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LA THÈSE A ÉTÉ MICROFILMÉE TELLE QUE NOUS L’AVONS REÇUE
FOCUS PLACEMENT AND CEPTO-SUBJECT COMPLEMENTATION IN RUSSIAN

by

James Donald Kolesnikoff
M.A., Moscow State University (U.S.S.R.), 1967

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
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and Linguistics

James Donald Kolesnikoff 1979
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August 1979

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FOCUS PLACEMENT AND ČTO-SUBJECT COMPLEMENTATION IN RUSSIAN

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ABSTRACT

This study attempts to integrate aspects of surface meaning to syntactic form in an interpretive description of ČTO-Subject Complementation in Russian. The primary objective is to provide an explanatory account of those aspects of semantic representation that are derived from surface structure phenomena: Focus Placement, ČTO-Topicalization, ČTO-Topicalization, and ČTO-Focusing. That is, an attempt is made to integrate certain syntactic, semantic (logical), and pragmatic (discourse) properties of ČTO-Subject Complements within an interpretive theory of semantic representation.

Since the grammatical relation of subject complement is syntactically invariant regardless of the surface position it occupies, there is no empirical evidence available to justify the positional definition of subject, as the first NP of S. On the contrary, it is argued that a non-positional analysis of subject provides a plausible explanation of its discourse roles in terms of such pragmatic functions as "explicational" and "specificational", which are independent of syntax.
A theory of semantic representation is proposed which formally characterizes the discourse roles of ČTO-Subjects conveying the new information in sentences. It is proposed that a ČTO-Subject as new information occurs in the rightmost position of either a root S or a double bar S (S''), depending on its communicative role in the sentence. Thus in a topicless sentence the focused ČTO-Complement is contextually bound to the main verb in order to convey the explicational relation (BYLO ZAMETNO, ČTO IGOR' Ø RUSSKIJF); this type of ČTO-Complement is analyzed as an object complement, since no ĖTO-trace is permitted (*ĖTO BYLO ZAMETNO, ČTO IGOR' Ø RUSSKIJF). On the other hand, in a topic-focus sentence the focused ČTO-Subject is contextually independent of the main verb in order to convey the specificational relation (BYLO ZAMETNO TO, ČTO IGOR' Ø RUSSKIJF); here the scope of focus is restricted to the ČTO-Subject. Moreover, in a topic-focus sentence ĖTO functions as a topic-marker with the dislocated ČTO-Subject conveying repeated information (ĖTO Ø ZAMETNO, ČTO IGOR' Ø RUSSKIJ); here the scope of focus is confined to the VP of the matrix sentence.
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INTRODUCTION

0.1. Goals

This study is concerned with the systematic inter-
relationship between the surface position and the communi-
cative role of ČTO-subject complements in sentences of the
following types:

(0.1) a. Čto Igor' Ø russkijp, ětoT Ø OČEVIDNO_F

'That Igor is Russian, that's OBVIOUS'

b. ětoT Ø OČEVIDNO_F, Čto Igor' Ø russkij

'That's OBVIOUS, that Igor is Russian'

(Capitalization and F denote Focal Stress; P indicates the
segmental Pivot Accent; T marks the anaphoric topic; Ø is
a deleted copula)

It is assumed that the ČTO-subject in (0.1a) is a constit-
uent of TOPIC, while in (0.1b) the ČTO-subject is a con-
stituent of the S'' category. The positions of the ČTO-
subjects in these examples will be called the rhetorical
topic positions, since left-S'' and right-S'' positions
are filled by constituents conveying repeated information.
Moreover, the position of the ĖTO-subject in (0.1) will be
called the unmarked topic position.

Both sentences in (0.1) are assumed to be under-
lying structures generated by phrase structure rules. Base-
genereated ČTO-subjects and ĖTO-traces are governed by a
binding principle which specifies that ĖTO is coindexed
and semantically bound to a commanding ČTO-subject in surface-structure. It follows from the binding convention that a bound ĖTO-trace will block movement rules.

Another concern will be to show the syntactic relationship and communicative role between the ČTO-subjects in the following sentences:

(0.2) a. \( \text{Čto Igor' \& rusškij, \& OČEVIDNO}_F \)

' The fact that Igor is Russian is OBVIOUS'

b. \( \text{NPe \& očévidno to}_P, \text{Čto Igor' \& RUSSKIJ}_F \)

'What's obvious is that Igor is RUSSIAN'

It is assumed that the ČTO-subjects in (0.2) are base-generated in their respective surface positions; in (0.2a), the ČTO-subject conveys topic information, but in (0.2b), the ČTO-subject conveys new information and is assigned focus in right-S' position.

Notice that in (0.2b) the TO-subject is positioned to the right of OČEVIDNO; it is assumed that a TO Focus Movement rule moves TO to the right under S'. Evidence for this movement is based on the empirical fact that there is a mirror image relationship between the position of TO in the declarative sentence of (0.2b) and the position of the Q-phrase ČTO in the underlying question of (0.3); both TO and ČTO are constituents of the S' category.

(0.3) \( (S' \text{ ČTO}) (S' \text{NPe \& očévidno})? \)

'What is obvious?'
The third concern will be to show that the ĆTO-complements of KAZAT'SJA-type verbs are not subject complements but object complements:

(0.4) Kažetsja, čto Igor' Ø RUSSKIJ

'(It) seems that Igor is RUSSIAN'

This sentence conveys only new information, therefore the ĆTO-complement in focus is semantically bound to the main verb. This explains why an ĖTO-trace is not tolerated:

(0.5) *Èto, kažetsja, čto Igor' Ø RUSSKIJ

'That seems that Igor is RUSSIAN'

The verbs that semantically bind a ĆTO-complement are just those verbs that do not allow ĖTO-traces; ĖTO cannot be anaphoric with a constituent conveying new information. Significantly, verbs that do not tolerate ĖTO-traces allow parenthetical expressions:

(0.6) a. Igor' Ø RUSSKIJ, kažetsja

'Igor is RUSSIAN, (it) seems'

b. *Igor' Ø RUSSKIJ, èto kažetsja

'Igor is RUSSIAN, that seems'

In analyzing the syntactic and semantic relevancy of focus placement (nuclear stress) and the surface position of the subject complement, this study attempts to show in a formal way (1) how focus is associated with surface form, and (2) what is the semantic significance of such lexical items as TO-topic, TO-focus, and ĖTO-topic, which interact
with focal stress to determine the particular communicative role conveyed by the subject complement at the level of surface structure.

0.2. Assumptions

In accounting for the communicative role of ĖTO-subjects, I make two basic assumptions: (1) discourse properties of ĖTO-subjects are described by semantic markers such as FOCUS (F), PIVOT FOCUS (P), and TOPIC (T), which are interpreted by rules of semantic interpretation at the level of surface structure, and (2) the semantic similarities are captured by assigning different surface structures a common semantic composition in the semantic representation.

Essentially, it is argued that the focal constituent is identified at the surface structure level and that the interpretive rule which states the semantic value of focus cannot be a restatement of some transformational operation (this claim is made by Jackendoff (1972, Chapter Six)). That is, if movement takes place which induces a shift in focus the semantic effect of movement must be derived from relevant semantic markers on surface constituency bracketing and not on deep structures.

0.3. Scope

In formulating the theory of ĖTO-subject complementation and Focus Placement, I limit the choice of data
to \text{ETO}-trace, \text{TO}-trace, and traceless \text{CTO}-complements. Traceless complements are actually analyzed as object complements, since these types occur in topicless sentences in which the main verb semantically binds its complement in postverbal position. By narrowing the scope to these three types, I attempt to give a thorough account of the data under investigation. It will be shown, however, that the proposed theory of \text{CTO}-subject complementation and Focus Placement extends beyond the scope of the limited data examined.

0.4. Framework

The syntactic and semantic formalism proposed in this study has been adopted (with minor modifications) from Jackendoff's important work \textit{Semantic Interpretation in Generative Grammar} (1972), and also partly from \textit{Syntax: A Study of Phrase Structure} (1977).

Insofar as the interpretive framework is being constantly revised and improved on, the syntactic and semantic formalism proposed will be tentative in formalization, but the possible solutions of grammatical phenomena will be independently motivated and justified within the limitations of the current theory of interpretive grammar.
0.5. Terminology

The central topic of this study is a construction called the "ČTO-subject complement", or the area of Russian syntax generally known as "predatočnye podležaščie". Thus according to the nonpositional analysis of subject adopted here, the notion subject is identified in terms of the case system. The subject clause is unmarked for case if no head NP occurs in surface structure, otherwise a head NP in the nominative identifies a subject complement.

I shall use the term "explicational object complement" to refer to the constituent which immediately follows the main verb and bears the nuclear stress (marked F):

\[(0.7) \emptyset \text{ Zametno, čto Džo } \emptyset \text{ AMERIKANEC}_F\]

'(It's) noticeable that Joe is AMERICAN'

This sentence conveys only new information; for this reason there is no segmental pivot intonation between the main verb and the postverbal complement in focus. On the explicational reading, the ČTO-complement is the main assertion while the main verb qualifies the semantic content of its complement. Such ČTO-complements are not subjects.

On the other hand, I shall use the term "specification subject complement" to refer to the complement expressing the second assertion, as in (0.8).

\[(0.8) \text{ NPe bylo zametno to}_P, \text{ čto Džo } \emptyset \text{ AMERIKANEC}_F\]

'What was noticeable was that Joe is AMERICAN'
In English the specificalional reading is produced by the pseudo-cleft construction with focused THAT-complements (for a transformational analysis of cleft sentences from pseudo-cleft sentences refer to Akmajian (1970)). In Russian, however, the Pivot Accent placed on the postverbal TO-trace segments the topic-S from the focus-S, thus creating two discourse constituents. Normally, specificalional sentences are used in speaker-hearer oriented discourses in which the speaker identifies the property evaluated in the topic-assertion.

The other terms which require explanation are "surface structure", "focal constituent", and "topic constituent".

The term "surface structure" refers to the output of phrase structure rules and transformational rules. Within the Base-analysis adopted here, the phrase structure rules generate ČTO-subjects and ŠTO-traces directly in surface positions, while the TO-trace as focus involves the rule called TO Focus Movement (this analysis is justified in Chapter Three).

It is assumed that surface structures are not identical to representations in "logical structure". Unlike the ordered labelled bracketing of surface structures, logical structure is unordered and of the schematic form:

\[(0.9) \, V^n \rightarrow V^{n-1} \ldots X^n \ldots (where \, X^n \, is \, an \, unordered \, set \, of \, arguments).\]
Rules of Construal, Interpretive Rules and Conditions on Binding are properties of the logical structure. For example, rules of construal relate anaphors to antecedents and employ coindexing (i.e. \( NP_i: \text{VANJA} = NP_i: \text{ON}; NP_i: \text{VANJA} = NP_i: \text{PRO}; NP_i: \text{VANJA} = NP_i: \epsilon \)). Thus if Q-movement is assumed to leave behind the category \( C_i \epsilon \), in accordance with trace theory, then \( C_i \epsilon \) is a "bound variable" subject to the control-command requirement (see Chomsky (1978), "On Binding."). The identity element 'e' is of primary relevance to the semantic interpretation of derived constituent structure.

Rules of interpretation convert the surface structure (i.e. \( NP_i \epsilon \)) into an appropriate representation in logical structure, as in a structure such as:

\[
S, \ (COMP \ KTO_{NP_i} \ (S \ \ldots \ (NP_i \epsilon \ \ldots )))
\]

where the Q-phrase KTO in COMP controls and commands the variable \( NP_i \epsilon \) in \( S \). Besides being of relevance to interpretive rules, \( NP \epsilon \) forbids the compounding of elementary transformations such as Q-movement (Lightfoot, 1977).

The term "focal constituent" is used to refer to a constituent bearing the nuclear stress (alternatively, the focal stress or simply the focus). The focal item is capitalized and predictably has a falling pitch (Pitch Accept 1). The other term "pivot focus" designates the
item bearing the rising Pitch Accent 3, which segments sentences into topic-focus informational units.

Finally, the term "topic-constituent" is defined loosely as the constituent representing the shared information of the speaker-hearer, as opposed to the "focal constituent" which conveys the new information. In special cases, I shall use the traditional terms "theme" and "rheme" which are broader in meaning than the terms "topic" and "focus". In particular, the term rheme will designate "all" the new information in the sentence, or simply the scope of focus (this notion is discussed in Chapter Four).

Krylova and Khavronina (1976: 17) define the theme as the subject of the message, while the rheme is the relevant information on the theme. As an example, observe sentence (0.11) in which the theme indicates a known fact (U MENJA V GOSTJAX BYL), while the rheme introduces something new (names the guest: VIKTOR).

(0.11) U menja v gostjax byl VIKTOR

'Visiting with me was VICTOR'

In (0.11), the theme constituent could be analyzed as containing the identity element NP e which is realized as the rheme NP VIKTOR.
CHAPTER ONE
RUSSIAN PHRASE STRUCTURE

1.0. Introduction

This chapter will explore the Russian phrase structure for the major syntactic categories within the framework of the X' Theory of syntax as formulated by Jackendoff (1977) in *X' Syntax: A Study of Phrase Structure*. The main objective will be to formalize a version of the X' Convention which appears adequate for the description of Russian phrase structure.

As a theory of syntactic categories in universal grammar, the X' Convention makes three basic claims. First, the universal grammar includes a set of syntactic distinctive features which defines the possible lexical categories in languages. Second, each lexical category X defines a set of syntactic categories $X'$, $X''$, ..., $X^k$ related by the phrase structure schema:

\[(1.1) \quad X^n \rightarrow (C_1) \ldots \rightarrow X^{n-1} \rightarrow (C_j) \ldots\]

where each $X^n$ category will dominate one and only one $X^{n-1}$ category. Third, each term of any rule of grammar must be either a specified or grammatical formative or a set of syntactic features $[\omega F_1 \mid F_2, \ldots]_{C_i}^2$.

Rule (1.1) is a phrase structure schema for the major categories N, V, Adv, Adj, and P. In particular, for the lexical category V there is a set of syntactic categories
V', V'', V''', etc., generated by phrase structure rules of the form:

(1.2) 
\[ a. \ V' \rightarrow (Neg) - V - (Prt) \]
\[ b. \ V'' \rightarrow V' - (P') \]
\[ c. \ V''' \rightarrow (Adv') - V'' \]

Rule (1.2a) describes the internal structure of V', rule (1.2b) provides the complement structure of V'', and rule (1.2c) generates the modifier position of V''', as shown in (1.3); note that NP denotes the supercategory N'''.

(1.3) 
\[ a. \ V' \]
\[ Neg \rightarrow V \]
\[ ne \ mečtal \]

'didn't dream'

\[ b. \ V'' \]
\[ Neg \rightarrow V \]
\[ ne \ mečtal \ o \ slave \]

'didn't dream about glory'

\[ c. \ V''' \]
\[ Adv' \rightarrow \]
\[ Adv \rightarrow V' \]
\[ PP \rightarrow \]
\[ Neg \rightarrow V \]
\[ nikogda \ ne \ mečtal \ o \ slave \]

'never dreamt about glory'
In (1.3), the principle distinctions among the $V'$, $V''$, and $V'''$ categories are accounted for in terms of the phrase structure rules for each category.

Furthermore, rule schema (1.1) expresses the generalization that the complement positions for related categories may be parallel. (In 1.4), for example, the phrase structure rules for the major categories $V''$, $N''$ and $Adj''$ generate complements in parallel positions.

(1.4) a. $V'' \rightarrow V' - (NP)$
    b. $N'' \rightarrow N' - (NP)$
    c. $Adj'' \rightarrow Adj' - (NP)$

These base rules describe the syntactic relationship between the related lexical categories $IZBRAT'$, $IZBRANIE$, and $IZBRANNYJ$, as the structures in (1.5) illustrate.

(1.5) a. $\begin{array}{c}
V'' \\
\quad \quad N' \quad \quad NP \\
\quad V' \quad \quad NP \\
\quad V \quad N \\
izbrat' \quad predsedatelja
\end{array}$

b. $\begin{array}{c}
N'' \\
\quad \quad N' \quad \quad NP \\
\quad N' \quad \quad NP \\
\quad N \quad N \\
izbranie \quad predsedatelja
\end{array}$

to elect a chairman' 'the election of a chairman'

c. $\begin{array}{c}
Adj'' \\
\quad \quad Adj' \quad \quad NP \\
\quad Adj' \quad \quad NP \\
\quad Adj \quad N \\
izbranny \quad predsedatelem
\end{array}$
'elected as chairman'
These parallel structures express the generalization that related lexical items can take N complements which occur in the same positions within the X'' categories.

The primary concern of this chapter will be to establish the criterion which will help us choose the correct phrase structure for the major categories. The second task is to analyze the complement system of each of the major categories V, N, Adv, Adj and P and show the principled distinctions among the three levels of complements. The third concern will be to show the structural parallelism between each of the major categories at the X', X'' and X'''' levels of analysis. 4

In adopting the general principles of the X' Convention proposed by Jackendoff (1977), I will modify certain analyses which appear adequate for the description of English phrase structure but not for Russian. Essentially, I will retain Jackendoff's three level hypothesis which claims that complements to a phrase can be attached in three possible places: to X', X'', or X''''. 5

1.1.0. Noun

1.1.1. N' Category

The internal structure of the N' category can be represented in the form of the base rule:

(1.6) \[ N' \rightarrow (\text{Neg}) - N - (\text{Prt}) \]
The rule of Q-movement can displace the Q-phrase N' with NE and LI under COMP, as shown in (1.7).

(1.7)

The convention NP:N = N\(^3\) over N\(^2\) - N\(^1\) - N; the convention VP:V = V\(^3\) over V\(^2\) - V\(^1\) - V; NP e = the removal site)

Otherwise, if NP has an adjective modifier, NE and LI must appear within the A' category, as in (1.8).

(1.8)

'Wasn't (it) John (who) phoned?'

'Wasn't (it) interesting (the film)?
The particles NE and LI do not occur in the N'' category, as the forbidden structure (1.9) shows.

(1.9)

\[
\begin{array}{c}
\text{NP} \\
\text{N'} \\
\text{Neg} \\
\text{AP} \\
\text{N'} \\
\text{Prt} \\
\text{A} \\
\text{N} \\
\end{array}
\]

*ne interesnyj film li

'not interesting film'

On the basis of the configuration (1.9), it is not possible to determine whether the scope of NE and LI is the adjective or noun. Hence, the categories Neg and Prt provide a useful test for establishing the internal structure of N'.

The main criterion for N' is provided by the negative particle NE which occurs in the X' categories of (1.10).

(1.10) a. NP b. AP c. AdvP

\[
\begin{array}{c}
\text{N'} \\
\text{N} \\
\text{Neg} \\
\text{AP} \\
\text{A'} \\
\text{Adv'} \\
\text{Neg} \\
\text{A} \\
\text{Neg} \\
\text{Adv} \\
\end{array}
\]

ne čelovek ne xorošij ne plxo

'not a person' 'not good' 'not badly'
Whenever NE precedes the adjective modifier, it must be attached to A', not to N''; thus only the bracketing of (1.11a) is acceptable.

(1.11) a. 

b. 

NE should be inside of A', as in (1.11a), for AP containing Neg can be moved to the S' position of focus: 7

(1.12).
AP Focus Movement creates two discourse constituents: the lefthand topic-S and the righthand focus-AP. Since the scope of negation is restricted to the adjective, Neg must be within the A' category.

Pro-N' deletion provides the third criterion for N'. In (1.13), for example, the pro-N' of the conjoined clause is anaphoric only to the antecedent N', which is followed by a P' complement attached to N':

\[(1.13) \text{Maša xočet ((moroženoe}_N, (s šokoladom)_{PP})_{N'},.)_{NP}\]
\[
\text{a Vanja } \emptyset_V, ((\emptyset_N, (s klubnikoj)_{PP})_{N'},.)_{NP}
\]

'\text{Masha wants icecream with chocolate, but Vanya}
\text{Ø}_V, Ø_N, \text{with strawberries}'

Only the pro-X' phrases are deleted in (1.13); the PP complement is excluded from anaphora by being outside of N':

\[(1.14) \text{a. } NP \quad \text{b. } NP\]
\[
\text{\quad N'} \quad \text{\quad N'}
\]
\[
\text{\quad N''} \quad \text{\quad N''}
\]
\[
\text{\quad N' i PP} \quad \text{\quad N' i PP}
\]
\[
\text{\quad N P'} \quad \text{\quad N P'}
\]
\[
\text{\quad P NP} \quad \text{\quad P NP}
\]
\[
\text{\quad moroženoe s šokoladom} \quad \emptyset \text{ s klubnikoj}
\]
\[
\text{\quad 'icecream with chocolate'} \quad \text{\quad 'Ø with strawberries'}
\]
Thus N' negation, LI insertion in N' and pro-N' deletion provide some of the evidence justifying the N' category.

1.1.2. N'' Category

Now I will deal with the syntactic differences between the N'' and N''' categories which correspond to differences in the base rules. Rule (1.15) generates N'' phrases with various complements:

(1.15) N'' → N' - (NPN) - (PPN) - (IP/S)

(The index 'n' denotes multiple expansion; '/' denotes a category alternating with another category)

The structures in (1.16) show the expansion of N'':

(1.16) a. N''

   N' NP
     |   |
     N  N

   prikaz otca
   'father's order'

b. N''

   N' IP
     |   |
     N  Inf

   želanie otdoxnut'
   'a desire to rest'

c. N''

   N' PP
     |   |
     N

   peredača po radio
   'a program on radio'

d. N''

   N' S'
     |   |
     N

   pros'ba čtoby ne kurit'
   'a request not to smoke'
One criterion for $N''$ is provided by the determiner TOT 'that', which appears in the $N'''$ position as a specifier of $N''$ in (1.17a), or as a specifier of the NP complement embedded in $N'''$, as in (1.17b).

(1.17) a. \[
\begin{array}{c}
\text{NP} \\
\text{Det}' \\
\text{NP} \\
\text{Det} \quad \text{AP} \quad \text{N'} \quad \text{NP} \\
\text{A} \quad \text{N} \quad \text{N} \\
\text{tot strogij prikaz profesora} \\
\end{array}
\]

'that strict order of the professor'

b. \[
\begin{array}{c}
\text{NP} \\
\text{NP} \\
\text{AP} \quad \text{N'} \quad \text{NP} \\
\text{A} \quad \text{N} \quad \text{Det}' \quad \text{N''} \\
\text{Det} \quad \text{N'} \\
\text{Det} \quad \text{N''} \\
\text{strogij prikaz togo profesora} \\
\end{array}
\]

'the strict order of that professor'

The semantic difference between these two NPs depends on the syntactic position of the determiner TOT.\(^9\)
The second criterion for $N''$ is based on the syntactic and semantic parallelism between NP possessives and NP genitives; both types occur in the $N'''$ category:

(1.18) a. $\text{NP} \rightarrow \text{QP} \cdot \text{N''} \cdot \text{N}$

\[
\begin{array}{c}
\text{QP} \\
\downarrow \\
\text{Q} \\
\downarrow \\
\text{N'} \\
\downarrow \\
\text{N} \\
\downarrow \\
\text{Oli} \\
\end{array}
\]

\[
\begin{array}{c}
\text{vse slova} \\
\end{array}
\]

b. $\text{NP} \rightarrow \text{QP} \cdot \text{N''} \cdot \text{NP}$

\[
\begin{array}{c}
\text{QP} \\
\downarrow \\
\text{Q} \\
\downarrow \\
\text{NP} \text{poss} \\
\downarrow \\
\text{N'} \\
\downarrow \\
\text{N} \\
\downarrow \\
\text{Olyina slova} \\
\end{array}
\]

\[
\begin{array}{c}
\text{vse Olyina slova} \\
\end{array}
\]

The assumption that QP is a specifier under $N'''$ explains why a quantifier within $N''$ is unacceptable in (1.19).

(1.19) a. *Oliny vse slova 'Olya's all words'

b. *slova vse Oli 'words all Olyats'.

1.1.3. $N'''$ Category

The phrase structure rule for $N'''$ (= NP) generates the determiner and quantifier specifiers in NPs:

(1.20) $N'''' \rightarrow (\text{QP}) - (\text{Det'}) - N'' - (S')$

As rule (1.20) indicates, QP and Det' specifiers can occur in the $N''''$ specifier position preceding head NPs with S' complements, as shown in structure (1.21).
Since the QP specifier must precede the Det' specifier, as predicted by the phrase structure rule (1.20), the ill-formed combination of (1.22) will not arise.

(1.22) *te vse prikazy čtoby syn vernulsja

'those all orders so that the son return'

Rule (1.20) also predicts the wellformed combinations of QP and Det' specifiers for the NPs of (1.23).

(1.23) a. (vse_{QP} eti_{Det'}, (náši_{NPposs} spořy_{N''})_{N''})_{NP}

'all these arguments of ours'

b. (každaja_{QP} takaja_{Det'}, (moja_{NPposs} udača_{N''})_{N''})_{NP}

'every such success of mine'

Summarizing, the quantifier and determiner specifiers are expanded from the N'' category, which in turn dominates an N''. By ordering QP before Det', the ill-formed sequences of quantifiers and determiners are not generated.
The present incomplete analysis of the syntactic possibilities of NP specifiers in Russian developed the following phrase structure rules:

(1.24) a. \( \text{N''} \rightarrow (\text{QP}) - (\text{Det'}) - \text{N''} \)

b. \( \text{N''} \rightarrow (\text{NP}_{\text{poss}}) - (\text{AP}) - \text{N'} \)

c. \( \text{N'} \rightarrow (\text{Neg}) - \text{N} - (\text{Prt}) \)

To allow for the generation of complements to NPs, the phrase structure rule of (1.25) was proposed.

(1.25) \( \text{N''} \rightarrow \text{N'} - (X^n) \)

where \( X^n \) is some complement of the categories NP, PP, IP/S'.

The different \( X^n \) positions correspond to different semantic roles of complements:

(1.26) a. \[
\begin{array}{c}
\text{NP} \\
\text{N''} \\
\text{N'} \\
\text{N} \\
\text{P'} \\
\text{P}
\end{array}
\]

razgovor Billa s otcom = 'Bill's talk with father'

b. \[
\begin{array}{c}
\text{NP} \\
\text{N''} \\
\text{N'} \\
\text{N} \\
\text{P'} \\
\text{P}
\end{array}
\]

razgovor s otcom Billa = 'a talk with Bill's father'
1.2.0. Verb
1.2.1. V' Category

The proposed phrase structure rule for the V' category is rule (1.27), which expands Neg and Prt from V'.

(1.27) \[ V' \rightarrow (\text{Neg}) - V - (\text{Prt}) \]

The main evidence for this analysis involves the rule of Q-movement; this rule places a questioned V' under COMP:

(1.28)

\[
\begin{array}{c}
S' \\
\downarrow \\
COMP \\
\uparrow \\
V' \\
\downarrow \\
\text{Neg. V Prt} \\
\uparrow \\
N \\
\downarrow \\
V'' \\
\end{array}
\]

To see the need for generating Neg and Prt from V', note that these particles cannot be assigned to the V'' category, as in \((\text{Neg}_{\text{XOTITE}}, \text{KOFEE}_{\text{NP}}, \text{LIPRt})_{V''})_{VP}\). From this structure it is not possible to establish whether the V' is questioned, or the NP.
The NE and LI particles provide the main criterion for \( V' \), for if \( V' \) takes a degree modifier, the particles appear within \( \text{Deg}' \), not \( V' \):\(^{10}\n
(1.29) \hspace{1cm} \text{Deg}' \n
\begin{array}{c}
\text{Neg} \hspace{1cm} \text{Deg}' \hspace{1cm} \text{Prt} \\
\end{array}

\text{Ne o\v{c}en' li (ljubite kofe)?}

If Neg and Prt are expanded from \( V'' \), this would produce the incorrect structure of (1.30), which contains \( \text{Deg}' \).

(1.30) \hspace{1cm} \text{VP} \n
\begin{array}{c}
\text{V''} \\
\end{array}

\begin{array}{c}
\text{Neg} \hspace{1cm} \text{Deg}' \hspace{1cm} \text{V}' \hspace{1cm} \text{Prt} \\
\text{Deg} \hspace{1cm} \text{V} \\
\end{array}

*Ne o\v{c}en' ljubite li (kofe)?

In section 1.2.3., it is shown that \( \text{Deg}' \) is a \( V''' \) specifier, since a degree adverb can qualify a negated verb:

\[ \text{ON} \cdot (\text{O\v{C}EN}'_{\text{Deg}'}, ((\text{NE}_{\text{Neg}} \text{ LJUBIT}_{V'} \text{ RAGU}_{\text{NP}})_{V''})_{V''})_{V'}. \]

Compare this to:

\[ \text{ON} \cdot ((\text{NE}_{\text{Neg}} \text{ O\v{C}EN}'_{\text{Deg}'})_{\text{Deg}'}, (\text{LJUBIT}_{V'} \text{ RAGU}_{\text{NP}})_{V''})_{V'}. \]

Thus the ability of NE to occur either in \( V' \) or in \( \text{Deg}' \) is proof that Neg is a specifier in \( X' \).
The second test for $V'$ concerns the copula $EST'$, which is deleted in the present tense:

(1.31) On $gV_1$, BOGAT

'He (is) RICH'

NE can be the single focal item within this type of $V'$:

(1.32)

```
S
  NP  VP
    :  
  N  V''
    |
  V'  AP
    |
  Neg V A
    |
  On NE $\emptyset$ bogat

'He NOT (is) rich = He's NOT rich'
```

To prove that NE is within $V'$, we can show that the $V'$ category NE BYL can be moved to the $S'$ position of focus;

(1.33) ((On $v.e$ bogat)$_S$ (NE BYL)$_{V'}$)$_{S'}$

'He rich WAS NOT = He WASN'T rich'

This type of movement indicates two things: Neg occurs in $V'$, and AP is a complement within the category $V''$.

Pro-$V'$ deletion provides the third test for $V'$; for example, in conjoined clauses only the lexical items under pro-$V'$ can be deleted, excluding other material outside of $V'$.
(1.34)

```
(1.34)  
S
   / \  
NP ---- VP*
  /    \  
 NP VP  C  VP
     / \  /  
    VP PP VP
   / \   /  
 Vj PP Vj
On rabotal nad stat'ej i $nad otklikami

 'He worked on the article and $, on the reviews'
```

The pro-V' in the conjoined clause of (1.34) excludes the PP NAD OTKLIKAMI, indicating that PP is within V''.

The semantic differences between pro-V' and pro-V'' deletion would correspond to the syntactic differences between V' and V''. In a conjoined clause QP is a pro-V'':

(1.35)

```
(1.35)  
S
   / \  
NP ---- VP*
  /    \  
 NP VP  C  VP
     / \  /  
    VP PP VP
   / \   /  
 Vj PP Vj
On dolgo rabotal nad stat'ej i $ $ nad otklikami

 'He for a long time worked on the article and $, on the reviews'
```
1.2.2. \( V'' \) Category

The phrase structure rule for the \( V'' \) category expands various complements attached to \( V'' \):

\[
(1.36) \quad V'' \rightarrow V' - (NP) - (PP) - (IP/S')
\]

The verb \textit{XOTET}' 'want' strictly subcategorizes its complements:

\[
(1.37) \quad a. \quad \begin{array}{c}
\text{VP} \\
\quad \text{V''} \\
\quad \text{V'} \\
\quad \text{NP} \\
\quad \text{(Ja) xoču moroženoe}
\end{array} \quad b. \quad \begin{array}{c}
\text{VP} \\
\quad \text{V''} \\
\quad \text{V'} \\
\quad \text{IP} \\
\quad \text{(Ja) xoču otdoxnut'}
\end{array}
\]

'(I) want icecream'    '(I) want to rest'

Since embedded complements can in turn take complements, these are daughters of the \( X'' \) category:

\[
(1.38) \quad a. \quad \begin{array}{c}
\text{VP} \\
\quad \text{V''} \\
\quad \text{V'} \\
\quad \text{V} \\
\quad \text{NP} \\
\quad \text{N''} \\
\quad \text{N'} \\
\quad \text{PP} \\
\quad \text{(Ja) xoču moroženoe s šokoladom}
\end{array}
\]

'(I) want icecream with chocolate'
The embedded complements function as single grammatical relations; consequently, an embedded IP can be topicalized:

(1.39) \((( \text{Otdyvat'} \ v \text{parke})_{\text{IP}} \ (\text{Ja NE XOCU}\ \text{IP}_{e})_{s},)_{s},\)

'To rest in the park, I DON'T WANT TO'

This supports the argument that PP is within IP, not V''.

Now let us compare two types of PF complements in V'':

(1.40) a. \(\text{VP}\)

\(\text{PP}\)

\((\text{On})\ \text{sidel s damoj}\)

'(He) sat with a lady'
Here the syntactic difference is between the PP in (1.40a) with no complement, and the PP in (1.40b) containing the PP complement S SOBAČKOJ.

There is a structural parallelism between the V'' position for adverb modifiers (i.e. BYSTRO/MEDLENNO RABOTAET 'quickly/slowly works' and the N'' position for adjective modifiers (i.e. BYSTRYJ/MEDLENNYJ RABOČIJ 'a quick/slow worker'. Thus the base rules in (1.41) represent a case of a more general rule for the V'' and N'' specifiers. 13

(1.41) a. V'' → (AdvP) - V'
    b. N'' → (AP) - N'

In (1.42) the structural relationship between adverb modifiers in V'' and adjective modifiers in N'' is shown.
1.2.3. \textit{V'''} Category

Degree adverbs such as TAK/SOVSEM/\textit{OČEN}' so/completely/very' can qualify \textit{V''}, \textit{A''} and \textit{Adv''} categories. This parallelism, shown in (1.43), is the main reason for assigning the category \textit{Deg'} to the \textit{X'''} specifier position.
a.  
(1.43)  
\[ V' \]  
\[ \text{Deg'} \]  
\[ V' \]  
\[ \text{Deg} \]  
\[ V' \]  
\[ \text{NP} \]  
\[ V \]  
\[ \text{N} \]  
\[ \text{tak ljubit detej} \]  
'so (much) loves children'

b.  
(1.43)  
\[ A'' \]  
\[ \text{Deg'} \]  
\[ A'' \]  
\[ \text{Deg} \]  
\[ A' \]  
\[ \text{NP} \]  
\[ A \]  
\[ \text{N} \]  
\[ \text{tak dovolen soboj} \]  
'so pleased with himself'

c.  
(1.43)  
\[ \text{Adv}'' \]  
\[ \text{Deg'} \]  
\[ \text{Adv}'' \]  
\[ \text{Deg} \]  
\[ \text{Adv'} \]  
\[ \text{NP} \]  
\[ \text{Adv} \]  
\[ \text{N} \]  
\[ \text{sovsem vniz golovoj} \]  
'completely down headfirst'
One bit of evidence for assigning Deg' to V''' comes from pro-V'' deletion, illustrated in (1.44).

(1.44)

The ability of OCEN' to be excluded from pro-V'' deletion indicates that Deg' is attached to the higher category VP.

Other evidence for V''' involves appositive clauses which are analyzed at the X''' level:

(1.45)

'She invited him for dinner, which surprised him'
The position of the ČTO-clause in (1.45) differs from the position of the KOGDA-clause in (1.46).

(1.46) \[ S' \]

\[ \begin{array}{c}
NP \\
N \\
V' \\
V \\
S' \\
\end{array} \]

Ja priedu kogda ty pozvonis' 'I'll come when you'll phone'

The appositive clause of (1.45) is separated from the V'' by the comma intonation characteristic of all clauses attached to X''. In (1.46), on the other hand, no intonation break is possible between the V' and the KOGDA-clause, since the adverb clause is a functional argument such as V SUBBOTU in JA PRIEDU V SUBBOTU. The distinction between functional arguments and appositive modifiers corresponds to the structural differences between V'' and V'''.

Summarizing, the distinctions between the V', V'', and V'' categories is expressed by the rules in (1.47).

(1.47) a. V''' \rightarrow (Deg') - V'' - (S')

b. V'' \rightarrow^* (AdvP) - V' - (X^n)

c. V' \rightarrow (Neg) - V - (Prt)
1.3.0. Adverb

1.3.1. Adv' Category

The internal structure of the adverb phrase provides positions for the Neg and Prt categories. Rule (1.48) generates the necessary phrase structure for the questioned Adv' category moved under COMP in (1.49).

(1.48) Adv' \rightarrow (\text{Neg}) - \text{Adv} - (\text{Prt})

(1.49)

\[
\begin{array}{c}
\text{S'} \\
\downarrow \\
\text{COMP} \\
\downarrow \\
\text{S} \\
\downarrow \\
\text{Adv'} \\
\downarrow \\
\text{Neg} \text{ Adv} \text{ Prt} \\
\downarrow \\
\text{NP} \\
\downarrow \\
\text{VP} \\
\downarrow \\
\text{AdvP} \\
\downarrow \\
\text{V''} \\
\end{array}
\]

'Isn't (it) late he returned?'

Q-movement of Adv' containing Neg and Prt provides the legitimate proof that Adv' is reserved for NE and LI.

Another bit of evidence for Adv' is provided by sentences reflecting AdvP Focus Movement:

(1.50) ((\text{On e vernulsja})_S \text{ NE POZDNO})_S,

'He returned NOT LATE'
In (1.50), NE is moved with the adverb POZDNO to convey the new information within the single focal constituent. Since there is a major intonation break (reflected by pitch 3) between the topic-S and the focus-AdvP, this indicates that the focal item is placed outside of S.

1.3.2. Adv'' Category

Adverbs which take NP and PP complements assign them to the Adv'' category. Thus rule (1.51) generates complements as daughters of Adv'', as illustrated in (1.52).

(1.51) Adv'' \rightarrow Adv' - (NP) - (PP)

(1.52) a. Adv''
   b. Adv''

   ```
   Adv'     PP
   |     |
   Adv P'  Adv'  NP
   |     |
   P  NP
   |
   |
   naedine s drugom  vniz golovoj
   'alone with a friend'  'down headfirst'
   ```

By attaching adverb complements in Adv'', we can show the structural parallelism between complements in Adv'', Adj'', and N''. In (1.53), for instance, the recurring parallelism of the PP in X'' is shown.
These structures reflect cross-category generalizations at
the X'' level; this type of evidence shows the explanative
power of the X' Theory of phrase structure.

Quantifiers which appear in the specifier position
of Adv'' provide additional evidence for the Adv'' category.
The attachment of QP to Adv'' is shown in (1.54).
If a degree adverb precedes QP, it will be within QP:

\[((\text{OCEN}'\text{Deg}' \text{DALEKO}_Q')_\text{QP} \text{ VNIZ}_{\text{Adv}'}\text{Adv}')_{\text{Adv}''})_{\text{AdvP}}\]

Hence the phrase structure rule (1.55) will generate QP as an Adv'' specifier.

(1.55) Adv'' \rightarrow (QP) - Adv'
1.3.3. Adv'''' Category

The degree words qualifying the X'' categories (Adv'', A'', and Q'') are generated in the specifier position of the X'''' categories. Therefore, the rules in (1.56) express the cross-category parallelism between the AdvP, AP and QP categories, as shown in (1.57).

(1.56) a. Adv'''' \rightarrow (Deg') - Adv''
     b. A'''' \rightarrow (Deg') - A''
     c. Q'''' \rightarrow (Deg') - Q''

(1.57) a. 

```
    Adv'''
   / | \
(Deg') /   (Deg') \
    |      |
    Deg   Adv''
   / |
  /   |
Deg   Adv'
 /   |
/   |
Neg  Adv
    /   |
  /     |
/       |
sovsem ne rjadom s nej
```

'at all not beside her'
The ability of Deg' to precede Adv', A', and Q'' indicates that Deg' is an X''' specifier in these categories. Thus, the main argument for the distinction between the Adv'' and Adv''' categories depends on the Deg' specifier.

One apparent reason for assigning Deg' to X''' is to show the relationship between determiners in N''' and degree adverbs in Q''''. Observe this relationship in (1.58).
The NP TA TAKAJA IDEJA and the QP TAKIE STOL'KO MNOGO IDEJ are prohibited; Deg' should not arise in NPs, and Det' in QPs:

(1.59)  a. *(TA_{Det'} OČEN'Deg' (IDEJA_{N''})_{N''} )_{NP}

b. *(TE_{Det'} STOL'KO_{Deg'} (MNOGO_{Q'} IDEJ_{NP})_{Q''} )_{QP}

These types of sequences are blocked by phrase structure rules; no rule will generate Deg' in NP, nor Det' in QP.
1.4.0. Adjective

1.4.1. A' Category

The base rule for the adjective phrase generates positions for the minor categories Neg and Prt:

(1.60) $A' \rightarrow (\text{Neg}) - A - (\text{Prt})$

Neg and Prt provide the main criterion for $A'$; Q-movement moves all the lexical material within $A'$ to COMP position:

(1.61)

\[
\begin{array}{c}
S' \\
\downarrow \text{COMP} \\
A' \\
\downarrow \text{NP} \\
\downarrow \text{VP} \\
\downarrow \text{Neg} \\
\downarrow A \\
\downarrow \text{Prt} \\
\downarrow N \\
\downarrow V' \\
\downarrow V \\
\downarrow A'' \\
\downarrow A' \\
\end{array}
\]

'Not pleased he was? = Wasn't he pleased?'

AP Focus Movement provides the other evidence for $A'$; this rule positions the AP node with the Neg category in $A'$ to the right of $S$:

(1.62) \[ ((\text{On e byl})_S \text{ NE DOVOLEN SOBOJ})_S' \]

'He was NOT PLEASED WITH HIMSELF'
The third evidence for A' comes from pro-A' deletion, which includes only the lexical item in A':

(1.63)

He was very pleased but she wasn't very much.

The ability of Deg' to be excluded from anaphoric deletion provides proof that A' does not contain the Deg' category.

1.4.2. A'' Category

The base rule (1.64) provides the functional arguments for the A'' category, as illustrated in (1.65).

(1.64) A'' \rightarrow A' - (NP) - (PP) - (IP/S')

(1.65) a. ((DOVOLEN_A, EJ_NP)_{A''})_{AP} 'pleased with her'

b. ((GOTOV_A, POMOC'_{IP})_{A''})_{AP} 'ready to help'

c. ((RAD_A, (ZA_P, BRATA_NP)_{PP})_{A''})_{AP} 'glad for brother'
1.4.3. A''' Category

A degree modifier is attached to the A''' category:

(1.66) a.  
\[ \text{Deg}' \quad \text{A''} \quad \text{Deg} \quad \text{A'} \quad \text{NP} \]
\[ \text{Deg} \quad \text{A} \quad \text{N} \]
\[ \text{očen' dovolen ej} \]

'bvery pleased'

with her'

b.  
\[ \text{Deg}' \quad \text{A''} \quad \text{Deg} \quad \text{A'} \quad \text{IP} \]
\[ \text{Deg} \quad \text{A} \quad \text{I} \]
\[ \text{očen' gotov pomoč' } \]

'very ready to help'

The position of Deg' in (1.66) is the same as that of an adverb modifier such as VSEGDA; both are X''' specifiers:

(1.67)  
\[ \text{S} \]
\[ \text{NP} \quad \text{V'''} \]
\[ \text{N} \quad \text{AdvP} \quad \text{V''} \]
\[ \text{Adv} \quad \text{V'} \quad \text{A'''} \]
\[ \text{V} \quad \text{Deg'} \quad \text{A''} \]
\[ \text{Deg} \quad \text{Deg} \]
\[ \text{Dik vsegda byl očen' dovolen Su} \]

'Dick always was very pleased with Sue'

Since pro-A'' deletion can exclude Deg', as in (1.68), Deg' must be attached outside of A''.
Dik byl (očen' Deg' (dovolenA, SuNP)A'')AP,
a Děo byl (ne očen' Deg' (ØA, ØNP)A'')AP
'Dick was very pleased with Sue, but Joe wasn't very much'

In the conjoined clause of (1.68), the anaphoric deletion applies to the constituents DOVOLEN SU which are inside of A''.

As an X''' specifier, the Deg' category excludes the Det' category; both cannot appear in the same phrase:

(1.69) a. A'''
    b. A'''

The incorrect sequence *TAKIE TAK POXOŽY will not arise, since the Det' category is not expanded from AP, only from NP. Thus the base rule for A'' could be:

(1.70) A''' → (Deg') - A'' - (S')

This rule shows that an S' can follow the A''; this position is reserved for the appositive clause, as in (1.71).
'He was very pleased with her, which is understandable.'

The comma intonation before čto Φv, PONJATNO in (1.71) is explained by the fact that appositives differ from restrictives: restrictives are X'' complements and appositives are X''' complements.

Summarizing, 'it was shown that the NE/LI particles are identified with the A' category, the complements with the A'' category, and the degree adverbs and appositives with the A''' category. Moreover, at each hierarchical level there was a systematic cross-categorical relationship between adjectives, adverbs and quantifiers.
1.5.0. Preposition

The phrase structure rule for the P' category is rule (1.72) which generates P - NP and optional particles.

(1.72) P' \rightarrow (\text{Neg}) - P - NP - (\text{Prt})

Whenever the Q-particle LI is used to question the head noun within P', the Prt category for LI is attached to P', as in the structure (1.73).

(1.73)

```
S'   
\|   
COMP
\|   
P'    S
\|   \|
P   NP   VP
\|   \|   \|
P    N   N'   V'   PP
\|   \|   \|   \|
N    NPposs N'   V'   P'
```

V ма́шине ли tвои перчатки \emptyset e

'Are (they) in the car, your gloves?'

Likewise, whenever the particle NE is used, Neg is also attached to P' to the left of P:

(1.74) \( S \left( (\text{pr} \text{ NE V (np ма́шине) LI}) (S \text{TVOI PERČATKI } \emptyset e) \right) \)

'Aren't (they) in the car, your gloves?'
Preposition phrases dominate two types of NP complements: the first type is a P - NP construction, as in (1.75).

(1.75) a. \[
\begin{array}{c}
P' \\
P \quad NP \\
\quad : \\
N \\
\end{array}
\]

\[
\text{na nedelju 'for a week'}
\]

b. \[
\begin{array}{c}
P' \\
P \quad NP \\
\quad : \\
N \\
\end{array}
\]

\[
\text{ot revnosti 'from jealousy'}
\]

The second type of P' contains a head NP with either an NP complement, as in (1.76a), or a PP complement, as in (1.76b).

(1.76) a. \[
(V_P (\text{PERVUJU}_A P \text{ SUBBOTU}_N , (\text{MESJACA}_{NP,N'\prime} )_{NP})_P,
\]

'\text{on the first Saturday of the month}'

b. \[
(V_P (\text{PERVUJU}_A P \text{ SUBBOTU}_N , (V \text{ JANVARE}_{PP,N'\prime} )_{NP})_P,
\]

'\text{on the first Saturday in January}'

In these phrases the NP complement MESJACA and the PP complement V JANVARE exhibit the same grammatical functions and appear in identical positions within the N'' category.

The question arises as to whether a PP complement should be attached to N'' of (1.77a), or to P'' of (1.77b).
Structure (1.77b) represents the claim that the P' category can subcategorize PP complements, although there does not appear to be any strong evidence for this claim. There is evidence, however, indicating that PP complements appear in the N'' category, as shown in (1.78).

(1.78)  \((\text{MOROŽENO}_N, (S \ ŠOKOLADOM)_P)_{N''})_{NP}\\
'icecream with chocolate'
Since we need a base rule to generate PP complements from the $N''$ category, but we apparently do not need a rule to generate PP complements from the $P''$ category, we can maintain the generalization that the $P'$ category does not subcategorize complements.

Another problem concerns PP constructions with numerals such as $V \text{PJAT'} \text{ČASOV} \ 'at\ five\ o'clock'$. The question is: does this phrase have the base structure of (1.79a), or that of (1.79b).

\[(1.79)\ a. \quad P'' \quad b. \quad P'\]

\[
\begin{array}{c}
P' \\
\downarrow \ \downarrow \\
NP \quad \quad P' \\
\downarrow \\
NP \\
\downarrow \\
N \\
\downarrow \\
N \\
\downarrow \\
v \ \text{pjat'} \ \text{Časov} \\
\end{array}
\quad \quad \quad
\begin{array}{c}
P' \\
\downarrow \\
NP \\
\downarrow \\
N' \\
\downarrow \\
NP \\
\downarrow \\
N \\
\downarrow \\
N \\
\downarrow \\
N \\
\downarrow \\
v \ \text{pjat'} \ \text{Časov} \\
\end{array}
\]

Structure (1.79a) indicates that the NP ČASOV is a complement of $P'$; (1.79b) shows that NP ČASOV is a complement of $N'$. One argument favoring (1.79a) involves the inversion rule which inverts $P'$ and NP in structure (1.80).
Inversion (denoted by double arrows) cannot apply to (1.79b), for if it could apply this would produce the incorrect configuration: PJAT' ČASOV V 'five o'clock at' by inverting the preposition and the head NP within P'.

The inversion process can also be described by the operation of Chomsky-adjunction, which adjoins an NP to the left of the head node:

(1.81)

Inversion (denoted by double arrows) cannot apply to (1.79b), for if it could apply this would produce the incorrect configuration: PJAT' ČASOV V 'five o'clock at' by inverting the preposition and the head NP within P'.

The inversion process can also be described by the operation of Chomsky-adjunction, which adjoins an NP to the left of the head node:

(1.81)
The resulting structure is one in which the copied NP node and the head P' node are sisters under a common P'' node which is created by Chomsky-adjunction. By resorting to this type of rule, we can still maintain the hypothesis that prepositions do not subcategorize complements, while nouns do subcategorize complements.

Degree adverbs which precede negated PP phrases are attached to the P'' category:

(1.82)

```
      P''
     /   \
 Deg'   P'
  /     \
 Deg   Neg  P  NP
   \
    N
```

tol'ko ne ot revnosti
'only not from jealousy'

But if NE precedes the degree word, it is attached to Deg':

(1.83)

```
      P''
     /   \
 Deg'   P'
  /     \
 Neg  Deg
   \
   N
```

ne tol'ko ot revnosti
'not only from jealousy'
The semantic differences between the PP structure (1.82) and the PP structure (1.83) depend on whether NE appears in P', or in Deg'.

Rule (1.84) will generate Neg from the P' category.

(1.84) P' \rightarrow (Neg) - P

Since degree adverbs can precede P' (as in TOL'KO NE OT REVNOSTI), the phrase structure rule (1.85) will generate Deg' from the P'' category.

(1.85) P'' \rightarrow (Deg') - P'

The S' category does not directly co-occur with a preposition, so it will be generated from the N'' category:

(1.86)

\[
\begin{array}{c}
\text{S'} \\
\text{S} \\
\text{NP} : \\
\text{N} \\
\text{V'} \\
\text{V} \\
\text{V''} \\
\text{P'} \\
\text{P} \\
\text{NP} \\
\text{N''} \\
\text{N'} \\
\text{S'} \\
\end{array}
\]

vse bespokojatsja o tom cto ceny rostut na vse'
'everyone is worried about the fact that prices are rising on everything'
Whenever a degree adverb precedes a PP node with an embedded S' complement, it will be attached to P'', as a modifier of the P' category. In (1.87) this type of PP construction is shown.

(1.87)

\[
\begin{array}{c}
P'' \\
| \\
\text{Deg}' \\
| \\
\text{Deg} \\
| \\
\text{Neg} \\
| \\
P' \\
| \\
NP \\
| \\
N' \\
| \\
N \\
| \\
S' \\
| \\
\end{array}
\]

tol'ko ne o tom čto ceny rostut na vse'

'only not about the fact that prices are rising on everything'.

This structure shows the need for expanding Deg' from the specifier position in P''. We can now see that the base rules for the PP category differ from those for NP, VP, AdvP, and AP by not generating the P''' category. Since I could not find any concrete evidence for the P''' level at this time, I chose to generate Deg' from P'', being fully aware of the fact that Deg' in P'' does not generalize with Deg' in the X''' categories.
There are many interesting problems related to the phrase structure of prepositions. One question concerns the matter of whether for Russian we need the expansion P - PP, as in the P' phrase of (1.88a), or is the Adv'' phrase of (1.88b) to be preferred.

(1.88) a. \[ P' \]
\[ P \]
\[ PP \]
\[ vniz \]
\[ po lesnice \]

b. \[ Adv'' \]
\[ Adv' \]
\[ PP \]
\[ vniz \]
\[ po lesnice \]

'down by the ladder'  'down by the ladder'

Evidence for (1.88b) comes from the NE/LI particles. Notice that in (1.89a) we cannot question the P' phrase, but we can question the Adv' phrase in (1.89b).

(1.89) a. \[(\text{NE} \text{Neg} \text{VNIZ}_P \text{ (PO LESNICE)}_P \text{ LI}_P \text{Pr})_P \]
b. \[(\text{NE} \text{Neg} \text{VNIZ}_A \text{dv}_A \text{LI}_A \text{Pr})_A \text{Adv'} \text{ (PO LESNICE)}_P \text{Adv'})\]

Another problem concerns phrases like IZ VNUTRI 'from within': Should VNUTRI be analyzed as a preposition or adverb? The simplest description (in my opinion) is to treat VNUTRI as an adverb, since it can occur with a complement but without a preposition: VNUTRI DOMA 'inside the house'. Likewise, DO is a preposition in DO NAČALA KONCERTA, while RAN'ŠE is an adverb in RAN'ŠE ČEM NAČALSJA KONCERT.
1.6.0. Summary of Rules

The following rules developed in the preceding sections show the parallel grammatical relations in the specifier and complement systems of the syntactic categories in Russian.

(1.90) $X'$’’ Category

a. $N''' \rightarrow (QP) - (\text{Det'}) - N''' - (S')$

b. $V''' \rightarrow (\text{AdvP}) - (\text{Deg'}) - V'' - (S')$

c. Adv''' \rightarrow (\text{Deg'}) - Adv'' - (S')

d. A''' \rightarrow (\text{Deg'}) - A'' - (S')

(1.91) $X''$ Category

a. $N'' \rightarrow (\text{NPposs}) - (\text{AP}) - N' - (\text{NP}^n) - (\text{PP}^n) - (\text{IP}/S')$

b. $V'' \rightarrow (\text{AdvP/QP}) - V' - (\text{NP}) - (\text{PP}) - (\text{IP}/S')$

c. Adv'' \rightarrow (QP) - Adv' - (NP) - (PP)

d. A'' \rightarrow (QP) - A' - (NP) - (PP) - (IP/S')

e. P'' \rightarrow (\text{Deg'}) - P'

(1.92) $X'$ Category

a. $N' \rightarrow (\text{Neg}) - N - (\text{Prt})$

b. $V' \rightarrow (\text{Neg}) - V - (\text{Prt})$

c. Adv' \rightarrow (\text{Neg}) - Adv - (\text{Prt})

d. A' \rightarrow (\text{Neg}) - A - (\text{Prt})

e. P' \rightarrow (\text{Neg}) - P - NP - (\text{Prt})

('/' = "either or"; (...) = "optional"; $X^n$ = "more than one $X")
As formulated by Jackendoff (1977), the X Theory makes three claims: distinctive features describe the class of possible lexical categories (noun, verb, adverb, adjective, preposition, etc.); the syntactic categories (S, NP, VP, AdvP, QP, AP, PP, etc.) are stated in terms of the prime notation (X', X'', X'''); rules of grammar are stated in terms of the distinctive features and the primes.

The analysis of Russian phrase structure has shown that the maximal expansion of the major categories NP, VP, AdvP, AP, QP is the X'''' category; the preposition is an X'' category (this assumption is tentative); the degree adverb (Deg') and the determiner (Det') are X' categories; the particles (Neg and Prt) are X categories.

It appears that the X''''' level of analysis is not sufficient to describe all Russian phrase structure. In particular, the syntactic category S must be at a higher level than V'''' (=VP), since such adverbs as SEGODNJA, LETOM, etc., are attached to S, not VP. The present analysis leaves some questions unanswered. The first concerns possessive pronouns; these are treated as the special category NP_{poss} instead of AP, which is the traditional analysis. The second question concerns the numerals which are analyzed as NPs instead of QPs. The analysis of numerals, measure phrases, partitives and pseudopartitives raises deeper questions than I can answer.
FOOTNOTES

CHAPTER 1

The X Theory leaves a number of questions unanswered; first, the theory of markedness (the feature system) for syntactic categories is not fully developed; the second shortcoming concerns the adequacy of the constraint of the form C_i and C_j in the schema (1.1).

(1.1) \( X^n \rightarrow (C_i) \ldots X^{n-1} (C_j) \ldots \)

What is not known is whether all \( C_i, C_j \) are optional or just some, and whether the restriction to \( X'''' \) (the ultimate level) is universal or not. These questions have been raised in Jackendoff (Chapter 3).

2) The syntactic features make it possible to state rules which generalize to more than one major category. Thus in "Remarks on Nominalizations" Chomsky used the features +/- N and +/- V to analyze the major lexical categories N, A, and V:

(1.2) \[
\begin{array}{c|c|c}
+ & N & -N \\
+V & A & V \\
-V & N & \\
\end{array}
\]

In English phrase structure, the first division is between those categories which have a subject, N and V, and those which do not, A and P. Thus the feature +Subj designates N and V, and -Subj A and P (for a more detailed discussion see Jackendoff, 1977: 31-33).
Alternatively, an X'' is called a major phrasal category NP (or, a supercategory). For reasons of structural parallelism with the syntax of NPs, Jackendoff (1977: Chapter 3) proposed that $X^n$ must also equal 3 for the minor lexical categories Q (quantifier) and Adv (adverb). This three-level hypothesis is adopted for Russian phrase structure with certain modifications; in particular, S is higher than V'''', PP and Deg is X'''. In Jackendoff's analysis, S is equivalent to V''', PP and Deg are X''' categories.

In formal terms, the structural parallelism between the major categories is shown in terms of the identical X' notation expressed by the phrase structure rules.

The present analysis leaves open the issue: What is the maximum value of Vn, is it V'' or V''', and is V''' equivalent to S? For Russian, I propose that Vn equals 3 and that V3 does not correspond to the S level. The main evidence for this assumption is provided by appositives which attach to V''', while ČTO/ČTOBY-clauses and KOTORYJ-clauses are V'' complements. Section 1.3.3 will be concerned with showing some of the evidence for V'''.

The identity element 'e' marks the "removal site" or "gap" resulting from the application of a movement rule (see Lightfoot, 1977). The need for 'e' in Russian has not been sufficiently demonstrated. The analysis using 'e' assumes the validity of movement rules and strict linear order, which can be disputed. The main evidence for 'e' is that a trace element is needed for the projection rules of the interpretive component.

The claim that Focus Movement places constituents to the right of root S, under S', is justified in Chapter 3. The terms "focus", "focal constituent" and "focal information" designate the discourse rheme (the scope of focus): all the new information in the sentence.

An interesting argument for N'' concerns relative clauses which are attached to the N'' complement node of either the head NP, as in (1.3), or to the embedded NP, as in (1.4).
Since all restrictive relatives are daughters of N', only a single projection rule is required for interpreting the head N STUDENTKA with its S' complement in (1.3), and the head N UNIVERSITETA with its S' complement in (1.4).

9 The difference between appositives and restrictive clauses can be accounted for in terms of the X'' and X''' levels. Since an appositive must follow a restrictive, it can be attached to N''', while the restrictive to N'', as shown by the structure (1.5).
The fact that he died, which happened suddenly, surprised everyone.

If the appositive is a daughter of N'', and the ČTO-clause a daughter of N''', the ungrammatical sentence (1.6) results.

(1.6) *To, čto slučilos' vnezapno, čto on umer, udivilo vsex

'The fact, which happened suddenly, that he died surprised everyone'

As Jackendoff (1977: 172) correctly observed, the differences in intonation and distribution between restrictives and appositives show that the two types of clauses have different syntactic sources.

Notice that Deg' cannot precede the V' containing NE and LI, as in this forbidden construction:

(1.7) *očen' 

*ne ljubite li (kofe)
As pointed out to me by DeArmond, stress cannot hop across higher constituent boundaries:

11

\[(1.8) \text{ a. } (N\text{E}_{\text{Neg}} (BYL_V)_{V'}) \text{ cp. } (N\text{E}_{\text{Neg}} (N\text{ADO}_A)_{A'}) \text{ b. } (P\text{O}_P (GRIBY_{NP})_P) \text{ cp. } (Z\text{A}_P (GRIB\text{A}_M_{NP})_P) \]

For describing conjoined sentences and conjoined noun phrases, Langendoen (1969: Chapter 3) proposed that the iterative nodes \( S^* \) and \( NP^* \) be used in rules of the schematic form:

\[(1.9) \text{ a. } S \rightarrow C - S^* \text{ b. } NP \rightarrow C - NP^* \]

Such rules abbreviate for an unlimited set of rules which generate conjoined Ss and NPs in sentences. Besides S and NP conjunction, we can assume that there is a rule schema for VP conjunction as follows:

\[(1.9) \text{ c. } S \rightarrow C - VP^* \]

This rule generates conjoined VPs only for those sentences in which the subjects are identical for all the conjuncts; this approach eliminates the need for a transformational rule of subject deletion. Matters relating to conjunction will not be considered in this study. However, it appears to me that conjunction reduction is not a transformational process, but a property of logical structure and semantic binding rules.

\[12\text{ The quantifiers MNOGO/MALO 'lot/little' seem to alternate with the adverbs BYSTRO/MEDLENNO 'quickly/slowly' in the specifier position of the V'' category, as shown in (1.10).} \]
We do not find such ungrammatical combinations of specifiers as *MNOGO BYSTRO GOVORIT 'a lot quickly talks', nor *BYSTRO MNOGO GOVORIT 'quickly a lot talks'. These sequences are prevented from occurring by the rule:

(1.11) \( V'' \rightarrow (QP/AdvP) - V' \)

which generates QP and AdvP as alternate nodes.

On the other hand, the adverbial ČASTO 'often' must precede both BYSTRO and MNOGO; thus the combinations of specifiers in (1.12) are grammatical, but not those in (1.13).

(1.12) a. ČASTO BYSTRO GOVORIT
     'often quickly talks'

b. ČASTO MNOGO GOVORIT
     'often a lot talks'

(1.13) a. *BYSTRO ČASTO GOVORIT
     'quickly often talks'

b. *MNOGO ČASTO GOVORIT
     'a lot often talks'

This data supports the assumption that the adverbial ČASTO is a \( V''' \) specifier, as a modifier of \( V'' \); this assumption, however, is not tested in the present study.
CHAPTER TWO
WH-MOVEMENT, TOPICALIZATION AND FOCUS MOVEMENT

2.0.0. Introduction

The main concern of this chapter is to show that the topicalization process in Russian cannot be identified with the Wh-Movement, as Chomsky (1977) claimed for English. Although Topicalization shares certain diagnostic properties with Wh-Movement (alternatively, Q-Movement) in Russian: the gap, the bridge, and the Complex NP Constraint; it does not observe the Wh-Island Constraint, the Tensed-S Condition, and the Superior NP Condition.

The second concern is to show that certain focal constituents in end-S' position can be accounted for by a right movement rule called Focus Movement. This rule displaces a variety of constituents to end-S' position where the focal stress is assigned. The Pivot Accent 3 provides the crucial evidence for Focus Movement; the Pivot Accent segments sentences into two discourse units: the leftmost topic-S and the rightmost focus-S'.

Furthermore, it is shown that Focus Movement differs from Right Dislocation by not leaving behind a pronominal trace after movement. Finally, it is suggested that constituents under TOPIC be base-generated and that both right and left dislocated constituents originate in S'' positions.
2.1.0. **WH-Movement**

According to Chomsky (1977), Wh-movement observes four diagnostic properties, namely, the gap, the bridge, the Wh-Island Constraint, and the Complex NP Constraint. In Russian similar constraints are operative with respects to Wh-movement (alternatively, Q-movement).

2.1.1. The Gap

Wh-movement can move a Wh-subject into COMP leaving behind a gap (denoted by the symbol $e$), as in (2.1).

(2.1)

```
S'  
  |   S
  |   |  
  COMP | NP | NP | VP | AdvP
  | : | : | : | : 
  | N | N | V' |
  | V' | NP |
  | V  | N  |
  KTO  e  voz'mët Annu segodnja ?
  2  1

'WHO (will) take Anna to-day?'
```

(The numeral 2 denotes the interrogative pitch accent and numeral 1 the terminal pitch in interrogatives, or the focal pitch accent in declaratives; the identity element $e$ is a bound variable subject to the control-command requirement, as in accordance with Trace Theory (Chomsky 1977)).
The assumption that the $Q$-phrase with KTO fills COMP in (2.1a) follows from the premise that there is a mirror image order relationship between the positions of the $Q$-phrase in the underlying question and the antecedent $F$-phrase (focal phrase) in the response (Krylova and Khavronina 1976, Chapter 5). Thus the analysis adopted here is to attach the $F$-phrase to the right of $S$ under $S'$:

(2.1) b.

\[
\begin{array}{c}
S' \\
S \\
\text{AdvP} \\
\text{NP} \\
\text{VP} \\
\text{N}
\end{array}
\]

Segodnja $e_i$ voz'met Annu VOVA$_i$

'To-day will take Anna VOVA =

VOVA will take Anna to-day'

In (2.1b), SEGODNJA conveys the "temporal setting" and is not prominent in any way. This sentence differs in communicative purpose from the one in which the adverb is the single theme, and the verb + subject are the rheme:

($S$, Segodnja ($S$ POJD$'et$ DO$'D'$)); here SEGODNJA is located under $S'$, outside of the rheme-$S$. In this regard, movement under left-$S'$ would be a topicalization process whereby a topic-constituent is created.
Similarly, Wh-movement can move a Wh-object into COMP leaving behind a gap in the original position:

(2.2)

\[
\begin{array}{c}
S' \\
\text{COMP} \\
\text{NP} \quad \text{NP} \\
N \quad N \\
V' \\
V \quad \text{NP} \\
\text{AdvP}
\end{array}
\]

'WHOM (will) Vanya take to-day?'

This surface structure illustrates that Wh-movement served two discourse functions: it identified the Wh-phrase in COMP as the focus-information, and it associated the main S with the topic-information. Most importantly, Wh-movement does not create any major intonation break between the two discourse constituents indicating that movement is within the domain of S'.

2.1.2. The Bridge

Wh-movement can use the COMP node as a bridge to move a Wh-phrase out of a tensed clause, across specified subjects, and through successive cycles, as shown in (2.3).
In (2.3), movement is in accordance with the Subjacency Condition permitting movement of the interrogative NP from the internal COMP to the external COMP. Unlike Q-phrases under COMP, complementizers such as ČTO serve as a bridge allowing Q-movement up to the highest COMP node.
2.1.3. The WH Island Constraint

WH Movement observes the WH Island Constraint preventing COMP from getting doubly filled:

\[(2.4)\]

\[\begin{array}{c}
S' \\
| \\
\text{COMP}_1 \\
| \\
| \\
NP \quad NP \\
: \quad : \\
N \quad N \\
\end{array}\]

\[\begin{array}{c}
V' \\
| \\
\text{S'} \\
| \\
\text{COMP}_2 \\
| \\
\text{AdvP} \\
| \\
NP \\
: \\
N \\
\end{array}\]

\[\begin{array}{c}
V' \\
| \\
V \\
| \\
\text{AdvP} \\
| \\
NP \\
: \\
V'' \\
| \\
V \\
| \\
\text{AdvP} \\
| \\
NP \\
: \\
N \\
\end{array}\]

\[\text{ČTO}_i \quad \text{Maša} \quad \text{skazala} \quad \text{kogda}_j \quad \text{ona} \quad \text{rešila} \quad e_i \quad e_j ?\]

'WHAT did Masha say when she decided?'

In (2.4), movement of ČTO across the filled COMP₂ violated the WH Island Constraint, thus accounting for the ungrammaticality. But this COMP-to-COMP movement did not violate Strict Cyclicality (Chomsky 1973), only the restriction on doubly-filled COMP.
2.1.4. The Complex NP Constraint

Since Wh-movement observes strict cyclicity, it cannot move across a full head NP which has no COMP bridge:

(2.5)

Here the movement of ČTO from COMP-2 into COMP-1 across the complex head NP ŽELANIE caused the ungrammaticality; head NP, unlike COMP, do not serve as bridges for Wh-movement, or NP Topicalization.
2.2.0. Topicalization into TOPIC

2.2.1. The Gap

In "On Wh-Movement", Chomsky (1977) proposed that a topicalized phrase is base-generated under TOPIC, while its identity element 'e' is moved from COMP₂ to COMP₁:

(Capitalization and Pivot Accent 3 denote the topic-phrase; capitalization and Focus Accent 1 indicate sentential stress; ( --> ) designates semantic binding)
In (2.6), the embedded NPe is moved with a Wh-phrase and deleted in COMP₁ position; the phrase in TOPIC semantically binds e. Movement directly from NPe into COMP₁ is not allowed because a bounding node S separates the two nodes. If movement into TOPIC was allowed, it would have to be an unbounded rule in Russian.

The main evidence for the base-generated TOPIC node in Russian is provided by the Pivot Accent 3; the TOPIC position induces the Pivot Accent to create a major intonation break between the topic-constituent under TOPIC and the focus-constituent under S'. The semantic effect of the Pivot Accent is to make prominent the rhetorical topic-phrase.

A structure exhibiting Topicalization into TOPIC is stylistically marked, as in (2.7a), compared to a neutral structure exhibiting only WH Movement, as in (2.7b).

(2.7) a.

```
(2.7) a.
```

```
ANNU₁ e₁ POČEMU₂ ty obižaeš' NPe₁ e₂?
''ANNA, WHY do you offend?''
```
(2.7) b. S
    COMP
    AdvP 'NP VP
      N V' AdvP
      V' NP
    POČEMU comunità obižateš Annu ei

WHY (do) you offend Anna?

3.2.2. The Complex NP Constraint (Strict Cyclicity)

Similar to Wh-movement, Topicalization observes strict cyclicity blocking movement across a head NP:

(2.8)
In (2.8), the identity phrase NP e moved across the non-
COMP NP ZELANIE, causing the ungrammaticality.

2.2.3. The Wh-Island Constraint

Unlike Wh-movement, Topicalization is not sensitive
to the Wh-Island Constraint and the Superior NP Condition.
For example, a topicalized phrase can move across a filled
COMP node, as shown in (2.9).

In (2.9), Topicalization moved the subject NP e across
COMP filled by KOMU, thus violating the Wh-Island Con-
straint without invoking ungrammaticality. This type of
evidence argues against the transformational analysis of
topicalization into TOPIC position.
Topicalization can also violate the Wh-Island Constraint by moving an object NP e across the filled COMP:

\[ S'' \]

\[ \text{TOPIC} \]

\[ S' \]

\[ \text{NP} \]

\[ \text{COMP} \]

\[ S \]

\[ \text{NP} \]

\[ \text{NP} \]

\[ \text{VP} \]

\[ V'' \]

\[ V' \]

\[ \text{NP} \]

\[ V \]

\[ \text{N} \]

\[ \text{VANE}_j \]

\[ e_j \]

\[ \text{KTO}_i \]

\[ e_i \]

\[ \text{pozvonit} \]

\[ e_j \]

\[ 3 \]

\[ 2 \]

\[ 1 \]

'VANYA, WHO'S going to phone? =
WHO'S going to phone VANYA?'

The stylistically marked structures (2.9) and (2.10) can be compared to the neutral structures in (2.11), which reflect only Wh-movement into COMP.

(2.11) a. \( (S', (\text{COMP} \text{KOMU}_i)(S \text{ ona zvonit } e_i)) \)

2 1

'TO WHOM (is) she phoning?'

b. \( (S', (\text{COMP} \text{KTO}_i)(S e_i \text{ pozvonit Vane})) \)

2 1

'WHO (will) phone Vanya?'
2.2.4. The Superior NP Condition

Under Chomsky's analysis (Chomsky, 1973), WH Movement is required to select the superior term - the one that is closer to the root of the sentence; this condition can be violated in colloquial Russian, since a Wh-object can be moved across the superior Wh-subject under COMP, as shown by (2.12).

(2.12)

This type of surface structure clearly shows that in Russian there is no "superior" subject node and is evidence against a possible transformational analysis of movement into TOPIC; however, this example does not prove that there is no movement into COMP.
Whatever principle accounts for Wh-topicalization across a Wh-subject must also account for the Wh-movement in (2.13), reflecting adverb movement into COMP across a fronted object NP.

(2.13)

Summarizing, it has been shown that the topicalization process in Russian does not observe the Wh-Island Constraint preventing movement across a filled COMP, nor is it sensitive to the Superior NP Condition preventing movement of a Wh-object across a Wh-subject. It would be incorrect, therefore, to identify Topicalization with Wh-movement in Russian, as Chomsky claimed for English.
2.3.0. Evidence for the Category TOPIC

The assumption that the leftmost position of $S''$ is the TOPIC position is supported by a number of constructions in Russian. As will be shown, these constructions exhibit a number of syntactic and pragmatic (discourse) properties, namely: (1) the topic-phrase is located outside of $S'$ and in TOPIC position, (2) the Pivot Accent marks the topic-phrase, (3) both TOPIC and COMP can be filled in questions, and (4) a sentence boundary ($) may separate TOPIC from the $S'$ node.

I shall refer to the analysis which generates TOPIC as the TOPIC analysis and the sentences containing TOPIC as $S''$ structures.

2.3.1. Vocative NPs

Within the TOPIC analysis, vocative NPs can be assumed to occur under TOPIC and marked for Pivot Accent 3:

```
(2.14)
```

```

DOKTOR

' DOCTOR, what's with my child'
```
In (2.14), the Wh-subject moved into COMP, indicating that the vocative NP is generated under TOPIC. This analysis is supported by the fact that a clause can appear between TOPIC and the S'-complement, as shown in (2.15).

(2.15)

As (2.16) indicates, a clause cannot occur between COMP and the main S.

(2.16) *\((S_i(\_\_TO_i(S \text{ skažite doktor}) (S_e CT \_ \_s moim reběnkom)))\)

In indirect questions the Wh-phrase must be subjacent and commanding to the cycle from which it is derived; thus no intonation break is permitted between COMP and S.
2.3.2. Tag Clauses

A tag question occurring to the right of the assertive clause is attached to the S'' node:

(2.17)

\[ S' \]
\[ S \]
\[ Vy \hspace{1em} PRIDÊTE \hspace{1em} \# ne TAK li ? \]
\[ 2 \hspace{1em} 1 \hspace{1em} 3 \]

'You'll COME, (isn't it SO = WON'T you)!' 

The attachment of a tag question to S'' accounts for the major intonation break (#) between the two S' nodes.¹¹

Similar to tag questions, tag adverbials can be accounted for by an S'' structure, of the type in (2.18):

(2.18)

\[ S' \]
\[ S \]
\[ On \hspace{1em} byl VZVOLNOVAN \# kazalos' \]
\[ 2 \hspace{1em} 1 \hspace{1em} 0 \]

'He was EXCITED, (it) seemed'
This construction is identical to the one containing a tag question; both exhibit the boundary # representing the terminal point of the focal information.

The same assumption about intonation contours and surface bracketing account for the grammaticality of S Adverb Attachment in the S'' structure of (2.19), assuming that the topicalized NP is base-generated under TOPIC.

(2.19)

```
S''
  /\        \\     
TOPIC S    S'
   \       /     
  NP N    NP VP
     |   |      |
  e1 kazaros' by PRAV
  3 0 2 1 2 1

'VANYA, (it) seemed, was CORRECT'
```

By base-generating VANJA under TOPIC, this allows attachment of KAZALOS' between the lefthand topic-NP and the righthand focus-S'. In contrast to (2.19), the topicless sentence (2.20) shows KAZALOS' as a head verb to an S-complement conveying new information.
(2.20) S'  
    |  
    V'  
    |  
     V  
    |  
     N  
    |  
     N  
    |  
    S  

kazalos'  čto on byl PRAV

'(It) seemed that he was CORRECT'

This sentence exhibits the normal rising-falling intonation contour characteristic of all topicless sentences; thus no intonation break is possible between KAZALOS' and its ČTO-complement which bears the sentential stress. In topicless sentences the ČTO-complement is the main assertion, while the matrix verb qualifies the semantic content of the assertion.

2.3.3. Left and Right Dislocation

Syntactic Binding accounts for the grammaticality of the base-generated constituents under TOPIC, which have a pronominal trace in the matrix S, as illustrated by the structures in (2.21).
(2.21) a. 

ANNA, WHEN (did) she leave for home?

b. 

He DIED, our first son.
In (2.21a), NP ANNA under TOPIC is assigned Pivot Accent, while the Q-phrase KOGDA takes the interrogative pitch; the trace NP ONA occurs in the matrix S. On the other hand, in (2.21b), the right dislocated NP does not induce the Pivot Accent, since it occurs to the right of the focal constituent in which a copy NP is present.13

There appears to be no strong evidence indicating that Left and Right Dislocation are transformational rules in Russian, otherwise movement would have to violate the Cyclic Principle and the Wh-Island Constraint. In (2.21a) given above, NP ANNA would have to be moved across COMP filled by KOGDA, thus violating the Wh-Island Constraint. Moreover, in (2.21b), the NP NAŠ PERVYJ SYN would have to be moved over a subjacent S node, thereby violating strict cyclicity. Therefore, the assumption that dislocated constituents are base-generated is supported by the fact that the left and right movement rules into S'' positions do not obey the established constraints on movement.

The likely evidence for a movement analysis of dislocation concerns such grammatical phenomena as case agreement and conditions on verb negation. In Russian, the dislocated phrase under TOPIC must have the same case markings as its pronominal trace, otherwise incompatible agreement can result, as in (2.22).
(2.22) *(s, BOBj_s_ (COMP koi) (NPci verit emu_j))

'BOBI (Nom), who believes himi (Dat)'

Since the dislocated NP BOBNom does not match with its antecedent NP EMUDat, sentence (2.22) is illformed.

Another possible argument for a movement analysis involves sentences with verb negation in which the governed NP object occurs in the genitive case: if the object NP is dislocated into TOPIC, it must also be in the genitive:

(2.23) (s, SURyi (Gen) (s, (eei NET zdes'))))

'SHURA, she's NOT here'

If the governed NP is generated under TOPIC in the nominative, this would cause the ungrammaticality in (2.24).

(2.24) *(s, SURAIi (Nom) (s, (eei NET zdes'))))

What these examples indicate is that various conditions on wellformedness must be stated for dislocated constituents generated under TOPIC.

However, the phrase structure alternative to the copying analysis is able to show the same interdependencies between the verb, the pronominal copy and the dislocated phrase by means of a Binding Principle; this principle can specify that NPI in TOPIC properly binds an identity NPci, or a pronominal trace NPI in the matrix S.
If the Binding Principles prove viable, then it seems possible that all cyclic NP-movement rules can be eliminated, and traces could be base-generated in any NP position, but would be subject to the conditions that they must be interpretable as coreferential with a full NP. Recently, in "On Traces and Conditions on Rules" Lightfoot (1977) argued for such a view of grammar. This approach would reduce the role of the transformational component and likewise the content of the autonomy thesis.

It is important to note that certain NPs must be base-generated under TOPIC anyway. In colloquial Russian, for example, so-called "hanging topics" in the nominative do not observe case agreement, as shown in (2.25).

\[(2.25) \{s', ANNA_j(s', \text{COMP} \text{kto}_i) (s \notin \text{tebja}_j \text{obidel})\}\]

'ANNA, who offended you?'

There is no case agreement through copying between the hanging topic ANNA (Nom) and the pronoun TEBJA (Acc), but there is identity of reference. This suggests that hanging topics exhibit a specific type of binding condition.

In summarizing, the point to be emphasized is: because movement into TOPIC violates Strict Cyclicity, the Wh-Island Constraint, and the Superior NP Condition, the constituents under TOPIC should be base-generated in Russian.
2.4.8. Position of Time Adverbs

As thematic information, time adverbs occur at the end of S in the question and at the beginning of S in the response (Krylova and Khavronina, 1976: 109). Compare structures (2.26a) and (2.26b).

(2.26) a.

```
S'
  │
  COMP
    │
    S
       │
       AdvP
          │
          NP
             │
             VP
                │
                AdvP
                   │
                   N
                      │
                      V''
                         │
                         V'
                            │
                            AdvP
                               │
                               KUDA_i   ty   poedeš'   e_i   letom
                                 2       1

'WHERE (are) you going in the summer?'
```

(2.26) b.

```
S
  │
  AdvP
    │
    NP
       │
       VP
          │
          AdvP
             │
             N
                │
                V''
                   │
                   PP
                      │
                      AdvP
                         │
                         Letom_j   ja   poedu   e_i   e_j   V    KRIM_i
                           2       3       1

'In the summer I'm going TO THE CRIMEA'
```
Assuming that KUDA in (2.26a) moves under COMP, then the corresponding KRIM in (2.26b) moves to the focal position in S'. Furthermore, notice the similar type of adverb fronting in the complex sentence (2.27).

(2.27)

'Since COMP is filled in (2.27), LETOM must be attached to the bare S. As the single topic-constituent, LETOM can be under left-S', while the right-S conveys new information:

(2.28) \((S, \text{ Letom}_i \rightarrow (S \text{ my poedim v KRIM AdvP}_i))\)

'In the summer, we're going to the CRIMEA'

There also appears to be a mirror-image correspondence between a KOGDA-phrase under COMP in the question of (2.29) and its antecedent AdvP in the response of (2.30).
WHEN (are) you going to the Crimea?

'I'm going to the Crimea IN THE SUMMER'

The movement of LETOM to the focal S' position in (2.30) is in accordance with the principle that KOGDA in (2.29) occurs in the COMP position of S'.
2.5.0. Focus Movement into S' Position

In this section I attempt to account for certain postverbal constituents in focus in terms of a rule called Focus Movement. Focus Movement can be defined as a syntactic movement that moves, copies, or inserts a node C into the rightmost position in which C is immediately dominated by a S' node in derived structure.\textsuperscript{15}

2.5.1. Subject NP Focus

The Wh-movement rule which predicts the word order in the interrogative sentence (2.31) and the NP Focus Movement rule which predicts the word order in the declarative sentence (2.32) are mirror-image operations which move constituents in opposite directions outside of S under S'.

\begin{equation}
(2.31)
\end{equation}

\[ S' \]

\[ \text{COMP} \]

\[ S \]

\[ \text{NP} \]

\[ \text{NP} \]

\[ \text{VP} \]

\[ V' \]

\[ V'' \]

\[ \text{NP} \]

\[ V' \]

\[ V \]

\[ N \]

\[ \text{KTO}_1 \]

\[ e_i \]

\[ \text{podderľal Vanju?} \]

\[ 'WHO supported Vanya?' \]
Supported Vanya ONLY HIS COMRADES = ONLY HIS COMRADES supported Vanya'

If in (2.31) the moved Wh-subject is the leftmost node, then in (2.32) the corresponding antecedent subject is the rightmost constituent outside of S; the Pivot Accent 3 on VANJU in (2.32) clearly indicates that the topic-S is segmented from the focus-NP.

It is important to note that sentences with focused subjects do not paraphrase with those exhibiting Subject-Verb Inversion. In the interrogative structure (2.33), the subject NP and the predicate VP are inverted within the topic-S.
In (2.33), Wh-movement moved POČEMU into COMP, while Subject-Verb Inversion inverted the order of the subject NP and the VP within S. The role of inversion in (2.33) is to focus the speaker's attention on the subject NP. In other cases, if the focus of attention is the main verb, inversion does not apply, as in (2.34).

(2.34) \( (S', (\text{COMP } \text{POČEMU}_i) (S \text{ oni ne podderžali Vanju } e_i)) \).

WHY (did) they not support Vanya?

In a topicless sentence, however, the role of Subject-Verb Inversion is to place the most novel information at the end of the sentence where focal stress is assigned:

(2.35) \( (S, (S \text{ Id}e\text{VP DOŽD'}_{NP})) \) 'It's RAINING'
NP Focus Movement differs from Right Dislocation of NP, which moves a constituent into S'' as shown in:

(2.36)

In this structure PODDERŽALI expresses a confirmation; EGO TOVARIŠČI, however, conveys repeated information with the boundary # denoting the terminal point of the main assertion.16

What is most significant about the constructions involving focused subjects is that Focus Movement does not induce a major intonation break such as a pause where it is possible to insert a boundary # between the lefthand topic-S and the righthand focus-NP. This confirms the claim that Focus Movement is restricted to the domain of S'.
2.5.1. Evidence for Focus Movement

The most convincing evidence for a Focus Movement analysis involves a variety of displaced constituents such as a QP, AP, Object NP, and PP, which fill the end position of the S' node. Focus Movement creates the ideal surface bracketing for the assignment of Pivot stress to the left-hand topic-S and Focal stress to the righthand phrase which has been moved in order to be associated with the focus.

First, let us examine a case involving Focus Movement of a degree adverb, illustrated by structure (2.37).

(2.37)

In (2.37), right movement of Deg' into focus-S' position does not induce a pause break between the topic-S and the focus-Deg' indicating that movement is within the domain
of the S' category (that is, within root S').

Second, Focus Movement can move the category AP rightward into S'-focus position to derive the structure:

\[ (2.38) \]

\[ S' \]

\[ S \]

\[ NP \]

\[ VP \]

\[ V' \]

\[ V'' \]

\[ A' \]

\[ A' \]

\[ NP \]

Djadja byl tetej (NE DOVOLEN)_{i}

'Uncle was with aunty NOT PLEASED' =

Uncle WASN'T pleased with aunty'

The role of Focus Movement in (2.38) is to single out the category A' containing NE DOVOLEN as the new information.

The third bit of evidence supporting a Focus Movement analysis involves the movement of the object NP to the rightmost position of S' in order to be assigned focus.
'Uncle wasn't pleased ONLY WITH AUNTY.'

In (2.39), the object NP is moved outside of AP into S'-focus position; the particle TOL'KO attracts focal stress on ТЕТЕЈ.

In addition, a PP-node can be focused in S'-position:

(2.40)
In (2.40), Focus Movement segmented the topic-S from the focus-PP attached to S'. This sentence relates to the underlying question (2.41) in which the Q-adverb occurs under COMP.

\[(2.41) (S, (COMP 'KUDA_i) (S djadja polete\tilde{e}_i))\]

'WHERE (did) uncle fly to?'

2.6.0. Summary

The present analysis assumed that under TOPIC there can be a base-generated constituent, as in (2.42).

Following this analysis, the TOPIC node would be for the rhetorical topic marked for Pivot Accent; this property of TOPIC provides the main reason to suppose that there is no independent rule of Left Dislocation which would create a rhetorical topic by movement into TOPIC.
In contrast, unmarked topics can derive by Object Topicalization into COMP and take Pitch Accent 2:

(2.43) 

\[
\begin{array}{c}
S'' \\
| \_ \\
| S'
\end{array}
\]

\[
\begin{array}{c}
NP \\
| \_ \\
N \\
| \_ \\
\end{array}
\]

\[
\begin{array}{c}
S \\
| \_ \\
NP \\
| \_ \\
N \\
| \_ \\
\end{array}
\]

\[
\begin{array}{c}
VP \\
| \_ \\
\end{array}
\]

\[
\begin{array}{c}
VANE_2 \\
| \_ \\
VAVA \\
| \_ \\
\end{array}
\]

\[
\begin{array}{c}
ona \\
| \_ \\
\end{array}
\]

\[
\begin{array}{c}
PONRAVILAS' \ e_i \\
| \_ \\
\end{array}
\]

'To Vanya she was LIKED = Vanya LIKED her'

Krylova and Khavronina (1976: 88-90) noted that the object with the subject can make up a complex theme (topic), and the predicate the rheme (focus). Whenever the object precedes the subject within the theme, the speaker's attention is centered exclusively on the object.

A direct consequence of this analysis is that Topicalization under S' will not leave behind a pronominal trace, only the identity element e. This difference in behavior supports the two-source analysis which base-generates rhetorical topics with pronominal traces, and derives the unmarked topics without pronom copies by the rule of Topicalization.
Assuming that Focus Movement is to right-S', the output structure will be of the form (2.44).

(2.44)

This output structure is in accordance with the Trace Theory: \( C_i \) is the moved category, \((C_i^e)\) is the removal site and identity frame of \( C_i \), and \( B_F \) is the lexical item bearing focal stress 1. Within the topic-S, 2 denotes the initial rising pitch, while 3 marks the Pivot Accent which segments the topic-S from the focus-\( C_i \). The Pivot Accent provides the crucial evidence for attaching focal constituents outside of topic-S and under right-S'.

The assumption that the derived S' position (that is COMP) of the Q-phrase in a question and the derived S' position of the antecedent in a response are mirror-image positions in Russian is compelling; the question-response constructions have the relevant properties of mirror-image movements, as has been observed by Krylova and Khavronina (1976, Chapter 5), and confirmed in the present analysis.
The basic discourse properties of topicless sentences involve the process of Subject-Verb Inversion. Inversion satisfies a discourse requirement which specifies that the subject NP is the most important new information in the sentence. In particular, the explanation for the differences in communicative functions conveyed by the subject NPs in (2.45a) and (2.45b) does not involve a syntactic condition, but a pragmatic condition.

(2.45) a. \( (S, (S \text{ Do}\ddot{d}' \text{NP}\text{ IDET}_{VP})) \)

\[ \begin{array}{c|c} 2 & 1 \\ \hline \end{array} \]

'Rain COMES = It IS raining'

b. \( (S, (S \text{ Id}\ddot{d}t_{VP} \text{ DO}\ddot{d}' \text{NP})) \)

\[ \begin{array}{c|c} 2 & 1 \\ \hline \end{array} \]

'Comes RAIN = It is RAINING'

Sentence (2.45a) expresses a confirmation of the verbal action, while sentence (2.45b) conveys descriptive information. If (2.45a) is taken as the basic pattern, then (2.45b) will be derived by Subject-Verb Inversion. Thus analogous to (2.45b) is S-V Inversion in questions:

(2.46) \( (S, (\text{COMP GDE}_{i}) \text{ (S id}\ddot{d}t \text{ e}_{i} \text{ do}\ddot{d}')) \)

\[ \begin{array}{c|c} 2 & 1 \\ \hline \end{array} \]

'WHERE is (it) raining?'

The linear order of (2.46) can be predicted by the operations of Q-movement and S-V Inversion; however, the explanation for the movement is a pragmatic condition.
The rule of Wh-movement (alternatively, Q-movement) can be stated in terms of the semantic marker +Q:

(2.1) Q-movement: C \ldots X \ldots

\[ +Q \]

\[ 0 \quad 1 \quad 2 \quad 3 \Rightarrow 2 \quad 1 \quad \emptyset \quad 3 \]

The marker +Q represents the claim that all Q-words share some common property to which the Q-movement transformation makes reference to. On the other hand, the marker C denotes the COMP position into which the Q-word is moved. This marker is required in order to prevent fronting under S or under TOPIC. This rule predicts the correct surface position of the Q-word in the following structure:

(2.2)

\[
\begin{array}{c}
\text{TOM, WHERE are you going in the summer?}
\end{array}
\]

The term "bridge" is used in discussing the Strict Cyclicity Condition (Chomsky 1977). Assuming that a Wh-phrase moves into COMP, further movement may only take place into another COMP node. Thus Wh-movement uses COMP as a bridge, but not NP Movement.

The Subjacency Condition accounts for the grammaticality of Wh-movement from the NPe position into COMP-2, since COMP-2 and NPe are subjacent nodes; also, movement from COMP-2 into COMP-1 is possible because COMP-2 and COMP-1 are subjacent nodes. Two nodes are said to be subjacent if no more than one bounding node (NP or S) separate them (Bresnan and Grimshaw (1978: 378), "The Syntax of Free Relatives in English," Linguistic Inquiry 9:3, 331-391).

Ross (1967) replaced the A-over-A principle introduced by Chomsky (1962) by his Island Constraint. An "island" is a syntactic unit such as a complex NP with a lexical head (Complex NP Constraint), a coordinate node (Coordinate Structure Constraint), and NP on the left branch of a larger NP (Left Branching Constraint), or a sentence in subject position (Sentential Subject Constraint). Transformations are not permitted to extract lexical material from Island NPs.

Ross' constraint states that no transformation may extract a constituent from a complex NP. The term Complex NP denotes NPs that contain a relative clause (ČELOVEK KOTORYJ), a THAT-clause (TOT FAKT ČTO), and other types of head clauses.
The Topicalization rule could move constituents from root S to the right of TOPIC; this type of movement differs from Wh-movement (or, Q-movement) which moves Q-words into COMP. A third type of left movement would be Fronting which moves constituents to the leftmost position of root S. These three operations are illustrated below:

(2.3) a. Topicalization into S'

\[ S' \]
\[ \text{TOPIC} \]
\[ S' \]
\[ \text{NP} \]
\[ \text{NP} \]
\[ S \]
\[ \text{N} \]
\[ \text{N} \]
\[ \text{KOFI} \]
\[ \text{emu} \]
\[ \text{eto} \]
\[ \text{ne} \]
\[ \text{NADO} \]
\[ 3 \]
\[ 2 \]
\[ 1 \]

'COFFEE, he don't NEED it'

b. Wh-movement into COMP

\[ S' \]
\[ \text{COMP} \]
\[ S \]
\[ \text{NP} \]
\[ \text{NP} \]
\[ S \]
\[ \text{N} \]
\[ \text{KOMU} \]
\[ \text{stalo ploxo} \]
\[ ? \]
\[ 2 \]
\[ 1 \]

'WHO is feeling bad?'
(2.3) c. NP Fronting

\[
\begin{array}{c}
S' \\
S \\
NP \quad VP \quad AdvP \\
N \\
Emui \quad stalo \ ploxo \quad e_i \quad e_j (TOL'KO \ SEGODNJA) \\
2 \quad 3 \quad 1 \\
\end{array}
\]

'He started feeling bad ONLY TO-DAY'

The bounding nodes are hypothesized to be NP and S (Chomsky 1977). Topicalization movement directly from NP into TOPIC across two S nodes would be an unbounded movement:

(2.4)

\[
\begin{array}{c}
S'' \\
TOPIC \\
NP \\
NP \quad VP \\
N \quad V' \\
\quad V \\
\quad S' \\
\end{array}
\]

\[
\begin{array}{c}
MASHU_i \\
3 \\
ty \ s\vita\v\v_\i \\
2 \\
\end{array}
\]

\[
\begin{array}{c}
\vto \ Vanja \ LJUBIT \ e_i \\
1 \\
\end{array}
\]
In the article "Conditions on Transformations," Chomsky (1973) proposed the Superior NP Condition to block:

(2.5) *I remember what who saw,

while permitting:

(2.6) I remember who saw what.

Since the subject NP is closer to the root of the sentence, it is selected as the superior term, according to Chomsky.

The term "vocative NP" denotes the person or persons to whom a sentence is addressed. A vocative NP is not restricted to the initial position and may occur in medial or even final position. It is assumed that in S initial position the vocative NP is inserted under TOPIC. In topic position, the vocative NP is assigned the rising Pitch Accent 3, which sets it off from the main sentence. Notably, the vocative NPs exhibit the same rising pitch contour as do the other rhetorical phrases under TOPIC.

Another construction similar to the tag is the echo declarative which occurs under TOPIC, as in (2.7).

(2.7)

\[
\begin{align*}
\text{TOPIC} & \quad \text{S''} \\
\text{S'} & \quad \text{S'} \\
\text{NP} : \quad \text{VP} \\
\text{(Vy PRIDÊTE)}_i & \quad \text{ètoj} \quad \text{ZAMEČATEL'NO} \\
2 & \quad 2 & \quad 1 \\
\end{align*}
\]

'You'll COME, that's GREAT!'
12 The term "left dislocation" is used in Ross (1967) who proposed that a dislocated NP is derived from a corresponding non-dislocated structure. Thus (2.8a) derives from (2.8b).

(2.8) a. This room, it really depresses me.

b. This room really depresses me.

More precisely, Left Dislocation can be defined as a syntactic movement that moves, copies, or inserts a node C into the TOPIC position in derived structure. This rule can be formalized as:

(2.9) Left Dislocation: T ... X ...

\[ 1 \ 2 \ 3 \ 4 \Rightarrow \]

3 2 +PRO 4

In rule (2.9), T is the TOPIC node, the notation (...) denotes a variable, X is the constituent left dislocated, and +PRO the pronominal trace of the original constituent.

On the other hand, Right Dislocation can be defined as a syntactic movement that moves, copies, or inserts a node C into the rightmost position S'' in derived structure:

(2.10) Right Dislocation: ... X ... \# S''

\[ 1 \ 2 \ 3 \ 4 \ 5 \Rightarrow \]

1 +PRO 3 4 2

In rule (2.10), the X-constituent right dislocated moves across a sentence boundary \# which denotes the terminal point of the new information; this proves that movement is outside the domain of root S'. Both Left and Right Dislocation operate within S'' structures, and permit insertion of anaphoric pronouns after dislocation.

It is important to note that within the present analysis left and right dislocated structures are base-generated; likewise, anaphoric traces are base-generated and properly bound to antecedents.
Consider the following example of Left Dislocation involving an Infinitive Phrase (IP); this example is cited in Kručinina, 1974: 245).

(2.11)

This operation involves moving a subject IP from an embedded ČTO-complement and attaching it to TOPIC. After left dislocation the empty subject position can be optionally filled by NP ĖTO. This fact provides some syntactic evidence for treating subject infinitives as underlying NPs.
Now consider the following surface bracketing produced by left dislocating an Adverb Phrase (AdvP) from an embedded ČTO-complement into TOPIC.

(2.12)

\[
\begin{tikzpicture}[scale=0.8]
  \node (TOPIC) at (0,0) {TOPIC}
  \node (S) at (1,0) {S}
  \node (AdvP) at (0,-1) {AdvP}
  \node (NP) at (0,-2) {NP}
  \node (VP) at (1,-2) {VP}
  \node (N) at (0,-3) {N}
  \node (V) at (0,-4) {V}
  \node (COMP) at (1,-4) {COMP}
  \node (AdvP) at (1,-5) {AdvP}
  \node (S) at (1,-6) {S}
  \draw (TOPIC) -- (S)
  \draw (AdvP) -- (S)
  \draw (NP) -- (VP)
  \draw (N) -- (V)
  \draw (V) -- (COMP)
  \draw (COMP) -- (AdvP)
  \draw (AdvP) -- (S)
\end{tikzpicture}
\]

The bracketing shows \textit{VCERA} under TOPIC; the anaphoric trace is filled by the pronoun TOGDA which is fronted to the right of COMP. This example indicates that S' can be doubly filled; by COMP and by a topicalized pronoun. The position of TOGDA in (2.12) is similar to TOGDA in (2.13).

(2.13) \((S, \text{Togda}_i (S \text{ on Ždal menja OBEDAT'} e_i))\)

\[
\begin{tikzpicture}[scale=0.8]
  \node (TOPIC) at (0,0) {TOPIC}
  \node (S) at (1,0) {S}
  \node (AdvP) at (0,-1) {AdvP}
  \node (NP) at (0,-2) {NP}
  \node (VP) at (1,-2) {VP}
  \node (N) at (0,-3) {N}
  \node (V) at (0,-4) {V}
  \node (COMP) at (1,-4) {COMP}
  \node (AdvP) at (1,-5) {AdvP}
  \node (S) at (1,-6) {S}
  \draw (TOPIC) -- (S)
  \draw (AdvP) -- (S)
  \draw (NP) -- (VP)
  \draw (N) -- (V)
  \draw (V) -- (COMP)
  \draw (COMP) -- (AdvP)
  \draw (AdvP) -- (S)
\end{tikzpicture}
\]

'YESTERDAY, I know that then he waited for me for \underline{DINNER}'

'At that time, he waited for me for \underline{DINNER}.'
In TOPIC position, an AdvP such as LETOM is assigned the Pivot Accent 3, marking the topicalized phrase:

\[(2.14)\]

![Diagram of syntactic structure]

'AND IN THE SUMMER, WHERE are you going then?'

In (2.14), the AdvP A LETOM contains the emphatic particle A which renders prominence to LETOM; this explains why LETOM reflects the Pivot Accent 3, instead of the unmarked Topic Accent 2. Notice also that the TOGDA-trace in the matrix S functions as a redundant topic-marker. TOGDA is optional and bears the lowest Accent 0. In this position TOGDA is normally denoted by the identity element e.

The rule of Focus Movement can be formalized as:

\[(2.15)\] Focus Movement: \(((S \ldots X \ldots ) S, Y)\)

\[\begin{array}{cccc}
1 & 2 & 3 & 4 \\
1 & e & 3 & 2
\end{array}\]

In (2.15), (...) denotes a variable, X is the moved node, e is the removal site, and Y is the S' position of focus.
If cleft sentences are derived from underlying pseudo-cleft sentences (as proposed by Akmajian 1970a), the domain of the rule that extraposes NP-S complements would be S''', as illustrated by the structure (2.16).

(2.16)

\[
\begin{array}{c}
S'' \\
S' \\
S \\
NP \\
V \\
N \\
\hline
NP \\
VP \\
N' \\
S' \\
\hline
N' \\
\hline
\end{array}
\]

'That's SONYA, the one who phoned'

NP-S Movement into S''' parallels S Dislocation into S''':

(2.17)

\[
\begin{array}{c}
S'' \\
S' \\
S \\
\hline
Ja \\
ZNAJU \\
NPe_i \\
\hline
(čto zvonila Sonja)_i \\
\hline
\end{array}
\]
3.0.0. Introduction

This Chapter focuses on several problems connected with a possible transformational account of ĖTO-subject complementation in Russian. It will be shown that such rules as ĖTO-deletion, ĖTO-replacement and Extrapolation of S, which are the main transformations of a possible Extrapolation Analysis for Russian lead to incorrect descriptions.

To solve several of the anomalies of Rosenbaum's Extrapolation Analysis and Emonds' Intraposition Analysis of subject complementation, two separate analyses are proposed: the ĖTO-Trace Analysis and the TO-Trace Analysis.

In addition the positional analysis of subject is critically examined. It will be shown that in Russian the subject relation is not strictly positional and may be regarded as positional only in those cases where either the pronominal trace ĖTO, or TO of the subject relation is left behind in S-initial position after subject clause movement.

In particular, the positional analysis of subject is not valid for the formal account of so-called headless subject complements. These can be analyzed as object complements, since they must occur in postverbal position as the focal constituent and must be traceless.
3.1.0. Traditional Analysis

In traditional Russian grammar the term "subject complement" is known as "predatočnye podležašcie", which translates into English as "subordinate subjects". Thus in the Academy Russian Grammar Belošapkova (1970) defines the subject complement on both syntactic and semantic grounds. First, in S-initial position the anaphoric ĖTO (in the nominative) can substitute for the dislocated subject conveying repeated information:

(3.1) Êto ne bylo VERN0_F, ěto on Ø_Y, nedovolen

'That wasn't TRUE, that he's not pleased'

(Capitalization and the marker FOCUS (F) denote the item bearing nuclear stress)

Second, the anaphoric head NP TO (nominative) can function as a focus-marker indicating that the subject complement in dislocation conveys new information:

(3.2) Ne bylo verno TO_p, ěto on Ø_Y, NEDOVOLEN_F

'Was not true this: that he's not PLEASED ==

What wasn't true was that he's not PLEASED'

(Capitalization and the marker PIVOT (P) denote the rising Pivot Accent which marks the boundary between the topic and focus constituents)

Third, the head NP TO (nominative) dominating the subject complement in S-initial position can function as the topic-marker:
Finally, the subject complement serves a predicative function postverbally in topicless sentences:

(3.4) \( \emptyset_V \), VOZMO\(\text{\v{N}}\)NO, \( \emptyset_V \), NEDOVOLEN\(\text{\v{N}}\)

'(It's) possible that he's not PLEASED'

Here the subject complement is the main assertion, while VOZMO\(\text{\v{N}}\)NO qualifies its semantic content.

As the examples (3.1) to (3.4) show, the traditional account of subject complementation in Russian relies on both syntactic and semantic criteria to define the notion of subject. On the syntactic level, subject ĖTO (which substitutes for its antecedent clause), or subject TO (which functions as a topic-marker or focus-signal) are syntactically marked as in the nominative case. On the semantic level, on the other hand, the subject relation corresponds to some underlying pronoun ĖTO 'what' which is the logical subject. Take (3.4) as an example, the clause is the logical subject but an object complement on the syntactic level of analysis.
3.2.0. Transformational Analyses

Within the transformational-generative framework, three major theoretical views have been proposed on subject complementation. The first is the Positional Analysis which claims that subject complements originate as the grammatical relation NP of S in deep structure. The second is the Semantic Analysis which claims that the relation of subject is not important at the underlying level and that the surface subject is derived by rules which operate on the basis of some hierarchical principle ranking NP arguments. The third is Relational Grammar which treats grammatical relations as undefined primitives of grammar.

3.2.1. The Positional Analysis

In Aspects, Chomsky (1965: 71) defines the subject as the first NP of S, where S exhaustively dominates NP. It was assumed that grammatical relations contributed to semantic interpretation and this necessitated characterizing them in underlying semantic representation (Katz and Postal, 1964). Besides the semantic significance of the relation subject-of, this relation was also involved in several conditions on transformations, such as Perlmutter's Like Subject Constraint (1971) and Chomsky's Specified Subject Constraint (1970).
It was generally assumed that no transformation referred to the grammatical relations in the mapping of phrase-markers into phrase-markers. In "Deep Structure, Surface Structure, and Semantic Interpretation," Chomsky (1970a) was emphatic in stating that the grammatical relations are irrelevant to the formulation of grammatical rules. More recently, however, Chomsky (1975) has modified his position regarding grammatical relations and rules of grammar.

3.2.2. Comrie's Analysis

The first transformational account of aspects of sentential complementation in Russian was Comrie's thesis: Aspects of sentence complementation in Russian (1971). Essentially, Comrie adopts for Russian Rosenbaum's distinction between NP and VP complements proposed in: The grammar of English predicate complement constructions (1967).

Assuming after Rosenbaum that verb final subject complements are derived structures, Comrie proposes two separate rules: one rule to extrapose a headless S complement, the other to move the entire NP+S construction. For example, the rule Extraposition of S derives sentence (3.6) from (3.5).

(3.5) Čto Volodja ne ljubit viski, stranno

'That Volodya doesn't like whisky is strange'
(3.6) Stranno, čto Volodja ne ljubit viski

'(It's) strange that Volodya doesn't like whisky'

On the other hand, the rule of Extraposition of NP+S derives (3.7) from the base sentence (3.5).

(3.7) Stranno to, čto Volodja ne ljubit viski

'What's strange is that Volodya doesn't like whisky'

To derive (3.7), Comrie has a TO-insertion rule which optionally fills the postverbal empty head NP with the pivot pronoun TO. No explanation is given as to why TO gets inserted.

Unfortunately, Comrie does not show the relationship between the anaphoric ĖTO which fills the S-initial position as a topic-marker after Extraposition of S, and the anaphoric TO which serves as a focus-signal indicating that the antecedent subject clause conveys new information.

In other words, Comrie does not show the inter-relationship between the position of the nuclear stress and the surface position of the subject complement. Thus his proposed grammar cannot predict what factors motivate the insertion of either pronouns ĖTO or TO.

3.2.3. Chvany's Analysis

In On the syntax of BE-Sentences in Russian, Chvany (1975) adopts a modified version of the Positional Analysis of subject with the provision that an initial subject NP node may be empty in deep structure.
Of particular interest are the assumptions on Subject Raising (Chvany 1975, Chapter II), in connection with the behavior of copular complements of KAZAT'SJA 'seems' and SCITAT'SJA 'considered' in the derivation of the following sentences.

(3.8) a. Ivan ščitaj/skižetsja durakom
   'Ivan is considered/seems to be a fool'

b. ščitaj/skižetsja, čto Ivan durak
   '(It) is considered/seems that Ivan is a fool'

Under the empty Subject Analysis, a rule called Direct Object Preposing derives surface subject complements by filling the empty subject node.

(3.9)

After Direct Object Preposing moves the subject complement to subject position, a rule called SJA Copy inserts a copy of Object NP in the original position. Under this analysis,
Object Preposing would have to apply obligatorily, since SJA Copy applies only to moved Object NPs.

From subject position an entire subject clause can be moved back to verb-final position to derive:

(3.10) Считается/кажется, что Иван дурак

'(It's) considered/seems that Ivan is a fool'

If the complement is a headless S, the rule of Object Preposing may apply cyclically to finally derive the surface subject. These cyclic stages are illustrated by the arrows in the tree structure of (3.11).

(3.11)

In (3.11), Cycle 2 places NP Ivan in subject position to derive sentence (3.12).
(3.12) Ivan scitaetsja/kažetsja durakom
'Ivan is considered/seems to be a fool'

One apparent difficulty with the Empty Subject Analysis is that SJA must be predicted on the basis of a preposing movement rule; but Russian has certain impersonal SJA-verbs without object NPs that could be copied:

(3.13) a. Na dvore temnitsja
'(It's) getting dark outside'

b. Na dvore budet dožžat'sja (= budet dožd')
'(It's) going to rain outside'

It is quite likely that SJA is a lexical property of certain types of verbs and is not contingent on a movement rule. If this is true then no constraint need be imposed directly on a preposing rule in order to predict SJA.

3.3.1. The Semantic Analyses

3.3.1. Case Grammar

In Case Grammar, the grammatical subject is derived by relational rules (ordering rules) from a verb initial semantic base: V ... K+NP ..., where K is some well-defined semantic case relation and NP is a semantic argument.

For example, NP+S complements can be subcategorized by a verb such as ZELAT' 'to wish', a predicate adjective ZELATEL'NO 'desirable', and a head noun ZELANIE 'a wish',
as shown in the configurations of (3.14).

(3.14) a. 

![Diagram a]

\[ V'' (= S) \]
\[ \text{'wishes he that there be less discussion'} \]

b. 

![Diagram b]

\[ V'' (= S) \]
\[ \text{'is desirable that there be less discussion'} \]

c. 

![Diagram c]

\[ N'' (= NP) \]
\[ \text{'his wish that there be less discussion'} \]

(V'' corresponds to the notion "proposition" in formal logic, N'' = "head NP", K = "a given case relation")
On the basis of the deep structures in (3.14a.b), the sentences (3.15a.b) are derived by relational rules which express some grammatical relation embodied in the case marker K assigned to NPs.

(3.15) a. On želaet, čtoby bylo men'še razgovorov
   'He wishes that there be less discussion'
b. Š želatel'no, čtoby bylo men'še razgovorov
   '(It's) desirable that there be less discussion'

On the other hand, the underlying configuration (3.14c) would represent the subject NP EGO ŽELANIE of (3.16).

(3.16) Ego želanie, čtoby bylo men'še razgovorov, ne bylo odobreno
   'His wish that there be less discussion was not supported'

The Semantic Analysis of complementation expresses the generalization that the grammatical relation of the ČTOBY-complement in the three types of underlying structures of (3.15a.b) and (3.16) is the same kind of relation which holds between a head phrase and its complement. 8

3.3.2. Relational Grammar

Proponents of Relational Grammar assume that all grammatical relations are linguistic primitives or basic terms of universal grammar (Johnson 1977a, Perlmutter and Postal 1977).
The subject, within relational grammar, is a term neither defined nor directly connected to observable linguistic data. As a theoretical construct, subject is an abstraction indirectly derivable from language by means of empirically testable predictions associated with this term (Johnson 1977b: 690).

Closely related to relational grammar is Keenan's theory of grammatical relations (Keenan, 1976). According to Keenan's defining criteria, the concept "subjecthood" is associated with a particular cluster of designated properties and does not represent a single dimension of linguistic reality.

What is not clear about Keenan's definition of subject is whether the "multifactor properties" defining subjecthood are all basic notions of universal grammar or whether some are basic while others are language specific. It appears that only some of the defining criteria are universally applicable to diverse languages. The problem remains to isolate these universal properties.

In evaluating Keenan's universal definition of subject, Johnson (1977b) makes the valid point that a universal definition is not possible on purely empirical grounds; since "subjecthood" is associated with multifactor properties the subject relation could be as diverse as the language topology.
3.4.0. The Subject Relation

One of the assumptions of the X'-theory is that the verbal category V defines a set of grammatical relations such as subject NP. But while it is a lexical property of individual predicate verbs that some take human subjects, as in (3.17a), while others inanimate subjects, as in (3.17b), it is a property of discourse that subjects can be the single constituent conveying the new information in the S' position of focus.

(3.17) a.

'Igor is known by EVERYONE'

(The numeral 2 designates the unmarked topic, pitch 3 marks the boundary between the topic and focus constituents; pitch 1 identifies the focal constituent; the identity element e represents the base position of NPs)
These parallel surface structures indicate that the topicalized object NPs and the predicate VPs jointly represent the topic-constituent, while the focused subject NP placed outside of the topic-S conveys the new information. We can justify NP Focus Movement to right-S' position by the presence of the Pivot Accent 3 between the two discourse units. 12

Clearly, this explanation of NP Focus Movement applies to other structures in which the subject NP occurs in the right-S' position of focus, as shown by (3.18).
In (3.18), Pivot Accent 3 on IZVESTEN segmented the topic-S from the focused NP under right-S'. Since practically any constituent may appear in S' position of focus, we can reserve this position for those constituents moved from within the domain of the topic-S.

The fact that a subject NP can be displaced outside of topic-S indicates that the subject relation is not strictly position in Russian. Despite this fact, however, it appears most natural to generate such subjects in initial position, since the leftmost position of S also serves as
the unmarked topic position. Thus, it can be shown that there are sentences in which it is implausible to generate a subject NP is the right-S' position of focus:

(3.19) *(S, (S Vsem bylo izvestno) NP ŢETO))

'Everyone knew THAT'

Subject NP ŢETO cannot be focus (in non-contrastive environments), since ŢETO's primary role is to function as the anaphoric topic-marker:

(3.20) (S, (S Ţeto bylo izvestno) NP VSEM))

'That was known to EVERYONE'

One may argue that Russian has two basic word order patterns which can be generated by two types of base rules:

(3.21) a. S \rightarrow NP - VP

b. S \rightarrow VP - NP

One strong argument against having rule (3.21b) involves infinitive constructions; subject-deletion under identity applies to initial subjects, not to S-final subjects:

(3.22) a. Vanja₁ xočet (S, (S PRO₁ otdoxnut'))

'Vanya wants to rest'

b. *Vanja₁ xočet (S, (S otdoxnut' PRO₁))

Another argument against rule (3.21b) involves subject-raising, which operates on S-initial subjects:
(3.23)  a. Vanja с"итаet Manju (s, (s PRO i øV, duroчкоj))
   'Vanya considers Manya to be stupid'

   b. Vanja с"итаet Manju (s, (s øV, duroчкоj PRO_i))

Moreover, reflexivization can only operate under identity with an S-initial subject PRO:

(3.24)  Vanja Sobiraetsja (s, (s PRO_i pobryt' sebjai))
   'Vanya is preparing to shave himself'

Since rule (3.21b) which generates postverbal subjects leads to certain undesirable empirical consequences, it appears most natural to generate subjects in underlying subject position and to derive postverbal subjects by such transformations as Subject-Verb Inversion and NP Focus Movement.

As indicated earlier, the subject relation is not strictly positional in Russian, since relatively free movement is possible contingent upon certain discourse requirements. Because of the ability of subjects to move, we can equally well define the relation "subject of S" on purely syntactic grounds: the subject NP is in the nominative and is related to the main V by agreement, or, as withETO, by unmarked neuter agreement.

The relation "subject complement" is likewise not a positional relation, but a relation that can be identified in terms of the case system; the subject complement is grammatically the head NP TO, TOT FAKT, etc., in the
nominative case, or a headless phrase NP △ +S' unmarked for case.

On the other hand, the discourse relation "subject complement topic" can be defined as the linear position NP-S', where S dominates the NP-S' complement to the left of S, as in the structure (3.25).

(3.25)

\[ \begin{array}{c}
S' \\
| \\
S \\
| \\
NP \\
| \\
N'' \\
| \\
N' \\
| \\
N \\
| \\
To_i (\text{cato Igor}' \emptyset_V, \text{russkij})_i \\
| \\
2 \\
\end{array} \]

That (= the fact) that Igor is Russian is TRUE'

By comparison, the discourse relation "rhetorical complement" can be defined as the linear position TOPIC, S'' where S'' dominates the node TOPIC containing a base-generated sentential complement, as illustrated in (3.26).
'That Igor is Russian, that's TRUE'

'In (3.26), the S' complement under TOPIC can only be interpreted as conveying repeated information; this is confirmed by the presence of ETO as the topic-marker.

Summarizing, the phrase structure rules in Russian develop grammatical order, that is, the constituent structure order of phrasal categories, but not the discourse order (topic-focus order) of the labelled bracketing.

The topic-focus order can be determined by a system of rules that assign linear precedence relations on the basis of certain discourse principles. In particular, the surface position of ČTO-subjects in Russian depend on such semantic factors as: (1) Compatible Anaphoric Relations between ETO-topic and its antecedent subject clause, (2) Focus Placement, (3) Semantic Binding Relations, and
Contextual Binding. In Chapter Four such notions as "semantic binding" and "contextual binding" will be explicated in some detail.

3.5.0. Phrase Structure Rules

The syntactic categories TOPIC, sentence (S’, S), complementizer (COMP), predicate phrase (VP), and noun phrase (NP) are elements of phrase structure which describe sentences containing subject complements. For reference, I will state the constituent-structure rules for Russian that generate the main syntactic structures presented up to this point; these rules are stated in (3.27).

(3.27) Base Rules

a. \( S'' \rightarrow (\text{TOPIC}) - S' - (#) - (S') \)

\[
\left\{
\begin{array}{l}
S' \\
\text{IP} \\
\text{NP} \\
\text{PP} \\
\text{AdvP}
\end{array}
\right.
\]

b. \( \text{TOPIC} \rightarrow \{ \text{NP} \} \)

c. \( S^n \rightarrow (\text{COMP}) - S \)

d. \( S \rightarrow \text{NP} - \text{VP} - (\text{AdvP}) \)

e. \( \text{NP} \rightarrow (\text{Det'}) - N'' \)

f. \( N''' \rightarrow (\text{AP}) - N' - (S') \)

g. \( N' \rightarrow (\text{Neg}) - N - (\text{Prt}) \)

h. \( N \rightarrow (\triangle) \)

((#) = "optional S-boundary", (\triangle) = "optional dummy node")
Other PS-rules expanding the internal structure of the major categories VP, IP, AP, AdvP, and PP are stated in Chapter One (see section 1.6. for a summary of the rules).

ČTO-subject complements are expanded from NPs by the rules (3.27e) to (3.27h) given earlier; these rules provide the four basic structures involving subject NPs:

(3.28) a. FAKT ČTO+S

b. PRIKAZ ČTOBY+S
The structure (3.28a) represents a ČTO-clause in NP FAKT, while (3.28b), a ČTOBY-clause in NP PRIKAZ:

(3.29) a. Tot fakt, čto Iza žamužem, IZVESTEN emu
' The fact that Iza is married is KNOWN to him'

b. Tot prikaz, čtoby on ušel, ne PONRAVILSJA emu
' The order so that he leave did not PLEASE him'

Alternatively, the structures in (3.28c.d.) are either a ČTO-clause under NP TO, or, under a headless NP △.

(3.30) a. To, čto Iza žamužem, IZVESTNO emu
' That that Iza is married is KNOWN to him'

b. Čto Iza žamužem, IZVESTNO emu
' That Iza is married is KNOWN to him'

In assuming that a subject clause is dominated by NP, we must demonstrate that it behaves as an NP in relation to certain well-established rules of grammar.

First, NPs FAKT/PRIKAZ are involved in subject-verb
agreement, while head NP TO and the headless NP ∆ take part in unmarked neuter agreement, as shown in (3.31).

(3.31) a. Tot fakt/prikaz (masc, sg) byl (masc, sg) izvesten-(masc, sg)
   b. TO/∆ (neut) bylo (neut) izvestno (neut)

Second, since the Passive transformation can apply to the head NPs with subject complements, this supports the analysis that these complements are underlying NPs. The Passive rule can derive sentence (3.32b) from (3.32a).

(3.32) a. To, čto ona Øv' bogataja, UDIVILO ego 'The fact that she's rich SURPRISED him'
   b. On udivilsja tem, čto ona Øv, BOGATAJA 'He was surprised by the fact that she's RICH'

Also NP Focus Movement which derives sentence (3.33b) from (3.33a) is another transformation which can apply to NPs.

(3.33) a. a. To, čto ona Øv' duročka, NE UDIVITEL'NO 'That she's stupid is NOT SURPRISING'
   b. Ne udivitel'no to, čto ona Øv' Duročka' 'What's not surprising is that she's STUPID'

Q-movement and Subject-Verb Inversion can combine to derive the interrogative sentence (3.34b) from (3.34a).

(3.34) a. Vanja ne ponjal čto?
   'Vanya didn't understand what?'
3.5.1. The COMP Node

One category which remains to be justified is COMP; the question is whether complementizers are major syntactic categories or merely grammatical formatives as, for example, the category Particle.

The notion "complementizer" in generative grammar incorporates both the syntactic conjunctions (ČTO/ČTOBY) which do not move, and semantic conjunctions (KUDA, POČEMU, etc.) which fill the COMP node by Q-movement, as shown by the two structures in (3.35).

Next, two arguments will be given supporting the claim that COMP should be a syntactic node, as proposed by Bresnan (1970). The arguments are applicable to both English and Russian syntax.
The first argument for COMP pertains to the fact that although ČTO/ČTOBY complementizers are semantically empty they introduce S-complements with distinct semantic properties and are not interchangeable in the following sentences:

(3.36) a. Ej xotelos' čtoby/*čto vsë byl PRAVIL'NO
'It was her wish (she wanted) so that everything be (just) RIGHT'

b. Emu izvestno čto/*čtoby ona ljubit PORJADOK
'(It) is known to him (he knows) that/*so that she likes (everything) to be in ORDER'

(The asterisk (*) indicates incorrect usage)

The second argument for COMP involves the syntax of multiple conjunction of S-complements:

(3.37) Pòčemu on uexal, kuda on uexal i kogda on uexal -
vsë ěto menja INTERESUET
'Why he left, where he left and when he left - all this INTERESTS me'

The choice of the complementizers in (3.37) depends on at least four interrelated factors: (1) the semantic properties of the matrix verb, (2) the semantic and syntactic role of the complementizers, (3) the semantic function of the clause introduced by the complementizer, and (4) the structural properties of the head phrase which dominates an embedded clause introduced by a complementizer. 15
3.6.0. Problems of Extraposition

Rosenbaum (1967) proposed that all clausal subjects in English are sentence initial complex NPs, as in (3.38).

(3.38)

Given structure (3.38), the optional Extraposition transformation can move the embedded clause originating in subject position to final position replacing the symbol +PRO with the expletive 'it' in the original position. There are several arguments against adopting for Russian the so-called ETO+S Analysis, comparable to Rosenbaum's IT+S Analysis for English.

In order to claim that a possible ETO+S Analysis is not an independently desirable assumption, it must be demonstrated that certain transformations contingent on this analysis are not legitimate transformations in a grammar of Russian. Next, I will attempt to show that such rules as ETO-deletion, ETO-replacement and Extraposition of S lead to incorrect descriptions of CTO-subject complementation. Upon examining the problems of Extraposition,
I will attempt to show how the anomalies can be solved within a non-transformational approach. Two anomalies are connected with the ungrammaticality of the sentences in:

(3.39)  

a. *Čto pođet dožđ', KAZETSJA
        'That (it) will rain SEEMS'.

b. *Èto kažetsja, čto pojdet DOJD'
        'That seems that (it) will RAIN'

There are two observations to be made about the ill-formedness of such pairs of sentences. First, Extraposition must be obligatory in (3.39a), and second, there must not be any ÈTO-trace of the extraposed complement in (3.39b).

There are certain copular-type verbs (KAZAT'SJA and ŠCITAT'SJA) which invariably require the ČTO-complement to occur in postverbal position as the focal constituent; for this reason there must not be a trace of the extraposed complement. Extraposition is permitted, however, if no ÈTO-trace is left behind after movement:

(3.40)  

Kažetsja, čto pojdet DOJD'
        '(It) seems that (it) will RAIN'

This sentence conveys only new information, the ČTO-clause is marked for the focal stress, while the scope of focus includes the main verb. The syntactic and discourse properties of sentence (3.40) are parallel to those exhibited by the following topicless sentences:
These examples share the following discourse properties:
(1) the postverbal ČTO-complement is marked for focus,
(2) there is no ĖTO-trace of the ČTO-complement, and (3) the main verb contextually binds its complement so that only new information is conveyed.

Since Extraposition is required to be obligatory and be traceless for a class of copular-type verbs, these requirements present a problem for the Extraposition approach. But there is a natural explanation for these facts within the Non-transformation Analysis.

The ČTO-complements in (3.41), for example, can be analyzed as object complements, not subject complements. As an illustration, the complement of KAZAT'SJA in the underlying structure (3.42) is treated as an object complement generated in postverbal position.
'(It) seems that Oksana is from KIEV'

The subject relation in this structure is formally the dummy symbol \( \Delta \), and is not overtly expressed in a topic-less sentence, thus explaining why the \( \text{ETO} \)-trace is prohibited from occurring in S-initial position (the so-called subject position). Now let us consider some other evidence for treating the \( \text{ČTO} \)-complement of KAZAT'SJA as an object complement.

The third anomaly of Extraposition concerns yes-no questions in which Extraposition is obligatory. If Extraposition fails to apply, we end up with an ungrammatical sentence such as (3.43a); but if it does apply we get the well-formed sentence (3.43b).
(3.43) a. *Čto Oksana Øv, iz Kieva, ne KAZETSJA li?
'That Oksana is from Kiev DOESN'T (it) seems?'
b. Ne KAZETSJA li, čto Oksana Øv, iz Kieva?
'DOESN'T (it) seems that Oksana is from Kiev?'

If the ČTO-complement in (3.43a) is an object complement, the anomaly resulting from Q-movement would not arise, since NE KAZETSJA LI would just move across NP △ into COMP position, as in the tree (3.44).

Another interesting fact is that KAZAT'SJA-type verbs form parenthetical expressions:

(3.45) Oksana Øv, iz KIEVA, kažetsja
'Oksana is from KIEV, (it) seems'
Also observe that a parenthetical clause does not tolerate an ETO-subject, as the ill-formed sentence (3.46) shows.

(3.46) *Oksana ḥv, iz KIEVA, eto kažetsja
'Oksana is from KIEV, that seems'

There is still further evidence for rejecting Extraposition.

The fourth anomaly of Extraposition concerns the problem of having double S-complements at the end of VP after extraposition in the ungrammatical sentence (3.47a).

(3.47) a. *Eto dokazyvaet, čto Maša lgala, čto eē muž byl NEVINOVEN
'That proves that Masha lied that her husband was INNOCENT'

b. Čto eē muž byl nevinoven, dokazyvaet, čto Maša LGALA
'That her husband was innocent proves that Masha LIED'

There is clear evidence that the anomaly of sentence (3.47a) is not due to Extraposition, but to the incompatible anaphoric relation between the ETO-topic and its extraposed subject complement in focus. Notably, ETO cannot be anaphoric with a clausal subject conveying new information. The anomaly disappears, for example, when the subject complement is dislocated outside of the main sentence as repeated information leaving behind the ETO-trace. This process is shown by the surface bracketing of (3.48).
"That proves that Masha LIED, that her husband is innocent."

This structure shows that the subject complement is a constituent of $S''$; it is separated from the main $S$ by a boundary ($\#$) indicating the terminal point of the main assertion. Since the ĖTO-subject can be generated in the base, there is no compelling reason why we should not also base-generate the antecedent complement directly under $S''$. This approach is consistent with the assumption that all dislocated constituents originate in the base as daughter nodes of the $S''$ category.

Given the empirical evidence, the conclusion is that the Extrapolation Analysis does not provide a viable account of ĖTO-subject complementation.
3.7.0. Problems of Intraposition

There are also some difficulties with Emonds' Intraposition Analysis, in which the sentence initial clause replaces it when derived from the underlying post-verbal position:

(3.49)

\[
\begin{align*}
\text{IT-replacement is assumed to be a structure-preserving transformation which operates only on nodes generable by the base rules (Emonds 1970).}
\end{align*}
\]

A comparable ETO-replacement rule for Russian is implausible on grounds that there is no expletive ETO which is governed by a structure-preserving condition of the type in English. Thus left movement of the subject clause does not have the effect of replacing a dummy ETO, since there is no ETO in subject position in underlying structure.

Let us assume that in Russian there is a rule of Intraposition; it would be a root movement under TOPIC or under left-S', as shown in (3.50).
(3.50) a. Rhetorical Topicalization

'To lift a child, that's EASY'

b. Unmarked Topicalization (Fronting)

'To lift a child (is) EASY'
Structure (3.50a) has several features that confirm the presence of a topicalized constituent in TOPIC: first, the Pivot Accent on REBÆNKA indicates a major intonation break between S'' and S'; second, the presence of the ETO-trace is possible only with topicalized phrases in S''. Structure (3.50b), on the other hand, confirms a topic-phrase within S': IP Fronting does not induce the Pivot Accent, and there is no ETO-trace after movement.

Therefore, structure (3.50b) can be embedded as a verb complement, as reflected by sentence (3.51b), while the dislocated structure (3.50a) cannot be embedded, as the ungrammatical sentence (3.51a) indicates.

(3.51) a. *Ja dumaju, Ø podnjat' rebÈnka, eTo ØV, LEGKO
     'I think (that) to left a child, that's EASY'

     b. Ja dumaju, Ø podnjat' rebÈnka, ØV, LEGKO
     'I think (that) to left a child is EASY'

There is even more compelling evidence that Intra-position does not replace ETO in subject position (as IT is replaced in English); thus an object phrase in the accusative can be fronted into S' position without altering the case marking. The structure (3.52) confirms this.
'A child is EASY to lift'

The basic problem with Emonds' analysis for Russian is that the Intraposition rule (or Subject Replacement) is not structure preserving (it does not replace ETO for a subject complement), nor is it a local transformation, since movement is under root S'. In Russian, most root transformations are either into TOPIC (Rhetorical Topicalization), into COMP (Q-movement), into S' (Unmarked Topicalization), or under S (NP Fronting, Adverb Fronting).

The other problem with Intraposition involves the question of doubly filled nodes. This question is also problematic to the Extrapolation analysis and may be solved on the basis of certain discourse constraints involving topic-focus segmentation and compatible anaphoricity (see Chapter Four).
3.8.0. The ETO/TO Analyses

In the present analysis, ETO-trace structures are distinguished from TO-trace structures:

(3.53) a. ETO-Analysis

```
  S''
   |     
  S'    S'
   |     |     
 NP    NP
   |     |     
 N     N
   |     |     
 Ετο_2, udivitel'no # (čtonikogo net doma)_1
```

'That's SURPRISING, that no-one's at home'

b. TO-Analysis

```
  S''
   |     
  S'    S'
   |     |     
 NP    NP
   |     |     
 N     N
   |     |     
 e_2, udivitel'no to_3 (čtonikogo net DOMA)_1
```

'What's surprising is that no-one's at HOME'
This section will be concerned with two problems related to the structures in (3.53); first, the type of rules that relate the sentences in (3.54).

(3.54) a. Čto nikogo net doma, étó øV, UDIVITEL'NO
    'That no-one's at home, that's SURPRISING'
b. Éto øV, UDIVITEL'NO, čto nikogo net doma
    'That's SURPRISING, that no-one's at home'

The second problem concerns the type of rules that relate the sentences in (3.55).

(3.55) a. To, čto nikogo net doma, øV' UDIVITEL'NO
    'The fact that no-one's at home is SURPRISING'
b. نپ øV, Udivitel'no to, čto nikogo net DOMA'
    'What's surprising is that no-one's at HOME'

It will be argued that the two sentences in (3.54) are base-generated, and there is no transformational relationship between them. Likewise, there is no transformational relationship between the subject complements in (3.55), but there is a movement rule called NP Focus Movement which moves the TO-subject from initial to final S' position to derive the pseudo-cleft sentence (3.55b).

3.8.1. The ĖTO-Analysis

ĖTO-subjects have a number of properties that distinguish them from TO-subjects: First, an ĖTO-subject can be the anaphor of a left dislocated ĖTO-complement, while a TO-subject cannot:
(3.56) a. Čto emu $\emptyset_Y$, skučno, ěto $\emptyset_Y$, ZAMETNO
    'That he's lonely, that's NOTICEABLE'

   b. *Čto emu $\emptyset_Y$, skučno, to $\emptyset_Y$, ZAMETNO
     'That he's lonely, that fact is NOTICEABLE'

Second, an ĖTO-subject can be the anaphor of a right dislocated ĖTO-complement, but a factive TO-subject cannot:

(3.57) a. Ėto $\emptyset_Y$, ZAMETNO, čto emu $\emptyset_Y$, skučno
     'That's NOTICEABLE, that he's lonely'

   b. *To $\emptyset_Y$, ZAMETNO, čto emu $\emptyset_Y$, skučno
     'That fact is NOTICEABLE, that he's lonely'

Third, an ĖTO-subject cannot be the head NP of an embedded ĖTO-complement, while a factive TO-subject can:

(3.58) a. *Ěto, čto emu $\emptyset_Y$, skučno, $\emptyset_Y$, ZAMETNO
     'That that he's lonely is NOTICEABLE'

   b. To, čto emu $\emptyset_Y$, skučno, $\emptyset_Y$, ZAMETNO
     'The fact that he's lonely is NOTICEABLE'

In addition, only a TO-subject can function as a focus-signal indicating that a clefted complement is focus:

(3.59) a. *NP čto $\emptyset_Y$, ZAMETNO ěto, čto emu $\emptyset_Y$, SKUČNO
     'What's noticeable is that that he's LONELY'

   b. NP čto $\emptyset_Y$, ZAMETNO to, čto emu $\emptyset_Y$, SKUČNO
     'What's noticeable is that he's LONELY'

Therefore, the highly restricted and varying distribution of ĖTO and TO subjects and the distinct communicative roles
of their antecedent CTO-complements justifies the recognition of the two separate analyses.

There are at least three possible ways to describe sentences containing both the CTO-trace and its antecedent complement. In the first approach, the CTO-subject can be moved from initial position into TOPIC under S'', leaving behind CTO in the original position; this would be the Left Dislocation Analysis. In the second approach, the CTO-subject in extraposition (to the right of VP) would be moved across CTO into TOPIC position; this would be the Intraposition Analysis. Within the third approach, both the CTO-subject complement and its CTO-trace would be base-generated: the CTO-complement would originate under TOPIC (with left dislocated complements), or under right-S'' (with right dislocated complements), while the CTO-trace would be generated in S-initial position. In the discussion to follow, I will attempt to show that the Base Analysis provides the most natural account of the data in question.

Within the Base Analysis, the required constituent bracketing for CTO-subjects and CTO-subjects would be generated by the phrase structure rules of (3.60).

(3.60) a. $S'' \rightarrow (\text{TOPIC}) - S' - (#) - (S')$

b. $\text{TOPIC} \rightarrow (S')$

c. $S' \rightarrow (\text{COMP}) - S$

d. $S \rightarrow \text{NP} - \text{VP}$
These rules generate dislocated ČTO-subjects as leftmost or rightmost constituents of S'' with S-initial ČTO-traces: 17

(3.61) a. Left Dislocation

```
      S''
    /   |
   TOPIC | S'
           |
      S'   |
            |
        S

(čto poezdku otlažili)_i   ětoi  ø_V', ŽAL'
  2   3   2   1

'That the trip was postponed, that's a PITY'
```

b. Right Dislocation

```
      S''
    /   |
   S'   | S'
          |
      S

NP : N

 ětoi  ø_V', ŽAL'
  2    1

(čto poezdku otlažili)_i
  1   0

'That's a PITY, that the trip was postponed'
The ČTO-subjects in (3.61) are governed by a Binding Principle which specifies that a ČTO-subject is coindexed with the commanding ĖTO-trace. This requirement permits the ČTO-subject in dislocation to either precede ĖTO to the left (left dislocation) or follow ĖTO to the right (right dislocation).

The same Binding Principle governs ČTO-objects in dislocation occurring either in TOPIC position or to the right of S' under S''. The ČTO-objects of the surface structures in (3.62), for example, are generated in the base and properly bound.

(3.62) a. Left Dislocation

(Čto nikto e̱ ne zametil)ona OGORČILAS' etimi

'That no-one noticed her, she was BITTER about it'
(3.62) b. Right Dislocation

In these two structures, focus assignment on the main verb OGORČILAS' and the ETOn-trace combine to predict the topic-status of the ČTO-object. It would not be necessary to stipulate the surface position of the ČTO-object complement in relationship to the ETOn-trace. Since this follows from the binding relation between the anaphor and its antecedent. 18

Let us briefly examine the empirical consequences of this analysis. First, if dislocated ČTO-complements and ETOn-traces are base-generated, this will simplify our grammar by eliminating several unmotivated transformations such as Extrapolation of S, Intrapolation of S, ETOn-deletion, and ETOn-replacement. Second, the Base Analysis represents a unified theory for describing both ČTO-subject and ČTO-object complementation in Russian. Third, by generating
a ČTO-complement under TOPIC, we can guarantee that an ungrammatical parenthetical expression will be blocked, as the one in (3.63) with the unwanted ĖTO-trace. 📌

(3.63) *Ona OGORČILAS', Ėto øv, océvidno
'She's BITTER, that's obvious'

Since a parenthetical movement is possible only in topicless sentences without ĖTO-traces, the application of Parenthetical will be blocked whenever a ČTO-complement is base-generated in TOPIC position.

In conclusion, it appears that all types of dislocated clauses can be base-generated, including KOGDA-comps with TOGDA-traces:

(3.64)

'When Ira returns, then PHONE me'
3.8.2. The TO-Analysis

The two semantically distinct head TO-constructions in Russian are the pronominal TO 'the thing', and the prosentential TO 'the fact':

(3.65) a. \( \text{TO}_i \check{\text{CTO}}_i + S (\text{the thing} + S') \)

\[
\begin{array}{c}
\text{NP} \\
| \\
\text{N''} \\
| \\
\text{N'} \\
| \\
\text{S'} \\
| \\
\text{N} \\
| \\
\text{COMP} \\
| \\
\text{S} \\
| \\
\text{NP} \\
| \\
\end{array}
\]

\( \text{TO}_i \check{\text{CTO}}_i \) \( \text{JA ČITAJU}_e_i \)

'The thing that I'm reading'

b. \( \text{TO}_i (\check{\text{CTO}} + S)_i (\text{the fact} + S') \)

\[
\begin{array}{c}
\text{NP} \\
| \\
\text{N''} \\
| \\
\text{N'} \\
| \\
\text{S'} \\
| \\
\text{N} \\
| \\
\text{COMP} \\
| \\
\text{S} \\
| \\
\text{TO}_i (\check{\text{CTO}} \text{ JA ČITAJU})_i \\
\end{array}
\]

'The fact that I'm reading'
In (3.65a), the Q-phrase ČTO 'that/what' is moved to COMP; in (3.65b), however, the ČTO-complementizer 'that' is base-generated in COMP position. The subsequent discussion will be concerned with determining the syntactic and discourse properties of the factive TO which is semantically bound to a ČTO-subject complement.

A number of discourse properties distinguish the factive TO-subjects from the ČTO-subjects. First, TO identifies the topic-constituent in S-initial position, as in the following structure:

(3.66)

'S

NP

| NP

| N'

| S'

| VP

| N

| N'

| N''

To_1 (čto v Sibire źV, xolodno)_i ne źV, UDIVITEL'NO

2 1

'\text{The fact that (it's) cold in Siberia isn't surprising}.'

On the basis of (3.66), Focus is assigned to UDIVITEL'NO, while the scope of focus is the entire VP including the negative particle NE. The NP TO is optional; this fact
can be explained by appealing to the base rule which generates a dummy head NP, thus producing sentence (3.67).

(3.67) Čto v Sibire ŷ, xolodno, ne ŷ, UDIVITEL'NO

'That (it's) cold in Siberia is not SURPRISING'

The details of headless NPs are not important for the present analysis; what is important, however, is the claim that ČTO-subjects do not move from their base position in surface structure.

One argument against ČTO-subject movement involves such ungrammatical structures as (3.68).

(3.68) *Čto v Sibire ŷ, xolodno, to ne ŷ, UDIVITEL'NO

'That (it's) cold in Siberia, the fact isn't SURPRISING'

Another problem with ČTO-subject movement concerns ungrammatical structures with right dislocated ČTO-subjects:

(3.69) *To ne ŷ, UDIVITEL'NO, Čto v Sibire ŷ, xolodno

'The fact isn't SURPRISING, that (it's) cold in Siberia'

Within a transformational analysis of TO-subjects, it would be necessary to provide some constraint to block outputs with left and right dislocated ČTO-complements. By eliminating ČTO-subject movement, we also eliminate the following two problems: first, the ungrammatical structures of (3.68) and (3.69) will not arise, and second, we can avoid the use of ad hoc restrictions on transformations.
The ad hoc nature of a movement constraint is obvious, since in ĖTO-contexts left and right dislocated ĖTO-subjects are well-formed:

(3.70)  

a. Ėeto v Sibire Ŗv, xolodno, Ėto ne Ŗv, NOVOE
       'That (it's) cold in Siberia is not NEW'

b. Ėeto ne Ŗv, NOVOE, Ėto v Sibire Ŗv, xolodno
       'That's not NEW, that (it's) cold in Siberia'

Let us now consider the TO Focus Movement approach. Under this approach, the dislocated ĖTO-subject originates in the rightmost position of S'', while TO Focus Movement places TO under right-S'; this movement is shown in (3.71).

(3.71)  

'Is a pity this: that there's no ORANGES --
What's a pity is that there's no ORANGES'
In (3.71), the semantic role of TO Focus Movement is to associate TO with the Pivot Accent 3 which signals that the ČTO-complement conveys new information.

The main argument for TO-movement into right-S' position relies on the observation that there is a mirror-image reflection of the Q-phrase in COMP and the F-phrase is right-S' position. In other words, there is a mirror-image relationship between the positions of ČTO in (3.72a) and TO in (3.72b).

(3.72) a. Q-movement b. TO-movement

There is ample evidence supporting the TO Focus Movement analysis in Russian. One bit of evidence is provided by TO-objects which segment topic-focus sentences. This function is represented by TEM in the structure (3.73).
'She was bitter about this: that no-one NOTICED her — What she was bitter about was that no-one NOTICED her'

In (3.73), the Pivot Accent 3 is assigned to TEM under S'; this position marks the boundary between the topic and focus constituents. The fact that the question (3.74) with the Q-phrase under COMP is the underlying question of (3.73) confirms the TO Focus Movement analysis.

(3.74) (S, (COMP Čemi) (S ona ogorčilas' ei))?

'About what was she bitter?'

Further evidence for the TO Focus Movement analysis comes from sentences with generic NP subjects in focus. Thus a focused TOT-subject occurs in S' position to the right of the main S, while the antecedent KTO-clause is
associated with the focus and is generated in $S''$ position.

(3.75)

Only he stirs enthusiasm who is HIMSELF enthusiastic'

In certain cases the distinction in surface bracketing and intonation contours can be crucial in determining the correct focus interpretation. This is evident in (3.76).

(3.76)

"Came (some) students who were from ODESSA"
Structure (3.76) reflects Subject-Verb Inversion and S-scope of focus; thus only new information is conveyed and it differs in surface bracketing and focus interpretation from:

(3.77)

Only those students came who were from ODESSA'

In this structure, the scope of focus is restricted to the KOTORYJ-clause under S''. By placing the Pivot Accent on the determiner TE, this produces a topic-focus sentence. The underlying question of this structure is thus (3.78).

(3.78) \((S, (\text{COMP } \text{Kakie}_i)(S \text{ studenty priexali } e_i)))\)

'Which students came?'

The claim that clefted CTO-subjects are generated in the base under S'' is consistent with the empirical fact that other clauses in focus occur under S'':
'You take as much as you LIKE'

'You come at the time when you CAN'

The conclusion we can make is that clefted complements in focus are base-generated as daughter nodes of the S'' category. Assuming that the mirror-image hypothesis is valid, Q-movement will move the Q-phrase under COMP, while TO-movement will move TO to the right under S'.
3.9.0. Summary

In this Chapter, it was shown that the Extrapolation and the Intraposition Analyses of subject complementation are not viable hypotheses for Russian, since there are no transformations such as ETO-deletion, ETO-replacement and Extrapolation of S. Essentially, the anomalies of both Extrapolation and Intraposition can be solved under the ETO/TO-Trace Analyses. These analyses utilize base rules to generate dislocated subject complements either in TOPIC position, or in final S'' position. By adopting the Binding Principle, it is possible to get rid of a number of T-rules (especially Left/Right Dislocation, Extrapolation, or Intraposition), leading to a simplification of the grammar.

The problem of unwanted ETO-traces is eliminated by generating certain CTO-complements not as subject complements but as object complements. This analysis explains why topicless sentences with CTO-complements in focus do not tolerate ETO-traces. It is likely that parentheticals can be base-generated as proposed by Emonds (1974). If this assumption turns out to be correct, then parentheticals will originate under the S'' node similar to other dislocated constituents occurring under S''.
CHAPTER 3

The positional analysis of subject proposed by Chomsky (1965) was further developed in Rosenbaum's Extraposition theory (1967) of sentential subjects. Later, Emonds (1970) challenged the positional analysis claiming that subject clauses are derived by moving the complement leftward from underlying final position by a rule called Intraposition of S. The Intraposition theory was attacked mainly for its use of "double filled NPs" in accounting for verbs such as PROVE which take double complements. For example, sentence (3.a) was derived from an underlying structure (3.b) in which an NP dominated two complements.

(3:1) a. That Joe likes peanuts proves that he's a monkey.

b.

\[ S \]

\[ NP \]

\[ V \]

\[ NP \]

\[ S' \]

\[ S' \]

(it) proves that Joe likes peanuts that he's a monkey

Emonds (1976) finally gave up his Intraposition theory for the former Extraposition theory. However, Jackendoff (1977) presents a number of arguments for the Intraposition theory which will not be mentioned here. Within Jackendoff's X'-theory, two distinct positions are provided for sentential complements, one is V' and the other is V'', as in:

(3:2)

\[ N''' \]

\[ V''' \]

\[ V'' \]

\[ V' \]

\[ V \]

\[ V \]

\[ S' \]

\[ S' \]

(it) proves that he's a monkey. that Joe likes peanuts
In (2) the two S complements are analyzed at separate levels: the subject S is a complement of V", while the object S is a complement of V'. Within this analysis, doubly filled nodes are eliminated in favor of the X' device which is independently motivated by empirical facts (Jackendoff, 1977: Section 4.8).

The Like Subject Constraint and the Specified Subject Constraint involve the problem of selecting the appropriate controller NP of the higher clause as coreferent to the complement subject in the lower clause. In stating the constraints, both Chomsky (1970) and Perlmutter (1971) assume that the selection of the controller NP is based on structural principles.

Preceding Comrie's analysis of sentence complementation in Russian was Rothstein's analysis of predicate complementation in contemporary Polish (Rothstein, 1966). Using the syntactic criteria developed in Rosenbaum (1967), Rothstein also adopts the distinction between NP and VP complementation for Polish.

It should be noted that the use of the reflexive DOZZDAT' SJA is considered to be archaic (source: V. Dal', Tolkovyj slovar'. Moscow, 1956).

Bresnan's theory (1977) of lexical specifications for verbs provides an interesting solution to the SJA-problem involving pseudopassives in Russian. Within this approach, the lexicon can provide us with the functional structure of the intransitive verb UDARIT'SJA 'be hit', as shown in (3.3).

(3.3) Maša udarilas'
'Mary hit (herself)'

V: UDARI+L+AS' (NP nom: MĄŚ+Ą, (3NP acc: i))

In (3.3), the logical structure provides the semantic information that UDARI+L+AS' is represented by a one-place argument NP nom: MAS+A and the bound variable (3NP acc), which represents the intransitive use of the transitive verb UDARIT'. The notation (3NP acc) of the formula indicates that the grammatical function NP acc is eliminated from syntactic structure, but not from semantic structure. From the logical structure of (3.3) we can infer MAŠA UDARILA SEBJA, but not KTO-TO/ ĆTO-TO UDARIL/O MAŠU. Essentially, the symbol (3NP acc) shows
that UDARIT'SJA is syntactically intransitive, but that it is logically transitive in its functional structure.

The case marker K corresponds to a set of grammatical cases such as nominative, accusative, dative, etc. and a set of functional relations such as agent, experiencer, benefactor, goal, etc. The present study utilizes Gruber's system of functional relations (Gruber, 1965) instead of Fillmore's system of semantic cases (Fillmore, 1968). Unlike Fillmore's cases, Gruber's system of thematic relations permits noun phrases to function in more than one thematic role within the same sentence. Thus, in sentences (4 a.b) with the verbs BUY and SELL, the subject is Agent, but with BUY it is also Goal and with SELL it is also Source.

(3.4) a. Fred (A&G) bought some hashish from Reuben (S).  
b. Reuben (A&S) sold some hashish to Fred (G).

For a critical evaluation of Fillmore's cases and Gruber's thematic relations the reader can refer to Jackendoff (1972: Chapter Two).

Stockwell et al (1972) propose a unified description for both NP and VP complements for English. Under this analysis, both verbs and nouns are subcategorized for case relations.

In The Transformational Syntax of Russian, Kubik (1971) proposes that the semantic symbol EXP(LICATIVE) characterize the semantic relation holding between a head verb and its postverbal subject clause. This type of relation would not be contingent on any transformational rule but would be generated directly by phrase structure rules of the base.

Similarly, the Kiparsky's Factive analysis (1970) uses two semantic features (+/- EMOTIVE) and (+/- FACTIVE) to explain the meaning and syntactic distribution of certain complements. These semantic features were to be essential properties of head items which would predict which complementizer can be inserted between a head item and its complement S. For example, the head noun PREDLOŽENIE 'proposal' would contain the feature (+EMOTIVE) to predict the ČTOBY 'so that' complementizer of sentence (5.a), while ZAJAVLENIE 'application' is (-EMOTIVE) and therefore takes ČTO 'that' complementizer, as in (5.b).
(3.5)  a. To predloženie, čtoby/*čto isključit' ego iz Partii, ne bylo PRINJATOF 'The proposal so as/*that to expell him from the Party was not ACCEPTED'

b. Ego zajavlenie, čto/*čtoby on xočet vstupit' v Partiju, bylo PRINJATOF 'His application that/*so that he wants to join the Party. was ACCEPTED'

In using semantic features, the Kiparskys' attempted to show that the major restrictions between head items and complement Ss hinge on semantic and not syntactic properties.

While accepting Kiparskys' valid distinction into factive and nonfactive verbs, Menzel (1975) extends the inventory of head noun types to include such deletable head nouns as PROPOSITION, IDEA, EVENT, ACT, STATE, PROPERTY, etc., which exhibit the same semantic and syntactic properties as FACT does. In addition, Menzel proposes that an embedded complement be characterized as (+EVENT), (+ACTION), (+STATE), etc., independently of whether a head noun can occur with the embedded sentence or not, as semantic characterizations of embedded sentence types.

In defining subjecthood, Keenan resorts to such multifactor criteria as: independent existence, indispensability, autonomous reference, absolute reference, etc. Unfortunately, some of the criteria applies to more than one grammatical category. For instance, the criterion "absolute reference" defines the following properties:

(3.6) Absolute Reference

There must be an identifiable entity (state, event, fact, etc.) which is referred to in the subject which is true if a semantically basic sentence is presupposed to be true.

Thus, criterion (3.6) applies to the ČTO-Subject of sentence:

(3.7) Čuvstvuetja, čto pojdet DOŽD'F 'It feels like it will RAIN'
However, absolute reference is also a condition on the ČTO Object of sentence (3.8).

(3.8) On ščitaet, čto pojdet DOŽD′_F

'He considers that it will RAIN'

It seems that the proposed criterion must be refined if it is to serve as a principled basis for determining subjecthood in sentences.

I will briefly outline the method proposed by Bresnan (1977), which will enable us to formally represent grammatical relations of NPs directly in the lexical specifications for verbs. Within Bresnan's framework, lexical specifications have three main components: (1) the lexical entry, (2) the categorial and contextual structure, and (3) the functional structure.

Accordingly, the procedure for the functional interpretation of the simple sentence (3.9) follows three steps.

(3.9) _s′(S(Vse znajut NP_e) IGORJA)_

'Everyone knows IGOR'

In step 1, the lexicon provides us with the functional structure of the verb ZNAT′, as shown in (3.10).

(3.10) V: ZNAJ+UT (NP_1: VS+E, NP_2: IGOR′)

In this formula, the logical argument structure provides the semantic information that the transitive verb ZNAJ+UT is represented by a two-place relation (NP_1, NP_2).

For Russian, step 2 would be to identify the grammatical functions of the arguments VS+E and IGOR′ in terms of case relations; thus we assign NP_1 the nominative case and NP_2 the accusative:

(3.11) V: ZNAJ+UT (NP_1: VS+E, NP_2: IGOR′)

NP_1: VS+E = NP_nom (= VS+E)
NP_2: IGOR′ = NP_acc (= IGOR+JA)
These NPs are then inserted with the correct inflection into the logical argument structure obtained in step 1:

\[(3.12) \ V: \ ZNAJ+UT \ (NP_{\text{nom}}: \ VS+E, \ NP_{\text{acc}}: \ IGOR+JA)\]

This formula now shows a morphological change for \(NP_2\) from IGOR' to IGOR+JA which is marked for the accusative, masculine singular, animate.

In step 3, the indices (i and j) are assigned to the grammatical functions to indicate that each argument function has a unique reference. This procedure is shown in (3.13).

\[(3.13) \ V: \ ZNAJ+UT \ (NP_{\text{nom}}: \ VS+E, \ NP_{\text{acc}}: \ IGOR+JA)\]

\[\begin{align*}
NP_{\text{nom}} & : \ VS+E = i \\
NP_{\text{acc}} & : \ IGOR+JA = j
\end{align*}\]

The indexed NPs are then substituted into the logical form.

For Russian, it appears that step 1 can be eliminated by directly assigning grammatical functions to NPs in terms of case. Since all syntactic information about NPs can be assigned in the lexical specifications for verbs, the functional structure of step 2 (as in (3.11)) can represent step 1 directly. This elimination is in accordance with the basic assumption that grammatical functions in Russian are defined in terms of case relations, not in terms of syntactic structures, as they are defined for English in Chomsky's Aspects.

Let us compare the lexical specifications of the verb ZNAT' 'know' and its cognate IZVESTNO 'known' for their logical argument structures. The lexical structures and syntactic contexts for ZNAT' and IZVESTNO are illustrated in (3.14) and (3.15), respectively.

\[(3.14) \ s'(s(\text{Eto NPe znal}) \ VSE)\]

'\text{That knew EVERYONE}'

\[V: \ ZNA+L+I \ (NP_{\text{nom}}: \ VS+E, \ NP_{\text{acc}}: \ ET+O)\]

\[(3.15) \ s'(s(\text{Eto bylo izvestno NPe}) \ VSEM)\]
'That was known to EVERYONE'

\[ V: BY+L+O \ (A: IZVESTN+O \ (NP_{nom}: ET+O, NP_{dat}: VS+EM)) \]

Since the sentences in (3.14) and (3.15) are similar with respect to the surface bracketing and focus assignment, the lexicon must provide us with the information as to how they differ in their logical representations.

From the lexical specification for IZVESTN+O we know that it is syntactically intransitive, but that it is semantically transitive in logical structure. Thus ET+O is the logical object of IZVESTN+O, while VS+EM is the logical subject.

However, the active verb ZNA+L+I in (3.14) is syntactically and semantically transitive: VS+E is both the grammatical and logical subject, and ET+O is both the grammatical and logical object. Therefore, the difference in the logical argument structures of BY+L+O IZVESTN+O and ZNA+L+I corresponds to the difference in semantic interpretation between the two sentences in question. On the other hand, the functional information that is relevant to the interpretation of the similarities between these sentences is extracted from the fact that VS+EM and VS+E are the logical subjects, while ET+O is the logical object.

In order to interpret the focus of the sentence it is necessary to find the constituent bearing the phonological focus, and identify the scope relation of the focal phrase(s). This task is carried out by a separate inferential system independent of the procedure for interpreting the lexical functional structure of the sentence. The Focus Interpretation rule operates on the ordered surface structure of sentences rather than on the unordered logical structure.

The use of the S' node to expand subordinate clauses has become known as the COMP analysis or, alternatively, the Phrase Structure Hypothesis of complementation. This analysis claims that complementizers are derived in deep structure by a phrase structure rule and has been supported by Chomsky (1965, 1971), Dougherty (1969), Kayne (1969), and Bresnan (1972).

The term "complementizer" was first proposed by Rosenbaum (1967: 24-32) to designate the particles THAT, FOR-TO and POSS-ING. The use of complementizers was said
to be predictable from the type of syntactic structure amiable to insertion and from the semantic properties of the main verb.

The complementizer insertion rule was claimed to predict the occurrence of complementizers. However, in reality generalizations provide explanations only in terms of a given hypothesis which may or may not be correct. This point is emphasized by both Bach (1974) and Botha (1974).

15 Kiparsky and Kiparsky (1971), Bresnan (1972) and Hooper (1974) have observed that the compatibility of predicate with complement type depends to a great extent on the semantic functions of complementizers.

It must be made clear that the notion "complementizer" in generative grammar also incorporates so-called Wh-words such as WHERE, WHEN, WHY,WHO, etc. which refer to semantic antecedents.

In Russian traditional linguistics, Bogorodickij (1935) recognized the need to distinguish between syntactic conjunctions (SOJUZY): ČTO 'that', ČTOBY 'so that', and semantic conjunctions (SOJUZNYE SLOVA): KOGDA 'when', GDE 'where', POČEMU 'why', etc. Accordingly, syntactic conjunctions do not exhibit any independent role distinct from the syntactic role of the embedded clause. But semantic conjunctions serve both as syntactic markers of subordination and as anaphoric semantic markers as correlative adjectives or adverbs.

16 There are good arguments against generating dummy NP subjects by relying on an ETO-Insertion rule. First, antecedents semantically bind their anaphors in logical structure. A reasonable assumption is that logical form cannot contain "free variables" (this view is expressed in Chomsky's unpublished article "On Binding", 1978) Second, the presence of ETO indicates that the antecedent clause is repeated information, hence this pragmatic property should not be contingent on a possible transformational rule of insertion.

17 The semantic effect of left dislocation is to "recall" or make "prominent" the topicalized constituent. Lexical items within the left dislocated clause are not necessarily equal in communicative value. In general, the item bearing the rising accent (Pivot Accent 3) is more
prominent within the topic than unaccented items. Thus the topic constituent in sentence (3.16a) emphasizes the importance of the item UMNA 'is smart', while in (3.16b) the item SU 'Sue' is made prominent.

(3.16) a. Čto Su Ø UMNA_p, ĖTO_T Ø VERO_F

'That Sue (is) SMART, THAT'S TRUE'

b. Čto Ø umna SU_p, ĖTO_T Ø VERO_F

'That (is) smart SUE, THAT'S TRUE =

That (it's) SUE who is smart, THAT'S TRUE'

Since the focus centre is the item VERO 'true' in both sentences, it is the item conveying the most dynamic (novel) information in the sentence.

The notions "thematic prominence" and "communicative dynamism" must not be confused with the notion "illocutionary force". Austin (1962) defines "illocutionary force" as the act of advising, ordering, promising, etc., that one performs in producing a linguistic utterance under the appropriate circumstances.

For example, it is possible to say that a left dislocated ESLI-clause expresses an illocutionary force in the sense that the truth of the ESLI-clause must be satisfied first before the truth of the main S can be valid:

(3.17) Esli pojdeť dožď', TOGDA_T ne PRIEZŽAJ_F

'If (it's) going to rain, THEN don't COME'
The rule of ETO-fronting can move ETO from object position under S' to the right of TOPIC, as in (3.18).

(3.18)

'That Ira's married, that I didn't KNOW'

ETO-fronting makes the topicalized clause prominent; a similar effect is produced by TOGDA-fronting in (3.19).

(3.19)

'When you'll have time, then PHONE'
In a transformational analysis, structure (3.20) would be derived by a rule called Parenthetical which moves a complement from postverbal position into TOPIC:

(3.20)

Parenthetical can be restricted to operate only on VP complements; the ETO-subject is restricted from parenthetical expressions on discourse grounds, that is, ETO cannot be anaphoric to a constituent conveying new information. The constraint on compatible anaphoricity would block the ill-formed sentence (3.21).

(3.21) *Zemnoj sar KRUTITSJA, eto $\emptyset$, vozmožno

'It the earth ROTATES, that's possible'

It should be noted, however, that Emonds (1974) argued that parenthetical expressions should be generated by phrase structure rules as underlying structures. This approach is consistent with the present analysis. But we still must account for the distinction between verbs that reduce to parentheticals and those that do not.
CHAPTER FOUR
SEMANTIC REPRESENTATION AND FOCUS INTERPRETATION

4.0.0. Introduction

A central concern of this chapter is to show how the theory assigns to sentences semantic representations which express certain semantic and syntactic generalizations about the informational roles of ČTO-subjects at the level of surface structure.

Essentially, two kinds of rules of semantic interpretation will be examined: (1) Interpretive rules, and (2) Semantic Binding rules. Interpretive rules express the semantic aspects of such markers as TO-TOPIC, ĖTO-TOPIC, and TO-PIVOT; these markers interact with the Focus marker to determine the informational role of ČTO-subjects in topic-focus sentences.

Semantic Binding rules, on the other hand, express two types of semantic relations associated with focused ČTO-subjects: (1) the Explicational relation of a focused ČTO-complement in a topicless sentence, and (2) the Specification relation of a focused ČTO-subject generated under the right S'' category in a topic-focus sentence.

The present analysis of focus endorses the claim that focus interpretation is governed by pragmatic,
discourse and lexical factors; it is not determined solely on the basis of surface structure constituency as claimed by Chomsky (1970).

As it will be shown, the notion "scope of focus" is an important component of focus interpretation. In simple terms the scope of focus represents the lexical information which is contextually independent and contains the lexical item bearing the phonological focus. In turn, the scope of focus may contain certain lexical material which is disassociated from focus (i.e. personal pronouns), while in other instances certain lexical items attract or control focus (i.e. emphatic particles).

Before showing how focus can be interpreted in sentences, I will first suggest several reasons as to why the notion "presupposition" should be avoided in describing the discourse information shared by the speaker-hearer. In other words, I will argue against using the term presupposition instead of topic.

4.1.0. Presupposition and Focus

In "Deep Structure, Surface Structure, and Semantic Interpretation," Chomsky (1970a) refers to "presuppositions" as the information shared by the speaker-hearer, as distinct from "focus" which denotes the information not shared by the speaker-hearer (in contrast to FSP theory of focus).
Within the interpretive theory of focus assignment proposed by Jackendoff (1972: 245-246), the presupposition is a one-place predicate Presupp_S(x) where x is an appropriate semantic variable which substitutes for the lexical material in focus. 2

In declarative sentences the main assertion and the focus represent the same member of the presuppositional function as illustrated schematically below:

\[
\text{FOCUS} = \text{E of PRESUPP}_S(x) \quad \text{where E = member of set}
\]

That the report is written well is very IMPORTANT.

Formally, the variable x of the presuppositional function, the assertion and the marker F-scope identify the same semantic structure, namely, the new information conveyed in the sentence.

Since the present analysis does not use the term presupposition for identifying the old information, I will now state several reasons for rejecting this notion. Unfortunately, the term "presupposition" has been used
in generative grammar to refer to at least three different linguistic phenomena.

First, Fillmore (1969) defined presuppositions as conditions which must be satisfied before the sentence can be used in any of its functions (in asking questions, giving commands, or in making assertions).

For example, the Kiparskys' (1970) classify factive/non-factive verbs according to the presuppositions they introduce. Thus a factive verb such as KNOW takes a complement clause that is presupposed to be true whether or not the main clause is negated. For instance, the inherent presupposition: ONA PLAKALA 'She was crying' is derivable from the factive verb ZNAL 'knew' in (4.2a)*but not from the non-factive POKAZALOS' 'seemed' in (4.2b).

(4.2) a. Factive

On znal/ne znal, čto ona plakala
'He knew/didn't know that she was crying'

b. Non-factive

Emu pokazalos'/ne pokazalos', čto ona plakala
'It seemed/didn't seem to him that she was crying'

The second use of the term 'presupposition' is found in Karttunen (1970) who discusses 'existential' presuppositions associated with the syntactic structure of
the sentence, that is, objects are presupposed to exist that are denoted by grammatical structures.

Finally, as stated earlier, Chomsky (1970) refers to presuppositions as the information shared by the speaker-hearer in discourse.

It is clear that the term 'presupposition' is used to describe different linguistic phenomena, and its use in the sense of identifying the old information should be avoided. For these reasons, I use the more traditional term 'topic' to represent information shared by the speaker-hearer.

In the present analysis I assume that the 'topic information' is redundantly specified after the scope of focus and the phonological focus have been established by rule application. 3

4.2.0. Critique of Chomsky's Definition of Focus

According to Chomsky's theory, focus is determined by the surface structure, as a phrase containing the main stress of the sentence. Within this theory of focus, the question test provides an operational criterion for determining the focal phrase in the response-sentence. Thus the single Q-phrase of a given question corresponds to the single F-phrase of a response. This definition of focus, however, is inadequate for at least two reasons.
One difficulty with Chomsky's definition of focus involves the proposed question test; for example, the two distinct questions (Qa,b) of (4.3) can correspond to two identical responses with similar intonation centres, as the (Ra,b) of (4.3).

(4.3) Qa. Čem ty igraëš'sja?
   'What are you playing with?'
Qb. Čto ty delaeš'?
   'What are you doing?'
Ra. Ja igrajus' (PAL'CAMI)
   'I'm playing (with my FINGERS)'
Rb. Ja (igrajus' (PAL'CAMI))
   'I'm (playing (with my FINGERS))

In the responses, the intonation centre is carried by the same lexical item PAL'CAMI, whereas the scope of focus (denoted by the outer brackets) and the semantic interpretations differ for the two responses.

Another problem with Chomsky's definition of focus involves negation in sentences; for example, the Q-phrase of the question (4.4a) has no corresponding F-phrase in the response of (4.4b).

(4.4) Qa. Čem ty igraëš'sja?
   'What are you playing with?'
(4.4) Ra. Ja NE IGRAJUS'
'I'm NOT PLAYING'

As this example shows, the F-phrase NE IGRAJUS' of the response is not the semantic antecedent of the Q-phrase CEM of the question. By negating the verb of the response, the relationship between the topic (TY IGRAJUS'JA) of the question and the focus (NE IGRAJUS') of the response is negated. The examples (4.3) and (4.4) indicate two points: (1) the phonological focus can be ambiguous, and (2) focus interpretation can be governed by semantic factors such as negation. In general, the range of permissible focus is not determined uniquely by the surface structure.

4.3.0. A Reinterpretation of Focus

In order to incorporate the notion "scope of focus," it is necessary to modify Chomsky's definition of focus. In particular, a focused constituent is identified as a semantic marker RHEME assigned to the topmost major node which contains the phonological marker FOCUS, as shown in:

(4.5) Scope of Focus

\[ X(\text{RHEME}) \]

\[ \ldots \chi(\text{FOCUS}) \ldots \]

This schemata represents several types of scope relations, illustrated as Scope I, Scope II, and Scope III:
(4.6) Scope I

'S' = RHEME

\[
\begin{array}{c}
S' \\
\downarrow \\
S \\
\downarrow \\
S' \\
\downarrow \\
S' \\
\downarrow \\
\emptyset \\
\text{Zal'} \\
\text{čto net APEL'SINOV}_F
\end{array}
\]

'It's a pity that there are no ORANGES'.

Scope I is associated with entire sentences conveying only new information of a descriptive nature with the postverbal ČTO-clause (analyzed as an object complement) in Focus.

(4.7) Scope II

'Is a pity THIS: that there are no ORANGES'

What's a pity is that there are no ORANGES'
Scope II is associated with a postverbal subject complement in the end-S'' position of focus, while the postverbal head NP TO is phonologically marked for the rising Pivot Accent (P), which represents the boundary between the leftmost topic-constituent and the rightmost focal constituent.

(4.8) Scope III

'THAT'S a PITY, that there are no oranges'

Scope III is associated with the main VP category containing the marker F representing the focal boundary. The anaphoric ETO fills the initial position as a topic-marker indicating that the dislocated subject complement at the rightmost position conveys repeated information.

Essentially, Scopes I-III are formally expressed as independent projection rules which interpret the focal constituent.
The principle reason for choosing a surface structure theory of scope relations is to allow transformations to apply without reference to the semantic markers RHEME (= Scope of Focus) and FOCUS (= Accent). However, surface structures produced by movement rules are subject to well-formedness conditions. In the discussion to follow, I examine several semantic factors which either determine or control the scope of focus and consequently affect semantic interpretation in a special way.

4.4.0. Association with Focal Scope

Bryzgunova (1964: 80) provides several examples of lexical items which have the semantic property of attracting focus. Such items as DAŻE 'even', IMENNO 'precisely', NI 'not even', UŽE 'already', TOŽE 'also', etc., either attract or control focus by bearing the main stress. Observe the following examples cited by Bryzgunova:

(4.9) a. On ne spal ni MINUTY
'He didn't sleep not even a MINUTE'

b. Imenno VAM ja ne xoču ètogo govornit'
'(It's) precisely YOU I don't want to say this to'

c. Ja TOŽE xoču prinjat' učastie v rabote
'I ALSO want to take part in the work'
The lexical items that attract or control focus will define a scope (one or more nodes) in the surface structure bearing a particular structural relation to the lexical item (Jackendoff, 1972: 249).

Association with focus will usually take place only if the focus is within the scope of the lexical item attracting or controlling focus. For example, in (4.9c) the particle TOŽE bears the focus and associates the focus to the left. But NI and IMENNO associate with focus to the right in (4.9a,b).

The emphatic particles VOT ČTO 'that's what' and IMENNO ĖTO 'precisely this' automatically include lexical material to the left in their scope:

(4.10) a. Čto ty BEDNIJ F VOT F Čto ne ponjatno

'That you are POOR - THAT'S what is not understandable'

b. Čto u nas takaja BEZRABOTICA F - imenno ĖTO F strašit ljudej

'That we have such high UNEMPLOYMENT - precisely THIS frightens the people'

But if the emphatic particles are absent, then the normal syntactically based focus is assigned the rightmost constituent. Compare sentence (4.10a) with (4.11).
The definitions of the scopes of emphatic particles are rather complex and will not be examined here. The problem is that any single node can be within the scope of these particles as with the particle IMENNO TO:

(4.12) a. Bella byla dovol'na imenno TEMₚ
    a. čto Vadim PRIEDETₚ;  b. čto VADIMₚ priedet

'Bella was satisfied because
a. Nadim will COME;  b. it is VADIM who will come'

Thus IMENNO TO associates focus only with the item bearing the phonological focus and excludes the rest.

4.5.0. Disassociation from Focal Scope

The definition of focus must still take into account certain anaphoric items within the rheme constituent which are contextually determined information and therefore do not convey new information. In other words, a theory of focus must have a rule which will disassociate anaphoric items from the scope of focus.

In the examples below, the underlined anaphoric items are within the domain of VP-scope but are disassociated from focus interpretation.
(4.13) a. ëtò (ne BESPOKOITF ego)_VP
   'That (doesn't BOTHER him)_VP

b. Zìžn' (byla ŽESTOKAF k nemu)_VP
   'Life (was CRUEL to him)'

c. Ja (VINOVATF pered toboj)_VP
   'I'm (INDEBTED to you)'

In addition, situational adverbs such as TEPER 'now', ZDES 'here', TAM 'there'; adverb phrases V SUBBOTU 'on Saturday', V UNIVERSITETE 'at the university', etc., are purely redundant information which provide temporal or locational 'settings' for other lexical items in focus.

It is clear that the scope of focus is restricted by semantic interpretation rules which disassociate focus.

4.6.0. Semantic Markers

The semantic representation of a sentence contains various semantic markers such as TO-TOPIC, ÉTO-TOPIC, TO-PIVOT, GENERAL FOCUS, PERSONAL FOCUS, and CONFIRMATIONAL FOCUS, which describes the meaning of sentences. In Jackendoff's (1972) interpretive theory, these semantic markers are called modal operators. Thus each modal operator M has an associated modal condition C_M which may be placed on M which makes different claims about the semantic effect of a given operator on semantic interpretation.
A semantic interpretation rule relates the modal structure of the sentence to its syntactic structure. Jackendoff proposes the following general rule (Jackendoff, 1972: 293):

(4.14) Modal Projection Rule

Given a lexical item A whose semantic representation contains a modal operator M. If an NP is within the scope of A, it is optionally dependent on M in the modal structure, that is, subject to $C_M$. If an NP is outside the scope of M, it is not dependent on M.

I have assumed that Scopes I-III are dependent on modal operators of discourse structure (that is, Scopes I-III are semantically dependent on discourse operators, even though these scopes themselves serve as semantic operators).

The division of modal operators into those semantically controlling and semantically dependent follows a systematic pattern. The exact criteria for the division must still be worked out.
4.6.1. The Semantic Marker TO-TOPI

Now I will state the rule of semantic interpretation which will express the semantic significance of the semantic operator TO-TOPI which can introduce several types of semantically distinct subject complements as topic-constituents.

Gvozdev (1968: 239) observes that the head determiner TO 'that' can amplify such semantically variant sentential subjects as POČEMU 'why', KUDA 'where', KOGDA 'when', ČTO 'that', etc., although such topic amplification is stylistically marked. The following are some examples.

(4.15) a. \{To \ počemu ona uexala\(_P\), ne bylo IZVESTNO\(_F\) Ta pričina, počemu ona uexala\(_P\), ne byla IZVESTNA\(_F\)
    'That/the reason why she left was not KNOWN

b. \{To \ kuda ona uexala\(_P\), ne bylo IZVESTNO\(_F\) To mesto, kuda ona uexala\(_P\), ne bylo IZVESTNO\(_F\)
    'That/the place where she left to was not KNOWN'

c. \{To \ kogda ona uexala\(_P\), ne bylo IZVESTNO\(_F\) To vremja, kogda ona uexala\(_P\), ne bylo IZVESTNO\(_F\)
    'That/the time when she left was not KNOWN'

d. \{To \ čto ona uexala\(_P\), ne bylo IZVESTNO\(_F\) Tot fakt, čto ona uexala\(_P\), ne byl IZVESTEN\(_F\)
    'That/the fact that she left was not KNOWN'

Since the head determiner TO is lexically empty and only serves a rhetorical function to amplify the importance of the topic-clause it is not necessary to specify its anaphoric meaning as either (+ PRIČINA), (+ MESTO),
(+ VREMJA), or (+ FAKT), because the sentential complement itself is specified as containing these semantic properties. In other words, the semantic component can have a rule showing that TO has the differential meaning of its sentential complement without resorting to a lexical rule such as PRIČINA ⇒ TO, implying that TO has the semantic reading PRIČINA. Under this analysis, TO will not be assigned a lexical meaning but only a rhetorical meaning as either a topic-amplifier or pivot focus depending on the particular context in which it occurs.

The semantic marker TOPIC(T) will be assigned to TO in those contexts in which TO is the topic amplifier. In turn, the S Complement embedded under NP TO will be semantically dependent on TOPIC. This dependence is expressed in the following statement.

(4.16) Semantic Dependence on TO-TOPIC

If the head NP TO contains a semantic marker TOPIC(T) a ČTO Complement coreferential with TO and to the right of T is interpreted as the constituent conveying the old information.
4.6.2. The Semantic Marker ĖTO-TOPI

In the discourse contexts in which the anaphoric pronoun ĖTO occurs, it will be assigned the rhetorical marker TOPIC(T). Further, associated with T is a semantic relation which claims that a coreferential S Complement is semantically dependent on TOPIC: This interpretive rule is the following:

(4.17) Semantic Dependence on ĖTO-TOPI

- If the anaphoric pronoun ĖTO contains a TOPIC(T), a S Complement coreferential with ĖTO and positioned to the left or right of T is interpreted as the rhetorical (repeated) topic. TOPIC claims that the S Complement is important.

Predictably, the role of object ĖTO as a topic marker is to signal that the antecedent S complement is repeated information regardless of its surface position. Thus rule (4.17) expresses the generalization that ĖTO's rhetorical function is the same in both (4.17a) and (4.17b).

(4.17) a. On ne ŽALELF ob ĖTOMT # čto ona uexala 'He didn't REGRET it, that she left'

b. Čto ona uexalap, ob ĖTOMT on ne ŽALELF 'That she left, about THAT he didn't REGRET'
Also, rule (4.17) applies to the subject ĖTO; that is, the rhetorical marker ĖTO affects semantic interpretation in the same way, though the syntactic environments of the topic-clause may differ. For example, the semantic effect of ĖTO positioned to the right or left of its antecedent S is the same in the following sentences.

(4.18) a. ĖTO on Æ russkij ĖTO T Æ Verno F
   'That he's Russian, that's TRUE'

   b. ĖTO T Æ Verno F Æ ĖTO on Æ russkij
   'That's TRUE, that he's Russian'

4.6.3. The Semantic Marker TO-PIVOT

On the phonological level TO-PIVOT designates a particular intonation contour which disambiguates certain uses of focus. This pitch contour is the Pivot Accent which is placed on the lexical item marking the boundary between the topic information and the focus information.

It is important to observe that the Pivot Accent cannot be assigned freely but is constrained by a coherent class of possible contrasts with the focus. The problem of defining a class of possible contrasts with the focus involves the interaction of pragmatic, lexical-semantic and syntactic constraints.
On the semantic level the interpretation of focus will be dependent on the TO-PIVOT marker, since an interpretive rule will specify the structural domain of focus which is associated with TO as the focus signal. This semantic dependence on TO-PIVOT is captured in the following statement.

(4.19) Semantic Dependence on TO-PIVOT

If the determiner TO contains the marker PIVOT, then an S Complement to the right of TO-PIVOT is interpreted as the constituent conveying the new information.

In the example below, TO serves as a focus signal whose scope is the entire S' to the right of TO:

(4.20) Nexorošo TO_p čto Sergej stal mnogo VYPIVAT_F

'What's not good is that Sergej started to DRINK a lot'

In other cases, TO can be associated with a single lexical item such as a quantifier or a human object:

(4.21) a. Nexorošo TO_p čto Sergej pjët SLUŠKOM_F mnogo

'What's not good is that Sergej drinks TOO much'

b. Nexorošo TO_p čto SERGEJ_F stal vypivat

'What's not good is that SERGEJ started to drink'
It is obvious from these examples that the scope of TO can only be determined after Focus Placement in surface structure. This single fact strongly supports a surface theory of focus assignment.

4.7.0. Semantic Binding Principles

A distinction is made between two types of Binding relations which are associated with the informational role of subject complements marked for focus in postverbal position. These relations are labelled "explicational" and "specificational".

4.7.1. The Explicational Relation

The notion "explicational relation" denotes the semantic dependence of ČTO-clauses on the semantic properties of predicate verbals (verbs, adverbs and adjectives) which require explication of their meaning. Thus whenever a head VP needs explication it will semantically bind its complement in postverbal position within root S. In the following sentences the postverbal ČTO-clauses explicate the meaning of their respective head referents.

(4.22) a. Kažetsja, čto pojдет DŽIND'F

'(It) seems that it going to RAIN'
Stalo jasným, čto on ne VERNĚTSJАF
'(it) became obvious that he won't RETURN'

In traditional terms this binding relation characterizes so-called topicless or rheme sentences (Ružička, 1963; Adamec, 1973; Miller, 1973; and Comrie, 1974). In formal terms this relation is embodied in the semantic marker EXPLICATIONAL, as expressed in (4.23).

(4.23) Explicational Information
A S Complement is semantically bound in postverbal position within root S by a head referent VP which requires explication.
Interpret the entire S as conveying new information of a descriptive nature.

4.7.2. The Specificational Relation
The notion "specificational relation" describes the dependence of postverbal ČTO Subjects on the discourse marker TO-PIVOT in surface structure. A semantic binding condition states that TO-PIVOT binds its S Complement to the right of TO and outside root S in order to have the S Complement express the specificational relation. In the following two sentences the postverbal ČTO Subjects marked for focus express this type of semantic relation.
(4.24) a. Stalo jasným TOP čto on ne VERNĚTSJA_F
    'What became obvious was that he won't RETURN'

b. Bylo ne verným TOP čto on Ø agent KGB_F
    'What wasn't true was that he's a KGB agent'

The Binding relation Specificalional is expressed in the following statement:

(4.25) Specificational Information

A S Complement is semantically bound in post-verbal position by the marker TO-PIVOT to the right of TO and outside the S'. Interpret the S Complement as conveying specificational information of a personal nature (which is speaker-hearer oriented).

A fundamental property of this Binding condition is that it states the syntactic and semantic generalizations that Specificational relations are expressed in end-focus position of the S'' containing two discourse constituents: the leftmost topic-S' and the rightmost focus-S'.

In summary, the system of binding principles enables the grammar not only to formally express certain kinds of semantic generalizations about the informational roles of TO Subjects in surface structures but also shows how a given semantic relation constrains the choice of syntactic form.
The explanatory value of the binding principles is seen in the type of semantic information which is expressed with the two relations EXPLICATIONAL(S) and SPECIFICATIONAL(S).

There are undoubtedly other solutions to the problem related to the phenomena of capturing the significance of movement rules. But what is most important is the obvious realization that movement rules are associated with particular kinds of semantic relations which are created in surface structure.

4.8. Inferences about EXPLICATIONAL(S) and SPECIFICATIONAL(S)

Now I will show how a common semantic representation such as:

\[(4.26) \quad (\text{KNOW}_{VP} + \text{FACT}_S)_S\]

combines with the functional relations EXPLICATIONAL(S) and SPECIFICATIONAL(TO+S) to identify the distinct semantic relations expressed in these two sentences.

\[(4.27) \quad \begin{align*}
\text{a. } & \text{IZVESTNO + EXP(S)} \\
& \text{Izvěstno, čto Kanada bogataja STRANA}_F \\
& '(\text{It's) known that Canada is a rich COUNTRY'} \\
\text{b. } & \text{IZVESTNO + SPEC(TO+S)} \\
& \text{Izvestno TO}_P \text{ čto Kanada bogataja STRANA}_F \\
& 'What is known is that Canada is a rich COUNTRY'
\end{align*}\]
Although these sentences differ in focus interpretation and surface bracketing, it is assumed that both share the highly simplified semantic representation given as 
\[(\text{KNOW}_{\text{VP}} + \text{FACT}_S)_S\]

It is important to note that I do not claim that either of the sentences in (4.27) is semantically basic, since the CTO-clauses in both are derived by means of phrase structure rules of the base, while TO in (4.27b) is moved from its original position by TO FOCUS Movement.

The main assumption about the semantic representation of sentences (4.27a,b) is that the semantic difference between these two sentences is formally captured by distinct inference rules involving the two functions \(\text{EXP}(S)\) and \(\text{SPEC}(\text{TO}+S)\).\(^6\)

First, let us examine the semantic properties of \(\text{EXP}(S)\), which characterizes the inferred relation between \(\text{IZVESTNO}\) and its CTO Subject in sentence (4.27a).

4.8.1. The Semantic Function \(\text{EXP}(\text{FACT}_S)\)

The semantic function \(\text{EXP}(\text{FACT}_S)\) is related to the semantic representation of a main VP containing \(\text{IZVESTNO}\) by an inference rule of the type: \(\text{F}(X) \Rightarrow \text{F}(\text{EXP}(X))\). In terms of elements of semantic representation this entailment relation corresponds to the formalization of:

\[
(4.28) \quad (\text{KNOW}_{\text{VP}} + \text{FACT}_S)_S \Rightarrow (\text{KNOW}_{\text{VP}} + \text{EXP}(\text{FACT}_S)_S)
\]
In analytic terms the function EXP(S) denotes the sentential explication of semantic information predicted by IZVESTNO, which binds its complement clause in postverbal position of a root S so as to convey general information of a descriptive nature. In other words, the functional composition \((\text{KNOW}_{\text{vp}} + \text{EXP(FACT)}_{\text{S}})_{\text{S}}\) paraphrases as: the EXPLICATION(S) of KNOWLEDGE(VP) of a FACT(S) as GENERAL INFORMATION (the capitalization represents the semantic markers of sentence (4.27a). Thus the functional composition (4.26) maps onto syntactic form to produce a semantic tree of the following type:

\[(4.29)\]

\[
\begin{array}{c}
\text{S} \\
\text{ASSERTION} \\
\text{VP} \\
\text{IZVESTNO} \\
\end{array}\quad \begin{array}{c}
\text{EXP(FACT)} \\
\text{ČTO KANADA BOGATAJA STRANA} \\
\end{array}
\]

'(It's) known that Canada is a rich country'

An adequate semantic theory must still account for the way a semantic tree like (4.29) above is related to surface focus. This can be formally expressed by a further rule of inference which claims that the relation EXP(S) is associated with the marker GENERAL FOCUS, as in

\[(4.30)\] Inferences about GENERAL FOCUS(S)

\[
\text{GENERAL FOCUS}(S) \Rightarrow \text{EXP(GENERAL FOCUS}(S))
\]
This inference corresponds to root S Scope and General Focus Assignment of a root S.

(4.31) \[ S = \text{RHEME} \]
\[ \text{VP} \]
\[ \text{V'} \]
\[ \text{V} \]
\[ \text{AP} \]
\[ \triangle \]
\[ \triangle \]
\[ \text{EXP} (... X_F ...) \]

Let us now examine how the entailment SPECIFICATIONAL(TO+FACTS) derives from the common semantic representation: \( (\text{KNOW}_{\text{VP}} + \text{FACTS})_S \)

4.8.2. The Semantic Function SPEC(TO+FACT(S))

The predicate verbal IZVESTNO can combine with the functional relation SPEC(TO+FACTS) to identify the entailment conveyed by the postverbal TO ČTO Subject of a bar S sentence like the one below, which is repeated as:

(4.32) Izvestno TO_p Čto Kanada bogataja STRANA_F

'What is known is that Canada is a rich Country'

The semantic representation of this sentence is related to the basic semantic structure by an inference rule of the form:

(4.33) Inference about SPEC(TO+FACTS)

\( (\text{KNOW}_{\text{VP}} + \text{FACTS})_S \equiv (\text{KNOW}_{\text{VP}} + \text{SPEC (TO)}_{\text{NPf}})_S + \text{FACTS}_S \)
This inference states that KNOWLEDGE(VP) about SOMETHING(NP₁) is IDENTIFIED as KNOWLEDGE(VP) of a FACT(S) which conveys PERSONAL FOCUS. In essence, the SPECIFIED FACT(S) represents the main assertion of (4.32) while the main clause is the topic S. Consequently, the semantic reading of this sentence consists of the Topic S and Assertion S given below:

(4.34) a. Topic S =⇒ SOMETHING IS KNOWN

b. Assertion S =⇒ CANADA IS A RICH COUNTRY

The functional composition of sentence (4.32) correlates to the syntactic form of a tree structure with two major constituent Ss, as in:

(4.35)

```
S'' ——— S' ——— S

TOPIC

S

SPEC (SOMETHING) ——— FACT

VP ——— NP₁

IZVESTNO ——— TO ——— ČTO KANADA BOGATAJA STRANA

'Known is the fact that Canada is a rich country'

= What is known is that Canada is a rich country'

(Note that the arrow ---- denotes anaphoric coreference)
A separate rule of inference will relate this derived semantic structure to Personal Focus interpretation, as in:

(4.36) Inferences about PERSONAL FOCUS(S)

PERSONAL FOCUS(S) \implies \text{SPEC(PERSONAL FOCUS(S))}

The effect of (4.36) is to correlate semantic representation to ČTO Subject Scope, Pivot Accent and Personal Focus of a bar S tree such as:

(4.37)

This system of semantic functions and inference principles enables the grammar not only to formally describe the semantic structure of IZVESTNO and its postverbal ČTO Subject but also to account for entailment between a common semantic representation and diverse syntactic form.

The theory of functional relations is able to formally express two types of assumptions: (1) that the semantic differences produced by word order changes and focus assignment are captured by different types of inference rules, and (2) that the semantic similarities
are characterized by assigning transformationally related sentences a common semantic composition in their semantic representation.

4.9.0. Summary

It appears that semantic representations assigned by the theory constrain the choice of syntactic form. Indirectly the rules of inference which show how semantic entities are combined identify the new relations produced by different types of combinations reflecting a particular semantic function conveyed by a subject complement in surface structure.

For example, it is not fortuitous that the function EXPLICATIONAL(S) characterize focused ĈTO Complements as conveying General Focus information of a descriptive nature in sentences which have no topic-constituent. Moreover, it is significant that a ĈTO Subject expresses the relation SPECIFICATIONAL(TO+S) in sentences with both a topic and a focal constituent.

These facts indicate that semantic form and surface syntactic form are tightly linked and predictable on the basis of pragmatic inference principles. Although rules of inference are not rules of grammar and do not relate phonetic representation to semantic representation, as Jackendoff suggests they make specific claims about the real world.
On the basis of the evidence examined in this study it is possible to make the following general statement.

The relation between the surface syntactic position of CTO Clauses and their informational role in sentences is constrained in terms of semantic representation, entailment relations, semantic markers, surface constituency bracketing and the assignment of surface focus.
The theory of functional sentence perspective ranks lexical items according to the principle of "communicative dynamism" with the topic-item being least dynamic in terms of informational content and the focal item the most dynamic.

The semantic variable which substitutes for the lexical material in focus is usually some Q-pronoun of an underlying question such as in (4.1a), corresponding to the focal sentential complement in (4.1b).

(4.1) a. ČTO važno?
   'WHAT's important?'
   b. Važno to, čto doklad napisan XOROŠO'
   'What's important is that the report is written WELL'

Within the theory of focus pursued here, the focus is assigned to the surface syntactic structure of a sentence by the rule called Focus Placement of the form:

(4.2) Focus Placement

\[ X^n \rightarrow \ldots F(X^n) \ldots \]

where \( X^n \) is any lexical item within the categories \( X', X'', \) or \( X''' \).

Rule (4.2) is a rule schema which is governed by the following General Scope Principle:

(4.3) General Scope Principle

The phonological marker \( F(X^n) \) is associated with a given scope marker \( R(X^n) \) assigned to a syntactic category \( X^n \) of each sentence in surface structure.
Essentially, the scope component consists of three sub-components, the General Scope Principle (4.3), Scope Adjustment Rules (section 4.3), and Output Filters on specific lexical items that determine or control the scope relations under certain conditions such as Association with Focal Scope (section 4.4) and Disassociation from Focal Scope (section 4.5).

Instead of the notion "scope", Jackendoff (1972: 249-251) uses "range" to define a set of syntactic nodes in the surface structure which bear a particular structural relation to such lexical items as even in sentences of the type in (4.4).

(4.4) a. Even JOHN gave his daughter a new bicycle
    b. John gave even his DAUGHTER a new bicycle
    c. John gave his daughter even a new BICYCLE

In (4.4), the readings are associated with different choices of focus and even goes with the stressed NP.

Within the X-bar convention the main verb does not dominate its complement in underlying structure, as shown in this tree structure:

(4.5)

```
S
  /\  
NP VP
   /\  
  N V''
    /\ 
   V' NP
   /|\  
  N Eto ne BESPOKOIT ego
```

The scope of focus is V' in (4.5) not V'', therefore NP EGO is outside the scope of the focal constituent.
An account of entailment between related sentences is stated in terms of semantic representations. Jackendoff (1976: 110-111) formulates the general principle for entailment relations as:

\[(4.6) \text{ A given Semantic Representation}^1 \text{ entails a Semantic Representation}^2 \text{ if SR-1 can be derived from SR-2 by means of a sequence of inference rules.} \]

Inference rules have the form:

\[(4.7) \text{ SR-1'} = \text{ SR-2 under condition C}_1, \ldots, \text{ C}_n. \]

Jackendoff points out that the conditions C\(_1\), ... C\(_n\) are elements of fact not necessarily expressed as sentences. That is, since pragmatic inferences exhibit properties of the real world, the claims they make is more a problem in cognitive psychology than one in linguistics.
APPENDIX

This appendix lists some of the syntactic and semantic characteristics of five classes of verbs which take postverbal subject complements as subordinate or main assertions. In establishing which \( \text{CTO} \) subjects are the main assertions and which are not, I assume the definition of assertion stated in Hooper and Thompson (1973: 472):

...if a proposition is asserted by a sentence, then questioning or negating that sentence should question or negate the assertion it is making.

Hence, if negating or questioning the main verb is the same as negating or questioning the postverbal subject complement in focus, then the complement is the main assertion.

Following Kiparskys' (1971) classification of verbs into factives and nonfactives and Karttunen's (1971) distinction between factives and semifactives, I distinguish five classes of verbs that take asserted \( \text{CTO} \) subjects. These are the three classes of nonfactives (A/B/C), one class of factives (D), and one class of semifactives (E) listed in (A.1).
(A.1) a. Nonfactive

A

VERNO 'be sure, true'
OČEVIDNO 'be obvious'
JASNO 'be clear'
NESOMNENNO 'be certain'

B

KAŻETSJA '(it) seems' (neuter, singular)
SLUČAETSJA '(it) happens'
SČITAETSJA '(it) is considered'
BÝVAET '(it) occurs, happens'

C

NAVERNO 'be-probable, most likely'
VEROJATNO 'be likely'
VOZMOŽNO 'be possible'

b. Factive

D

ŽAL' 'be sorry, a pity'

UDIVITEL'NO 'be surprised'
STRANNO 'be odd, strange'
INTERESNO 'be interesting'
c. Semifactive

IZVESTNO 'be known'
OBNARUŽENO 'be discovered'
STAT' JASNYM 'realize'
PONJATNO 'be understood'

Class A: Pred Adjectives VERO, OČEVIDNO and JASNO

A class A PrdA like OČEVIDNO 'be obvious' can take a postverbal ČTO Subject Complement as an indirect assertion, which is not necessarily a speaker assertion. Sentence (A.1 a), for example, is a speaker assertion while (A.1 b) an indirect (reported) assertion.

(A.1) a. Načal idti DOŽD'F
       '(It) started to RAIN'

       b. Očevdno TOp, čto načal idti DOŽD'F
       '(It's) obvious that (it) started to RAIN ==
       What is obvious is that (it) started to RAIN'

The complement assertion of (A.1 b) is not the sole assertion since the main clause also makes the assertion:

(A.2) Čto-to očevdno
       'Something is obvious'

Therefore, a sentence with two assertions contains a presupposition assertion and a focus assertion.
A significant property of class A verbs is that negation affects the truth value of the complement proposition. For example, the negation of VERNO in (A.3 a) implies the negation of its complement proposition (A.3 b).

(A.3) a. Ne verno TO_p, čto ona POXUDELA_F

'What is not true is that she LOST weight'

b. Ona ne poxudela

'She didn't lose weight'

Briefly, class A verbs such as VERNO, JASNO, OČEVIDNO, etc. take complement clauses as main assertions to express the focal information. The negation of a class A verb clearly demonstrates that these verbs take indirect assertions as complements. To see this compare these two sentences:

(A.4) a. Očevidno TO_p, čto pojđet DOŽD_F

'What's obvious is that (it's) going to RAIN'

b. Ne očevidno TO_p, čto pojđet DOŽD_F

'What's not obvious is that (it's) going to RAIN'

Although the negation of OČEVIDNO does not negate the complement proposition, it raises doubts about its truth and the sentence seems to be incomplete. If we add a clause to (A.4 b) the result is a more complete sentence:
(A.5) Ne očevidno TO_p, čto pojdet DOŽD,F, a očevidno TO_p, čto pogoda budet PLOXAJA.
'What isn't obvious is that (it's) going to RAIN, but what is obvious is that the weather will be BAD'.

As mentioned earlier, the negation of a class A verb casts some doubt on the truth of the complement. Thus with confirmation focus assigned to the main verb this questions the truth of the complement more emphatically. For example, sentence (A.6 a) implies the likelihood of the truth of the complement in (A.6 b).

(A.6) a. Čto pojdet dožd', NE_F očevidno
'That (it's) going to rain is NOT obvious'

⇒ b. Dožd', verojatno, NE_F pojdet
'Rain likely NOT fall = It likely will NOT rain
(Note that the symbol ⇒ denotes implication)

Class B Verbs: KAŽETSJA, SLUČAETSJA, SCITAETSJA

A mental process verb like KAŽETSJA '(it) seems' has an assertion as its complement and it does not make an assertion independent of the complement assertion. In the example below, the complement clause is the sole assertion.

(A.7) Kažetsja, čto ona ZAMUŽEM
'(It) seems that she's MARRIED'
In (A.7), KAZETSJA merely qualifies the main assertion of its complement without making an independent assertion. The ungrammatical sentence of (A.8) shows that KAZETSJA cannot be the assertion.

(A.8) *Èto KAZETSJA$_F$

* 'That SEEMS'

Thus a semantically weak verb like KAZETSJA typically qualifies the main assertion, as in:

(A.9) Èto kazalos' STRANNYM$_F$

* 'That seemed STRANGE'

With KAZETSJA a speaker may resort to a tag question in asking for confirmation about the truth of an asserted CTO Complement (this observation is made by Hooper and Thompson (1973, 477)):

(A.10) Kázetsja, čto ona ZAMUŽEM$_F$, ne tak li?

'(It) seems that she's MARRIED, isn't she?'

A tag question is inappropriate if KAZETSJA is the main assertion but acceptable with a class of verbs like VERNO:

(A.11) Èto [*KAZETSJA$_F$], čto ona zamužem, ne tak li?

\[
\begin{cases}
\text{VERNO}_F \\
\text{is TRUE}
\end{cases}
\]

'It [*SEEMS ]', that she's married, 'isn't it?'
This difference indicates that **VERNO** makes as assertion independent of its complement assertion while **KAZETSJA** relies solely on its complement for its assertion.

Since **KAZETSJA** does not make an independent assertion negating or questioning **KAZETSJA** is like negating or questioning its complement. Note that the truth value of these pairs is invariant:

(A.12) a. Ne kažetsja li tebe, čto on p'jan?

'Does (it) not seem to you that he's drunk?'

b. On P'JAN, kažetsja

'He's DRUNK, (it) seems'

(A.13) a. Mne NEF kažetsja, čto on p'jan

'(It) does NOT seem to me that he's drunk'

b. On NEF p'jan, mne kažetsja

'He's NOT drunk, (it) seems to me'

These sentence pairs confirm the fact that the complement is the main assertion of **KAZETSJA**.

**Class C Verbs: VOZMOZNO, NAVERNO, VEROJATNO**

According to Hooper and Thompson (1973: 478), the complements of verbs like BE LIKELY, BE POSSIBLE, BE PROBABLE are not assumed to be true or false. For example, in (A.14) the main assertion expressed by **VOZMOZNO** 'be possible' includes the subject complement to its right, but sentence (A.15) makes two independent assertions.
(A.14) Vožmožno, čto ona BOGATA
'(It's) possible that she's RICH'

(A.15) Vozmožno TO_p, čto ona BOGATA_F
'What is possible is that she's RICH'

An interesting difference between VOZMOŽNO and VÉRNO is that negation of VOZMOŽNO does not affect the truth value of its complement, but the negation of VÉRNO implies the negation of its complement:

(A.16) a. £TO_T ne VOZMOŽNO_F, čto ona bogata
'THAT'S not POSSIBLE, that she's rich'

b. £TO_T ne VÉRNO_F, čto ona bogata
'THAT'S not TRUE, that she's rich'

Only NE VÉRNO of (A.16 b) presupposes the truth of the statement:

(A.17) Ona ne bogata
'She's not rich'

The negation of VOZMOŽNO only casts some doubt as to the truth of ONA BOGATA without invalidating the truth value. Consequently, the negation of VOZMOŽNO only negates the main assertion ETO VOZMOŽNO and not the truth of its complement.
Class D Verbs: VAŽNO, STRANNO, INTERESNO, UDIVITEL'NO

Factive verbs such as VAŽNO 'be important', STRANNO 'be odd, strange' and INTERESNO 'be interesting' express an emotive or subjective attitude in their ČTO Subject Complements. An important characteristic of factives is that the complement is logically implied or presupposed to be true. Thus under negation the truth value of the presupposition remains constant (as observed by Keenan, 1971 and Kiparskys, 1971).

This means that the negation of a factive verb like UDIVITEL'NO 'be surprised' does not negate its complement proposition:

(A.18) Ne udivitel'no TO_p, čto ona i KRASIVA_F i BOGATA_F

'What isn't surprising is that she's both BEAUTIFUL and RICH'

Thus the negated assertion of (A.18) still implies the truth of:

(A.19) Ona i KRASIVA_F i BOGATA_F

'She's both BEAUTIFUL and RICH'

Complements of true factives do not allow tag question formation while semifactive verbs do:
Factives

\[ \text{Žal}' \]
\[ \begin{cases} \text{Stranno} & \text{TO}_P, \, čtò on ne ljubit PIVO}_P, \, ne tak li? \\ \text{Udivitel'no} & \text{a pity} \\ \text{What's} & \text{\{strange\}} \\ \text{surprising} \end{cases} \]

\[ \text{What's} \text{\{-known\}} \text{is that he doesn't like BEER, does he?} \]

Semifactives

\[ \begin{cases} \text{Izvestno} & \text{TO}_P, \, čtò on ne ljubit PIVO}_P, \, ne tak li? \\ \text{Zametno} & \text{\{noticeable\}} \end{cases} \]

\[ \text{What's} \text{\{known\}} \text{is that he doesn't like to drink BEER, does he?} \]

Semifactives allow tag questions since their complements are usually the main assertions, while factives reject tag questions on grounds that they are the main assertions.

Another distinction between factives and semifactives is that factive assertions do not reduce to sentence adverbials, while certain semifactives as qualifiers of complement assertions do reduce. This is illustrated by comparing (A.22) to (A.23).

(A.22) Factives

a. \[ *\text{Ona POXUDELA}_F, \{\text{stranno/žal'/udivitel'no}\} \]

b. \[ *\text{Ona \{stranno/žal'/udivitel'no\} POXUDELA}_F \]

(A.21) Semifactives

\[ \text{comparing (A.22) to (A.23).} \]
(A.23) **Semifactives**

a. Ona POXUDELA$_F$, zametno
   'She lost WEIGHT, (it's) noticeable'

b. Ona, zametno, POXUDELA$_F$
   'She noticeably lost WEIGHT'

**Class E Verbs: IZVESTNO, PONJATNO**

Complements of semifactive verbs like IZVESTNO 'be known' and ZAMETNO 'be noticeable' behave like main assertions. The negation of the main verb raises some doubt about the truth of the complement as with a nonfactive verb like OČEVIDNO 'be obvious':

(A.24) a. Ne izvestno TO$_p$, čto dver' ZAMKNUTA$_F$
   'What isn't known is that the door is LOCKED'

b. Ne očevidno TO$_p$, čto dver' ZAMKNUTA$_F$
   'What isn't obvious is that the door is LOCKED'

The complements of these sentences seem to be affected by negation of the main verb and paraphrase with the indirect question complements in (A.25).

(A.25) a. Ne izvestno TO$_p$, ZAMKNUTA li dver'?
   'What isn't known is if the door is LOCKED'

b. Ne očevidno TO$_p$, ZAMKNUTA li dver'?
   'What isn't obvious is if the door is LOCKED'

This fact suggests that the complement of a semifactive verb like IZVESTNO is asserted and affected by main verb negation. Karttunen (1971) noted that the main difference
between a factive verb such as UDIVITEL'NO and a semifactive verb like IZVESTNO is that under negation the semifactive can lose its factivity. Therefore, with UDIVITEL'NO the truth of its complement can be inferred but not with IZVESTNO:

(A.26) a. Ne udivitel'no T₀p, čto on P'JAN
   'What's not surprising is that he's DRUNK'
  =>  b. On P'JAN
      'He's DRUNK'

(A.27) a. Ne izvestno T₀p, P'JAN li on?
   'What's not known is if he's DRUNK'
 /=>/ b. On P'JAN
     (Note that the symbol /=>/ denotes "does not imply")

These sentences illustrate that the complements of factive verbs are presupposed, and semantically asserted with semifactives

Sentential Adverbs

When OČEVIDNO, KAZETSJA and VEROJATNO merely qualify the main assertion their status as predicate verbs is reduced to the status of sentence adverbials. For example, in (A.28) these adverbials merely qualify the truth of the main assertion.
Obviously, it seems that the adverbials in (A.28) are not asserted as main predicates. Thus it is unacceptable to negate the main assertion by negating the adverbials:

\[
\begin{align*}
\text{(A.29) } & \text{ *Ona, ne kažetsja } ZAMUŽEM_\text{f} \\
& \text{ ne očevdno } \\
& \text{ not obviously } \\
& \text{ *'She (it) does not seem } \text{ is MARRIED' } \\
& \text{ not likely }
\end{align*}
\]

These same sentences are acceptable with main verb negation:

\[
\begin{align*}
\text{(A.30) } & \text{ Ona, kažetsja } \text{ ne ZAMUŽEM}_\text{f} \\
& \text{ očevdno } \\
& \text{ obviously } \\
& \text{ 'She (it) seems } \text{ is not MARRIED' } \\
& \text{ likely }
\end{align*}
\]
Unlike the nonfactive verbs such as ОЦЕВИДНО, КАЗЕТСЯ and ВЕРОЯТНО which can convert into sentence adverbials, the factives like УДИВИТЕЛЬНО, СТРАННО, ИНТЕРЕСНО and semifactive ИЗВЕСТНО do not become adverbials without a change in meaning. Therefore, while sentences (A.31) are acceptable the ones in (A.32) are not.

\[
\begin{align*}
\text{(A.31)} & \quad \left\{ \begin{array}{l}
\text{Uдивительное} \\
\text{Strанно} \\
\text{Iзвестно}
\end{array} \right\}, \text{что она замуж}
\end{align*}
\]

\[
\begin{align*}
\text{surprising} & \quad \begin{cases}
\text{strange} \\
\text{known}
\end{cases} \text{that she's MARRIED'}
\end{align*}
\]

\[
\begin{align*}
\text{(A.32)} & \quad \left\{ \begin{array}{l}
\text{удивительное} \\
\text{strанно} \\
\text{известно}
\end{array} \right\}, \text{замуж}
\end{align*}
\]

\[
\begin{align*}
\text{is surprising} & \quad \begin{cases}
\text{strangely} \\
\text{knowingly}
\end{cases} \text{MARRIED'}
\end{align*}
\]

These sentences show that factive ЧТО Complements which are presupposed and not asserted do not permit their verbs to reduce to adverbials in sentences. Consequently, sentences with УДИВИТЕЛЬНО, СТРАННО, ИНТЕРЕСНО, and ИЗВЕСТНО contain two assertions: (1) a main verb assertion, and (2) a complement assertion in focus.
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