be much simpler to consider strike as an as-complement-taking predicate, say like regard (e.g. I regard him as incompetent) which is not a subject-raising verb in anyone's grammar, and to subcategorize strike both as a subject-embedding verb, and as an as-complement-taking verb.

The facts above seem to argue very strongly that the relation between sentences like those in (29) is not transformational. But if strike does not allow RAISING, then the meaning contrasts discussed cannot be linked with the transformation.

Postal can only handle the semantics of his strike sentences on the assumption that they are related by the RAISING transformation. The solution I am proposing is independent of the transformation and can handle the semantics of such sentence pairs whether they are transformationally related or not.

On the basis of evidence presented, I conclude that RAISING induces semantic contrasts which are a function not of the rule itself, but of the main predicate and the raised NP, and that the semantic contrasts are best handled by semantic interpretation rules operating on the output of the transformation.

6. Summary

The first few sections of Part II dealt with the standard view on RAISING, according to which, RAISING is a transformational rule that
moves noun phrase constituents from embedded complement clauses into either matrix subject position or matrix object position. After presenting the better known arguments for RAISING in English, and noting the main arguments against, we concluded that there were strong enough reasons to tilt the balance in favor of the hypothesis that there is such a rule in the grammar of English. Next, we presented Shopen's reasons for rejecting the more traditional approach. A close look at his counterproposal revealed that there is an important set of infinitival constructions which his method of analysis seems to be unable to account for, but which present no problem for a raising analysis. The problem is that his inventory of mechanisms seem to provide no possibility of accounting for sentences with infinitival complements involving several levels of embedding. We are forced to conclude that Shopen's approach to infinitival complements, at least in its present form, is observationally inadequate.

A survey of relevant data from German, French, Romanian and Hungarian indicated that, in spite of decreasing evidence for RAISING, each language has a number of constructions that would be very difficult to account for without the assumption of a raising process. It is interesting to note that items which can be described as allowing RAISING in each language belong mostly to the same meaning classes. The following is a summary of our findings:

1. Predicates of the certain and likely class: English only:

   (E)  i. It is likely that Peter will come.
       Peter is likely to come.

   ii. It is certain that Peter will come.
       Peter is certain to come.
iii. It is likely that heed will be taken of his warning.
   Heed is likely to be taken of his warning.

iv. It is certain that it will rain tomorrow.
   It is certain to rain tomorrow.

2. Tough Movement: all languages, except Hungarian.

   (G) a. Es ist leicht Johann zu befriedigen.
       'It is easy to satisfy Johann.'

   b. Johann ist leicht zu befriedigen.
       'Johann is easy to satisfy.'

   (F) a. Il est facile de convaincre Pierre.
       'It is easy to convince Pierre.'

   b. Pierre est facile à convaincre.
       'Pierre is easy to convince.'

   (H) a. Pétet nehész látni.
       Peter-ACC difficult see-INF
       'It is difficult to see Peter/Peter is difficult to see.'

   (R) a. E greu șă-1 congingi pe Petru.
       Is difficult him you-convince-subjunctive ACC-part. Petru
       'It is difficult to convince Petru.'

   b. Petru e greu de convins.
       Petru is difficult convince-supine
       'Petru is difficult to convince.'

3. Intransitive verbs of the seem class: all languages:

   (G) a. Es scheint mir, dass die Hunde jetzt lauter bellen.
       'It seems to me that the dogs are barking louder now.'

   b. Die Hunde scheinen jetzt lauter zu bellen.
       'The dogs seem to be barking louder now.'
(F) a. Il me semble que vous soyez un peu las.
   'It seems to me that you are a little tired.'

   b. Vous me semblez un peu las.
      'You seem a little tired to me.'

(H) a. Úgy látszik, hogy Péter dolgozik.
   so it seems that Peter is-working
   'It seems that Peter is working.'

   b. Péter dolgozni látszik.
      Peter-NOM to-work it-seems
      'Peter seems to be working.'

(R) a. Se pare că Petru e deștept.
     seems that Petru is clever
     'It seems that Petru is clever.'

   b. Petru pare deștept.
      Petru seems clever
      'Petru seems (to be) clever.'

4. Intransitive verbs of the begin class: all languages:

   (G) Der Motor fängt an zu laufen.
      'The engine begins to run.'

   (F) Le moteur commence à marcher.
      'The engine begins to run.'

   (H) a. Elkezdett esni az eső.
       started to fall the rain-NOM
       'It started to rain.'

       b. A szív megszűnik dobogni.
          the heart-NOM stops to beat
          'The heart stops beating.'
(R) Maria a început a vorbi.
Maria started to talk-infinite
'Maria started to talk.'

5. Non-factive verbs of thinking (believe class): English, French and Romanian:

(F) a. Je crois que Pierre est intelligent.
'I believe that Pierre is intelligent.'

b. Je crois Pierre intelligent.
'I believe Pierre to be intelligent.'

(R) a. Cred că Petru e deştept.
I-believe that Petru is clever
'I believe that Petru is clever.'

b. Ți crei pe Petru deștept.
him I-believe ACC-part. Petru clever
'I believe Petry (to be) clever.'

6. Desideratives (want class): English, French, Romanian

(F) a. Je veux que la soupe soit chaude.
'I want the soup (to be) hot.'

b. Je la veux chaude.
'I want it hot.'

(R) a. Vreau ca supa să fie caldă.
I-want that the soup be hot
'I want the soup (to be) hot.'

b. Și vreau caldă.
it I-want hot
'I want it hot.'
7. Stative verbs of physical perception (sensory verbs such as hear, see, feel), all languages:

(G) Ich sehe ihn schwimmen.
    'I see him swim.'

(F) Je l'entends faire les cent pas.
    'I hear him walk up and down.'

(H) Látom a hajót menni.
    I see the ship-ACC go-inf.
    'I see the ship move.'

(R) O văd plîngînd.
    she-ACC I-see cry-gerund
    'I see her cry.'

8. Let: all languages

(G) a. Er lässt sich von dir überzeugen.
    'He lets himself be convinced by you.'

    b. Ich liess die Lampe brennen.
    'I let the light burn/I left the light on.'

    c. Ich liess das Buch fallen.
    'I let the book fall/I dropped the book.'

(F) a. Pierre se laisse glisser au désespoir.
    'Pierre let himself slide into despair.'

    b. Je laisse Pierre travailler tranquillement.
    'I let Pierre work in peace (and quiet).' 

    c. Je laisse marcher le moteur.
    'I let the engine run.'

(H) Hagyon Pétert zongorazni.
    'I let Peter-ACC play the piano.'
(R) Il las sä place.
    him I-let leave-subjunctive
    'I let him leave.'

It was noted that a RAISING analysis faces certain problems. We have barely touched upon those relating to questions of formalism and have contented ourselves to point out that due to various ill-understood restrictions the rule has, to the best of our knowledge, resisted rigorous definition. We have dwelt mainly upon the semantic effects of the rule. We hope to have shown that the semantic contrasts induced by the rule are not a function of the rule itself (as Postal would have it), but of the main predicate and the raised NP. Our position, then, is that RAISING should be part of the syntax of the languages examined, and that the information relating to the possible meaning contrasts induced by the RAISING transformation should be made available to semantic interpretation in the lexical entry for verbs. We have suggested that the meaning contrasts are such that they are best handled post-transformationally. It would appear that the formalism developed by Shopen provides a promising means for doing this.

7. General conclusions

The following are the main conclusions emerging from this work.

1. It would appear that a theory which derives infinitival complements from underlying sentences is to be preferred to one that would generate them directly in the base.

2. An analysis which assigns readings to "empty" subjects of "subjectless" complements is to be preferred over one which would derive "subjectless" complements by means of deletion rules.

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3. There is strong syntactic evidence from English, German, French, Romanian, and Hungarian to show that there exists a rule of RAISING in these languages. The rule induces semantic contrasts which were shown to be a function of the main predicate and, to a certain extent, of the nature of the raises NP. It was suggested that the information pertaining to the potential semantic effects of RAISING should be made part of the semantic information entered in the lexical entry for "raising" predicates.

4. We gave reason to believe that the semantic contrasts induced by the RAISING transformation are such that they are best handled by rules of semantic interpretation operating on the output of transformations.

5. It was suggested that the formalism developed by Shopen provides a promising means of representing the meaning contrasts in question.

6. In sum, the model which emerges is one that incorporates the standard view of deep structure and accounts for sentence relatedness in terms of transformational processes, while meaning contrasts such as those induced by the RAISING rule are taken care of in terms of derived structure interpretive rules.
FOOTNOTES TO PART II

1. Since 1970, the VSO hypothesis has been accepted by many other linguists. For an insightful critique of the VSO hypothesis see Berman (1973), who considers several arguments against it, and concludes that there is no syntactic justification for it.

2. This may not be a felicitous sentence, but examples with two for-phrases can be found: "How difficult for you for your in-laws to drop in so unexpectedly!"

3. For an explanation of why there should be such a principle in language the reader is referred to Kirsner (1973).

4. For an extensive discussion of these verbs the reader is referred to Newmeyer (1969).

5. It was pointed out to me by Paul Schachter that sentences like (64a) can be used appropriately in the context of theatrical writing. For example, sentences like "A large living room.... Persian rugs are on the floor.... A bowl of flowers is on a large coffee table...." are acceptable as stage directions.

6. This observation holds also for French and German, as the following examples show:

   (i) a. Il pleut.
       b. Il semble pluvoir.

   (ii) a. Es regnet.
       b. Es scheint zu regner.

   It is not true, however, for Hungarian, which allows sentences like
the following:

(iii) a. Esik az eső.
    'The rain is falling.'

b. Havazik a hó.
    'The snow is snowing.'

7 In the course of my work on this section I have consulted the following writings wholly or partly devoted to the study of German infinitives: Bech (1955), Hartung (1964), Bierwisch (1963), and Esau (1971).

8 For an extensive discussion of these verbs in the context of raising operations, the reader is referred to Postal's document "On raising" (to appear).

9 The only verbs taking "bare" infinitives in German are the modal verbs and lassen 'let', sehen 'see', hören 'hear', fühlen 'feel', helfen 'help', lernen 'learn', gehen 'go'. The modal verbs are können 'can', werden 'become, get', müssen 'must', mögen 'be willing', wollen 'want', sollen 'should'. The various meanings of the modal verbs in German are much more complex than the translations could possibly indicate.

10 In addition to the works directly referred to in the text of this section, I have also consulted Imbs (1960) and Sandfeld (1943) for French, and Gramatica Limbă Română (1966), Guillermou (1962), and Vasiliu et al. (1969) for Romanian.

11 This is a classical kind of argument to be found very frequently in work carried out within the framework of the Standard Theory. This particular argument is also to be found in Ruwet (1972) who says he constructed it upon the lines of an argument suggested in Chomsky (1970) for English.
The following is to my knowledge the complete list of verbs that can still take infinitive complements in present day Romanian:

- a se apuca 'to grasp', 'to seize'
- a avea 'to have'
- a se grăbi 'to hurry'
- a izbuti 'to succeed', 'to manage'
- a începe 'to begin'
- a încerca 'to try'
- a îndrăzni 'to dare'
- a învăța 'to learn'
- a porni 'to start'
- a primi 'to receive'
- a putea 'to be able, can'
- a ști 'to know how'
- ști vine 'to feel like'
- se cade 'to be fitting, proper'

Note that all the verbs listed here also take the equivalent of that-clauses with the subjunctive, with no meaning difference whatever.

This is how Moreau concludes her paper:

Ainsi donc, il est possible, au moyen d'une seule et même règle, de rendre compte de la distribution des formes différentes (que et qui) que peuvent adopter le pronom relatif et la conjonction de subordination. Ce qu'il convient de noter, à propos de cette règle, c'est, comme nous l'avons déjà fait plus haut, son caractère strictement formel, qui permet de l'utiliser d'une manière tout à fait mécanique, sans qu'on ait jamais à se préoccuper de problèmes de fonctions ou de sens. C'est aussi le caractère très régulier du phénomène qu'elle décrit : ainsi, l'apparition de qui n'obéit pas à une règle particulière, spécifique d'un seul type de construction. Elle ne se produit pas non plus suivant un caprice de la langue ou de l'esprit, comme semblent le penser G. et R. Le Bidois. Au contraire, elle a lieu CHAQUE
POIS que, dans une phrase enchâssée, intervient une trans-
formation qui extrait de cette phrase le syntagme sujet, que
ceste transformation serve à former des relatives—(1) et
(4)—, des questions—(5)—, des phrases clivées—(6), ou
d’autres constructions encore.16 On notera que c’est le
cadre offert par la grammaire générative transformationnelle
qui permis de capter cette régularité du phénomène étudié.

14Notre analyse ne s’applique pas, bien sûr, aux formes pré-
positionnelles due relatif. Pour rendre compte de l’appari-
tion de qui dans une phrase telle que (a), il faudrait en effet
recourir à un autre mécanisme que celui que nous avons présenté:
(a) Les gendarmes à qui tu as envoyé des fleurs...
Il serait sans doute nécessaire de faire intervenir en ce cas
un règle qui serait sensible au trait [-humain] de l’antécédent
ou du pronom relatif, tout comme dans la formation des pronoms
interrogatifs:
(b) A qui as-tu envoyé des fleurs?

15"L’esprit, par besoin naturel de concentrer et de cimenter
la phrase, recourt instinctivement à la combinaison de deux
elements conjonctifs; il ne s’inquiète pas de savoir si le
second est tout a fait dans son rôle propre et sous sa forme
exacte." (Syntaxe du français moderne, I, sec. 578. Cit. Gre-
visse, ibid.)

16Ainsi, Gross (ibid.) recourt a la transformation CONVERSION
DE Qu dans la dérivation qui forme (a) au départ de (b), au
moyen d’une règle qui fait monter le sujet de la complétive
dans la principale:
(a) Je le vois qui vient.
(b) Je vois qu’il vient.

Cette hypothèse, toutefois, ne pourrait être utilisée
pour engendrer (c), qui, pourtant, semble bien relever du
même type que (a):
(c) Je l’ai rencontré qui sortait de chez lui.
Il n’existe pas, en effet, de phrase telle que (d):
(d) *J’ai rencontré qu’il sortait de chez lui.

14Sentences like those in (106a, b) and (107a, b) have sometimes
been analyzed as equivalent to en train de faire quelque chose construc-
tions (cf. Grevisse (1964), p. 1046). That is, a sentence like je le
vois lisant is taken as synonymous with je le vois en train de lire.
Manoliu's solution, which we will not reproduce here, accounts for this
fact.
Most of the examples used in this section are taken from Tompa (1968). I am indebted to Edith Moravcsik for stimulating discussion of the data presented in this section.

This is not to say that there are no rules governing word order at all. But these apply only within major constituents. For example, an article must always immediately precede the noun phrase, and adjectives must precede the noun they modify:

(i) a jó gyerek 'the good child' ≠
    a gyerek jó 'the child is good'

For (4) read my (1); for "example 10" read my (2).

Q is the (optional) assumption associated with sentences like I allowed Bob to leave, namely that the subject of allow expressed his permission to the individual designated by the raised NP. P is the assumption associated with the strike sentences.

It is not clear in which sense the word "focus" is used by them.

I am using the term "focus" in the sense defined by Jakobson (1966) to refer to the concentration of attention or interest, and not in the sense used in Chomsky (1969) where it is defined in terms of stress on surface structure constituents.

For most people I have asked this difference seems more difficult to get with (c) than with (b). The reason is that for most people the person of which one can expect something must be at least capable of doing it, which means that the NP following expect must be interpretable as an AGENT, which is not the case in a passive sentence like (c).
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