

THE ROLE OF CASE IN RUSSIAN SYNTAX

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in partial fulfillment of the requirements for the degree of Doctor of Philosophy

## ABSTRACT

Case has been playing an increasingly important role in recent theoretical work in linguistics, and the system of Russian case provides a rich area for linguistic research. The study of case is interesting, not only for its own sake, but also for what it may reveal about the linguistic organization that it reflects.

This dissertation considers the representation of case in Russian, within the framework of Lexical Functional Grammar (LFG). The processes of case assignment and agreement are investigated. It is suggested that the decomposition of case into distinctive features allows a natural account of the alternation of cases found in subject and object position. Chapter 1 deals with subject casemarking. It is proposed that subjects in Russian occur in either the nominative or dative case. Given the representation of case presented, the seemingly puzzling casemarking of modifiers may be accounted for quite simply. Chapter 2 focuses on the case borne by objects, which may be either accusative or genitive. The genitive casemarking of objects and apparent subjects is unified, once it is recognized that, in fact, subjects never appear in the genitive case. In Chapters 1 and 2, it is also shown that Russian casemarking provides support for the lexical-functional treatment of adjuncts and complements. Chapters 3 and 4 compare the current account of casemarking with alternative transformational proposals.

Thesis Supervisor: Joan W. Bresnan  
Title: Professor of Linguistics

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The study of case, once primarily of interest to philologists, has only recently begun to receive the attention it deserves from syntacticians. There are still many open questions concerning the nature of case assignment and agreement. Given the degenerate case system of English, the evidence crucial to an eventual understanding of the grammar of case should be sought elsewhere — in languages such as Russian, where overt casemarking plays an important role.

Moreover, the implications of the study of case may go far beyond a theory of case, since the logic of case is intimately related to the other subsystems that govern syntactic representation. Casemarking provides an added dimension, in which grammatical structures and relationships may become visible from a new perspective.

Before discussing the results of the present work — both with respect to the system of case in Russian, and the linguistic structures that Russian casemarking highlights — it will be useful to provide some background about the theoretical framework assumed. The analysis of Russian case assignment and agreement proposed in subsequent chapters presupposes the results of recent work in Lexical Functional Grammar, a system of

grammatical representation developed by Joan Bresnan (1977), (1979), (1982-a,b), Kaplan and Bresnan (1982), and other researchers. Furthermore, the results of the present study provide support for the syntactic representation allowed by this model. Therefore, for clarity of exposition, the organization of the model and the basic theoretical assumptions are summarized below.

## 0.1 LEXICAL FUNCTIONAL GRAMMAR

### 0.1.1 Organization

The lexical functional model assumes three independent but interrelated levels of grammatical representation:

- [1] Constituent structure
- [2] Lexical representation
- [3] Functional structure

Constituent structure (*c-structure*) and lexical properties are determined and represented independently. The information from these two components is integrated within functional structure (*f-structure*). The LFG model, unlike transformational models, assumes that all three levels of representation are simultaneous. There is no derivational process involved.

Productive relationships in language of the kind that inspired transformational models (e.g. Chomsky's (1957) *Syntactic Structures*), are accounted for, instead, by relationships that hold between lexical items. For example, it is assumed that corresponding to the active verb 'hit', there is a passive verb 'to be hit by', and the relationship between the arguments of active and passive verbs is predictable, since they are related by a productive lexical process. Such processes are called *lexical redundancy rules*, and they relate actual lexical items. It is assumed that lexical redundancy rules are exploited for the organization, and especially, for the acquisition, of lexical information. They are not required for on-line sentence processing, since the related lexical items are individually represented in the lexicon. [It might be useful to think of the redundancy rules as relating a large, central core of active vocabulary, while these same rules may be used productively to create and interpret peripheral lexical items. This periphery is constantly expanding, though, especially for the language learner.]

One crucial element of this model is the separation of lexical and constituent representation.<sup>1</sup> This makes it possible to determine and represent generalizations about constituent structure and subcategorization independently, without encoding subcategorization in constituent structure. The need to state subcategorization restrictions in terms of grammatical functions such as SUB (subject), OBJ (object), and

---

1. In this respect, the LFG model differs from that of Chomsky (1981), e.g., in that the "Projection Principle" (requiring constituent structure to be the reflection of subcategorization) is not assumed to hold.

the like, rather than syntactic constituents, is argued for in Grimshaw (1979) and (1981).

### 0.1.2 The Lexicon

As discussed in Bresnan (1979) and Kaplan and Bresnan (1982), each lexical entry contains a categorial specification, a predicate (henceforth PRED) which designates a meaning, and a list of features that will be promoted to the node under which the item will appear in constituent structure. Each lexical item, then, contributes information to the functional structure (f-structure) of the sentence by means of the lexical schemata. The entry for the Russian word *čelovek* 'person', for example, would contain the following information about its grammatical features:<sup>2</sup>

- (1)
- |                  |                       |
|------------------|-----------------------|
| <i>čelovek</i> : | N, (↑PRED) = 'person' |
|                  | (↑NUM) = SG           |
|                  | (↑GEND) = M           |

The metavariable '↑' (read 'mother's') is to be instantiated by the variable of the immediately dominating node (according to the algorithm presented in Bresnan (1979) and Kaplan and Bresnan (1982, fn.)). Thus, the features of *čelovek* will be transmitted to the node (N) which immediately dominates the word in constituent-structure (c-structure).

---

2. This is intended as a first approximation. In fact, number, gender, and other grammatical features might better be expressed in terms of markedness. 'SG' here is intended as a short-hand representation of '- PL', for example. The markedness distinctions are not relevant to the present discussion.

For some lexical items, the value of the predicate (that is, the meaning of the expression) is a function of the values of its arguments. For example, the verb 'kill' takes as arguments a *killer* and a *killee*.<sup>3</sup> Such an item is called a *lexical form* and is listed with its predicate argument structure and indication of corresponding grammatical functions. So, *kill* would be listed with the subject (*killer*) and object (*killee*):

(2)

<i>kill</i>	<SUB,	OBJ>
	AGENT	THEME

This will be discussed in Section 0.1.2.2.

### 0.1.2.1 Inflection

In the theory presented here, the terminal elements of the constituent structure are fully formed words. Inflection is not accomplished by syntactic derivation; rather, all inflected forms are produced by lexical rules. (See Lieber (1980) for a discussion of the nature of the lexicon under this assumption. Kiparsky (1982), Lapointe (1980), Mohanan (1982), and Selkirk (1981) also argue for insertion of fully inflected forms.) Morphological regularity is captured by lexical redundancy rules.

---

3. See Marantz (1981) for discussion of logical arguments.

So far, no mention has been made of the case features which are contained in the lexical entries of nouns and adjectives. The representation of case will be discussed in Chapter 1.

#### 0.1.2.2 Predicate Argument Structure

All lexical entries are referred to as *semantic forms*. Certain types of lexical entries have a *predicate argument structure*, a list of logical arguments.<sup>4</sup> *Semantic forms* that include such a list are referred to as *lexical forms*, and are distinguished from those that do not. As already mentioned, *kill* is a lexical form, since inherent to its meaning is the existence of a *killer* and a *killee*, while *tree* is a self-contained semantic form. Possible arguments include *agent*, *theme*,<sup>5</sup> etc., each of which holds a fixed position in predicate argument structure (argument 1, argument 2, etc.). In the lexical form, each argument is associated with a grammatical function (SUB (subject), OBJ (object), etc.) [as was illustrated in (2)]. Thus, the lexical entry contains a pairing of logical arguments and grammatical functions. The principle of *function - argument biuniqueness* requires, basically, that this pairing be one-to-one. Each argument must be assigned a unique

---

4. See Bresnan (1980) for more detailed discussion of predicate argument structures.

5. Although there are some problems in defining these notions precisely, as is discussed in Marantz (1981), for example.

grammatical function (even if the assignment is  $\emptyset$ ),<sup>6</sup> and each grammatical function that is included in the pairing must be associated with a unique argument.<sup>7</sup> As Bresnan (1980) points out, this condition places strong constraints on the types of lexical representations and grammatical rules that are allowed in languages. For example, if a sentence contains two different *BY OBJECTS*, as in Bresnan's example (48):

(3) \*She was admired *by him* *by the President*.

it is not possible to interpret both phrases as agents, and thus the sentence is inadmissible (since it would violate the Function - Argument Biuniqueness Principle). However, if one of the *by phrases* may be interpreted as a locative (adjunct) phrase, rather than an agent, then it is possible to find two *by-phrases*:

---

6. Allowing assignment of  $\emptyset$  is not a way of relaxing the requirement that all arguments be assigned functions. Arguments that are associated with the function  $\emptyset$  are interpreted in a specific way (as bound arguments (see Halvorsen's (1982) theory of semantic representation of LFG)).

7. Extra-grammatical (non-thematic) functions are permitted, however, but only in a very restricted set of circumstances. This will be clarified in Section 0.1.5.2.

(4) She was admired *by him* by the river.

Likewise, no more than one instrumental phrase is possible, as is seen in another of Bresnan's (1980) examples:

(5) \*John escaped from prison *with dynamite with a machine gun*.  
 [= John used dynamite and used a machine gun to escape from prison.]

This principle imposes restrictions on the types of lexical redundancy rules that are possible in language.

#### 0.1.2.3 Lexical Redundancy Rules

As opposed to transformational grammars (such as those of Chomsky (1965 or 1981) that have set up different levels of constituent structure (each derived from the previous level by application of movement rules), LFG assumes a single level of constituent structure, and excludes the possibility of syntactic derivation or syntactic movement (except for scrambling rules). This constituent structure is the input to the phonological component.

Syntactic relationships that have, in the traditional Transformational Grammars, been attributed to syntactic movement, are, instead, accounted for in terms of lexical relatedness. As mentioned earlier, corresponding to the active verb

'hit' <SUB, OBJ>  
 AGENT THEME

there is a passive verb



Returning now to the principle of Function - Argument Biuniqueness, it becomes apparent that certain types of lexical redundancy rules are excluded in principle: for example, a hypothetical passivization rule that transformed OBJ into SUB without deleting or changing the function of the original SUB. Such a rule would produce an inadmissible pairing of arguments to functions:

- (7) a. *No-such-verb*  
       (↑PRED) = '\$\$\$\$ <SUB, OBJ>  
                                   arg. 1   arg. 2
- b. *No-such-passivized-verb*  
       (↑PRED) = '\$\$\$\$ <SUB, SUB>  
                                   arg. 1   arg. 2

since the same grammatical function (SUB) is associated with two different arguments.

### 0.1.3 Constituent Structure

The existence of the lexical component, where subcategorization requirements are stated, allows a great simplification of c-structure (as is argued in Bresnan (1980)). Restructuring rules are no longer required to compensate for the failure of constituency and subcategorization to coincide. Moreover, such rules, which alter dominance and precedence relations, are excluded in principle.

Furthermore, the existence of functional structure allows the use of null constituency to be reduced. Within transformational grammar, null constituent structure was often justified by the need of an argument for interpretation. For example, reflexives may require an antecedent that is not syntactically overt, as in:

- (8) a. [PRO<sub>i</sub> Seeing yourself<sub>i</sub> on the evening news] is exciting.  
 b. Boris wants [PRO<sub>i</sub> to see himself<sub>i</sub>].

This type of example, although used to justify structural null elements, in fact demonstrates only the need for an argument at the level of representation where reflexives are interpreted. In LFG, this is functional structure. Therefore, it is still an open question as to whether or not a null element is structurally present. We will return to this question in Section 0.1.7.

Phrase structure expansions make use of the X' system suggested in Chomsky (1970) and elaborated and refined by Jackendoff (1977) and Bresnan (1977-b). We will assume that the phrases NP, VP, AP, and PP may be decomposed into syntactic distinctive features [ $\pm V$ ], [ $\pm N$ ]. We will further assume that Quantifier Phrases, or QP's, are distinguished by a third feature, which we will arbitrarily call [+K]. The feature decomposition allows for generalizations about the similar behavior of different categories to be captured. For example, only categories which are [+N] may bear case [that is, NP and AP]. Furthermore, the X' theory assumes the existence of supercategories X', X'', ... , where the head of the phrase X<sup>n</sup> is of the form X<sup>n-1</sup>. The reader is referred to Jackendoff for the other conventions and assumptions of this theory,

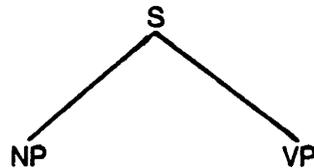
and the motivation behind them.

Grammatical functions are the interface between constituency and predicate argument structure, since they are mentioned both in Phrase Structure expansions and in the lexical entries. This fact allows c-structure information to link up with lexical information in f-structure. Thus, for example, in the sentence

(9) Natasha speaks.

the c-structure representation would be:

(10)



Associated with each constituent in the Phrase Structure (henceforth PS) expansion is an assignment of grammatical function. For example:

(11)  $S \rightarrow \begin{array}{cc} \text{NP} & \text{VP} \\ (\uparrow\text{SUB}) = \downarrow & \uparrow = \downarrow \end{array}$

The arrows are variables which are to be instantiated by the node with which the equation is associated ( $\downarrow$ ) or by the node directly above ( $\uparrow$ ). The unmarked assignment of ' $\uparrow = \downarrow$ ' to the heads of phrases identifies the head with the dominating node, so that it passes up

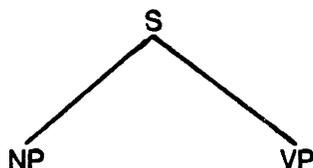
and the motivation behind them.

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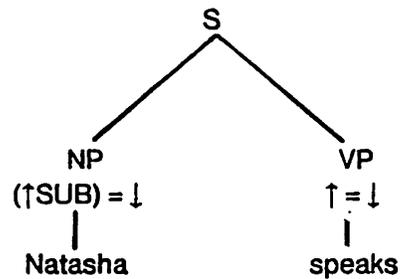
(11)  $S \rightarrow \begin{array}{cc} NP & VP \\ (\uparrow\text{SUB}) = \downarrow & \uparrow = \downarrow \end{array}$

The arrows are variables which are to be instantiated by the node with which the equation is associated ( $\downarrow$ ) or by the node directly above ( $\uparrow$ ). The unmarked assignment of ' $\uparrow = \downarrow$ ' to the heads of phrases identifies the head with the dominating node, so that it passes up

its information to the phrase above.<sup>9</sup> These equations allow the information from constituent structure and from lexical representation to be incorporated in the functional structure representation.

So, for example, the sentence in (9) will be associated with a c-structure tree like:

(12)



The annotations specifying grammatical functions permit the construction of functional structure, and allow constituent structure and lexical information to be merged.

---

9. The notation is discussed fully in Bresnan (1979). The unmarked assignment in the phrase structure expansion of  $X'$  is (i):

$$(i) X' \rightarrow \dots X \dots$$

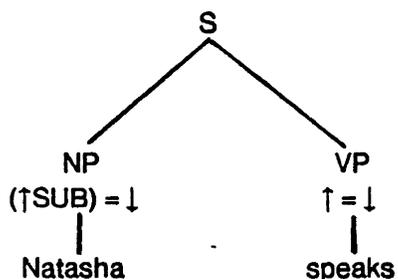
$$\uparrow = \downarrow$$

where '↑' is instantiated by the variable assigned to the  $X'$  node, and '↓' by the variable assigned to the  $X$ -node. Accordingly, all of the features of the head percolate up.

#### 0.1.4 Functional Structure

It is within functional structure that lexical and constituent information is pooled. It is there, for example, that the arguments of a predicate may be interpreted. This is because the predicate argument structure involves a mapping from arguments to grammatical functions, and the grammatical functions are assigned values in functional structure (and this allows the arguments to be evaluated). More specifically, the arguments of a predicate must be contained within the same *clause nucleus* (that is, the minimal f-structure containing a PRED whose value includes a *lexical form* [i.e. a pairing of arguments and grammatical functions].)<sup>10</sup> For illustration, let's consider (12), repeated below:

(13)



Since VP is considered to be the head of S, it receives the unmarked assignment:  $\uparrow = \downarrow$ .

Thus, the information from the VP node and from the S node will merge in functional

10. As defined in Bresnan (1982-a). The clause nucleus (which is basically the LFG version of a "simplex sentence") is also an important domain for anaphoric relations and other phenomena. The reader is referred to Bresnan for discussion.

structure. So the equation beneath the NP node will be interpreted as 'mother's (i.e. S's [and therefore also VP's]) SUB = daughter (i.e. the lexical item 'Natasha')'. In other words: 'The subject of *speaks* is *Natasha*.' In the lexicon *Natasha* is given a meaning, or a *predicate*, as is the verb *to speak*. *Speak* is also assigned a predicate argument structure: it takes an agentive subject.

(14) *speaks*, Verb  
 (↑PRED) = 'to speak <  $\begin{matrix} \text{SUB} \\ \text{AGENT} \end{matrix} \text{ >'}$

Moreover, the word *speaks* contains additional information about agreement. For example, it will only occur with a singular subject. In English, this is expressed within the lexical entry by a *constraint equation* which checks information in functional structure, but does not itself contribute function-values. Constraint equations, written with the symbol '=<sub>c</sub>' provide a filtering mechanism, since the functional structure will be well-formed only if the constraint equation is satisfied.

(15) *speaks*, Verb  
 (↑PRED) = 'to speak <  $\begin{matrix} \text{SUB} \\ \text{AGENT} \end{matrix} \text{ >'}$   
 (↑NUM) =<sub>c</sub> SG

In this case, the subject *Natasha* is a singular NP, and so the sentence is fine.

- (16) *Natasha*, Noun  
 (↑PRED) = 'Natasha'  
 (↑NUM) = SG

The last equation in (16) contributes the value 'SG' to the function NUM. Such an equation is referred to as a *constituting* equation rather than a *constraint* equation.

As was already mentioned, the association of constituents to the arguments of lexical items is accomplished at the level of functional structure. According to the algorithm in Kaplan and Bresnan (1982), the following functional structure representation would be assigned to the above sentence:

(17)

$$\left[ \begin{array}{l} \text{SUB} \left[ \begin{array}{ll} \text{PRED} & \text{Natasha} \\ \text{NUM} & \text{SG} \end{array} \right] \\ \text{PRED} \quad \text{'to speak <SUB>'} \end{array} \right]$$

#### 0.1.4.1 Functional Well-Formedness

Certain common-sense conditions on the well-formedness of functional structures (or *f-structures*) must hold for the sentence to be acceptable:

## I. COHERENCE

*Coherence* is a well-formedness condition that requires that every semantic form contained within the f-structure be the PRED value of a grammatical function mentioned (either in the predicate argument structure or a constituting equation). (See definition in Kaplan and Bresnan (1982).) Thus, the sentence:

(18) Natasha speaks green.

is ill-formed (in any but a very poetic style, where *green* is analogous to *the truth* in the sentence 'Natasha speaks the truth'). This is because *green* does not represent any argument of the predicate *speaks*.

## II. CONSISTENCY

The principle of *consistency* [also called *functional uniqueness*], requires that, in an f-structure, a particular function name (such as NUM) must have a unique value.<sup>11</sup> A representation that included:

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11. As defined in Bresnan (1979) and Kaplan and Bresnan (1980).

(20)

NUM	PL
NUM	SG

would be contradictory and *inconsistent*.

### III. COMPLETENESS

An f-structure is *complete* if and only if it contains values for the grammatical functions that are subcategorized by the Predicate.<sup>12</sup> Thus, the sentence:

(21) \*Speaks.

is incomplete, since there is no value provided for the subject argument of 'speak'.<sup>13</sup>

The same conditions for f-structure well-formedness would apply to the semantic interpretation of f-structures (along the lines of Halvorsen's interpretive system). Just to give one example of how these principles would be applicable to semantic interpretation, consider:

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12. See definition in Bresnan (1979) and Kaplan and Bresnan (1982).

13. In Russian, however, such sentences *are* grammatical. We will return to this difference between Russian and English in Chapter 1, where it is proposed that agreement in Russian makes use of constituting equations, rather than constraint equations, for purposes of agreement.

#### IV. SEMANTIC COHERENCE

Semantic forms with semantic content — that is, excluding dummy elements such as *it* and *there* in English, and idiom chunks that do not have inherent meaning — would have to be linked to a logical argument of another lexical form within their minimal clause nucleus in order for them to be coherently interpreted.

As will be seen in the chapters that follow, these simple principles are quite powerful in constraining the grammar.

##### 0.1.4.2 Motivation for f-structure

In Bresnan (1982-a), it is argued that f-structure is the relevant level for the determination of anaphoric relations. Where c-structure and f-structure are significantly different, it is the f-structure representation that determines interpretation of anaphors. An example of this divergence will be seen in Section 0.1.5.2, where the possibilities for reflexivization differ in two sentences that have identical constituency. The reader is referred to Bresnan for further discussion.

### 0.1.5 Constraints on Syntactic Rules

There are two additional principles which constrain Lexical Functional Grammar. They relate to possible syntactic rules.

#### I. THE LEXICAL INTEGRITY HYPOTHESIS

The Lexical Integrity Hypothesis, which originated with Chomsky (1970) and was taken up later by Bresnan, prohibits syntactic rules from moving any element into or out of lexical categories such as N, A, or V. (See also Mohanan (1981) and Simpson (in prep.) for discussion.) This type of constraint eliminates, for example, the possibility of a rule like Affix-Hopping (Chomsky (1957)), since words necessarily emerge from the lexicon with all their affixes in place. Although it is no longer clear what the status of rules like affix-hopping is in recent Chomskyan analyses, such rules expressed real generalizations. In LFG, these generalizations are naturally captured by means of productive lexical processes. For example, the rule that forms plurals in English attaches the plural affix along with the feature [ $\uparrow$ NUM = PL]. Likewise, other information conveyed by verbal suffixes is incorporated in the derived forms, thus allowing for apparently discontinuous syntactic dependencies between, for example, the auxiliary *have* and the suffix *-en*. The suffix contributes the relevant information to the lexical category as a whole (e.g. been), which is adjacent to *have* (as in have been). Thus, Affix-Hopping, like Passive, provides an example of a relationship which had been used to motivate transformations, but which

finds a natural treatment in terms of Lexical Functional Grammar.<sup>14</sup>

## II. THE PRINCIPLE OF DIRECT SYNTACTIC ENCODING

This principle (cf. Bresnan (1982-b)) requires that "every non-lexical rule of grammar preserve function-assignments." This excludes the possibility of syntactic movement (or other) rules that would alter grammatical functions.

### 0.1.6 Theory of Control and Complementation

We have discussed several of the grammatical functions that are postulated to belong to the universal set of grammatical functions. In addition to functions like SUB (subject) and OBJ (object), this set also includes *predicate complements* and *adjuncts*.

#### 0.1.6.1 Complements vs. Adjuncts

These functions are illustrated in the following sentences from Bresnan (1979):

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14. Affix-hopping was discussed in Bresnan (1979). See also Falk's (1980) analysis of the English auxiliary system.

## COMPLEMENTS

- (22) John didn't sound *ashamed of himself*.
- (23) Fred struck me *as a fool*.
- (24) Jogging keeps Susan *in a bad mood*.
- (25) I'll have your brother *working again*.

## ADJUNCTS

- (26) John looked down, *ashamed of himself*.
- (27) Louise enjoyed sports *as a girl*.
- (28) Susan ate her lunch *in a bad mood*.
- (29) I found the money *walking our dog*.

Bresnan (1979) has nice examples illustrating the difference between complements and adjuncts. The major difference is that:

COMPLEMENTS are grammatical arguments, and are required for functional completeness.

ADJUNCTS provide additional information, but are not subcategorized for by particular lexical items.

If a verb requires a complement, then the complement must be present for the sentence to be complete. Adjuncts are never required for grammaticality. Removing the italicized phrase from sentences (22) through (25) either makes the sentences ungrammatical or changes the primary meaning of the main predicate. Removing the italicized phrases from (26) through (29) leaves the sentences grammatical and does not alter the meaning of the remaining part. Compare the following (where complements are indicated by the

term 'XCOMP'):

*put*  
(↑PRED) = 'put <SUB, OBJ, XCOMP>'

- (30) \*Natasha put the book.  
(31) Natasha put the book in the living room.

*read*  
(↑PRED) = 'read <SUB, OBJ>'

- (32) Boris read the book.  
(33) Boris read the book in the living room.

There are other differences as well. Adjuncts have greater mobility, in that they can be found in a variety of positions, while complements occur in a single fixed position. Adjuncts may also be set off by pauses, unlike complements. Compare:<sup>15</sup>

#### ADJUNCTS

- (34) a. In a bad mood, Susan ate her lunch.  
b. Susan ate her lunch, in a bad mood.

---

15. The observations and sentences in this section are all due to Bresnan (1979).

## COMPLEMENTS

- (35) a. \*In a bad mood, jogging keeps Susan.  
 b. \*Jogging keeps Susan, in a bad mood.

Some predicates *optionally* include a complement in the predicate argument structure, giving rise to functional ambiguity. Consider the following sentence:

- (36) Natasha keeps a cat around the house.

The ambiguity arises because *keep* can be used in two different senses, each being associated with a different argument structure.

*keep*<sub>1</sub>, V

(↑PRED) = 'keep <SUB, OBJ>'

*keep*<sub>2</sub>, V

(↑PRED) = 'keep <SUB, OBJ, XCOMP>'

On one reading of (36), *in the house* is indispensable in defining where the cat was kept. On the other reading, it merely identifies the place in which the action occurs. The ambiguity becomes immediately apparent when the word order is changed in such a way as to permit only the adjunct reading.

(37) Around the house, Natasha keeps a cat.

The contrast is even more striking when the OBJ is not something that can be *kept* in the sense of *keep*<sub>1</sub>.

(38) Natasha keeps Boris around the house.

Here, only the complement reading is possible, and the word order may not be changed:<sup>16</sup>

(39) \*Around the house, Natasha keeps Boris.

Adjuncts and complements are also distinguished by extraction. Compare the following two examples (again from Bresnan (1979)):

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16. Such a construction is in fact possible, but only with the interpretation of *keep*<sub>1</sub>. This reading of *keep* does not usually include human objects. However, a sentence like the following is possible (as pointed out by Ken Hale (pers. comm.)):

(i) Around the house, Natasha keeps Boris and several other bodyguards.

- (40) COMPLEMENT: Who did you say John sounded ashamed of?
- (41) ADJUNCT: \*Who did you say John looked down, ashamed of?

Unlike adjuncts, complements may be questioned since they represent an argument of the main predicate.

### 0.1.6.2 Open Complements

Let's consider the representation of predicate complements in more detail. Since they represent arguments of the verbs with which they occur, they are listed in predicate argument structure. The symbol 'XCOMP' is used to designate the set of ACOMP's (adjectival complements), NCOMP's (nominal complements), VCOMP's (verbal complements) and PCOMP's (prepositional complements).<sup>17</sup> This is one area where the distinction between grammatical functions and constituency is extremely useful. This permits NCOMP's to be distinguished from OBJ's, although they share the same constituency. The same is true about PCOMP's and POBJ's (prepositional objects). We will return to the strong evidence of the need for these distinctions after discussing the representation of complements in the grammar.

---

17. The use of A, N, V, and P is merely for clarity of exposition. It is not necessary to encode constituency in functional designations, as is pointed out in Bresnan (1982-a).

Complements predicate something of another element in the sentence, either of the subject or the object.<sup>18</sup> This relation of predication is captured by the assignment to the complement of a subject that is identical with some other argument. Notice that different verbs place different requirements on the interpretation of the XCOMP's subject:

(42) *Boris*<sub>i</sub> struck *Natasha* [<sub>i</sub>] as a fool].

(43) Boris regarded *Natasha*<sub>j</sub> [<sub>j</sub>] as a fool].

This relation is expressed by a *control equation* which is included in the lexical entry of each lexical form that takes an XCOMP. So, for example, a verb of *subject control*, such as *strike-as*, includes the following control equation:

$(\uparrow\text{SUB}) = (\uparrow\text{XCOMP SUB})$

which expresses the relation indicated by the coindexing in (42) — that the f-structure subject of the XCOMP is *identical* in every respect with the SUB of the sentence. This may be represented in the f-structure either by coindexing the identical f-structures, or by drawing an arrow from the controllee or the controller.<sup>19</sup>

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18. This is a universal constraint on complements. See Bresnan for other principles governing complementation.

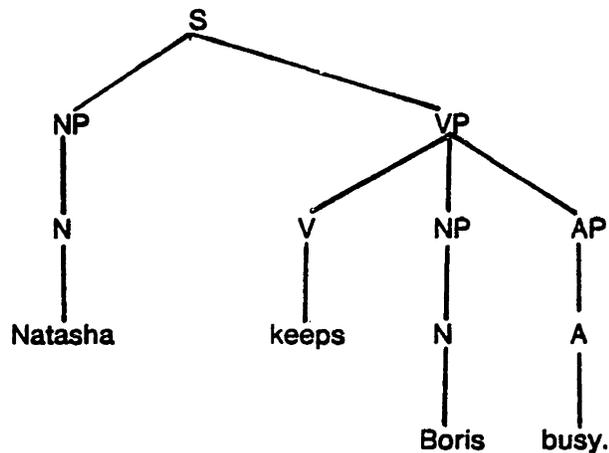
19. The latter option is preferred in recent work by Bresnan. The former will be used here.

Logically enough, object control is expressed by a control equation of the form:  $(\uparrow\text{OBJ}) = (\uparrow\text{XCOMP SUB})$ . Since object control is the unmarked relation if an object is present, the control equations may be filled in redundantly: object control if there is an object present, unless a subject control equation is specifically required by the lexical item; and subject control otherwise.

The f-structure representation for the following sentence will illustrate the way f-structure is constructed:

(44) Natasha keeps Boris busy.

(45)



(46)

SUB	[ PRED    Natasha    ]
TENSE	past
PRED	keeps <SUB,OBJ,XCOMP>
OBJ	PRED    Boris <sub>i</sub>
XCOMP	[ SUB    [            ] <sub>i</sub> PRED    busy <SUB> ]

Notice that the predication relation that holds between complements and their subjects is represented functionally. The subject and complement form a *clause nucleus*, which is a minimal f-structure containing a lexical form (that is, a PRED value including a list of arguments). This makes the correct predictions for English reflexive pronouns, which require an antecedent within their minimal clause nucleus. Thus, for example, sentences which share the same constituent structure, but differ in that one contains a prepositional complement while the other contains a prepositional object, differ with respect to reflexivization. The clause containing a complement contains an additional clause nucleus. Consider the following two examples from Bresnan (1979).

- (47) a. Susan informed John about the house.  
       b. Susan kept John about the house.

Although they are identical in constituency, their functional structures differ, as is represented schematically in (48) (where clause nuclei are indicated by CN):

- (48) a. [Susan informed John about the house]<sub>CN</sub>  
 b. [Susan kept *John*<sub>i</sub> [ [ ]<sub>i</sub> about the house]<sub>CN</sub>]<sub>CN</sub>

Therefore, since reflexivization is possible in English within the minimal clause nucleus, we find the predicted contrast:

- (49) a. Susan informed John about herself.  
 [Susan<sub>i</sub> informed John about herself<sub>i</sub>]<sub>CN</sub>  
 b. \*Susan kept John about herself.  
 \*Susan kept *John*<sub>i</sub> [ [ ]<sub>i</sub> about herself]<sub>CN</sub>

This provides a striking illustration of the importance of separating c-structure and f-structure representation.

Now, let's consider a slightly different case. We mentioned earlier that there may be a divergence between the constituent structure and the logical argument structure. Such is the case of so-called raising constructions. The transformational accounts were required to alter constituency so that subcategorization could be represented by the constituency on one level, while the surface constituency would be represented on another. In LFG, there is a more natural account. Consider *consider*.

(50) Boris considers Natasha boring.

Notice that *Natasha* is the object of *consider* (as argued in Bresnan (1982-b)). In casemarked languages such as Russian, 'Natasha' receives the casemarking that is normal for objects. However, it does not represent a logical argument of the verb *consider* (and is not part of the predicate argument structure): *consider* does not exert any subcategorization requirements over *Natasha*.<sup>20</sup> Rather, it represents the logical subject argument of *to be boring* (although this relation is not apparent in c-structure). Such cases are represented like the previous one: as a case of grammatical control.

(51) *consider*, V  
 (↑PRED) = 'consider <SUB, XCOMP> (OBJ)'

The placement of the object indicates that it is not associated with a thematic argument. However, by the redundancy rule just discussed, the lexical entry will be provided with a control equation:

(↑OBJ) = (↑XCOMP SUB)

---

20. See detailed argumentation in Bresnan (1982-b).

As mentioned earlier, there is a sharp distinction between constituency and lexical subcategorization. Many transformational approaches are founded on the principle that they are essentially the same.<sup>21</sup> Sentences like (51) provide examples of where the match-up is less than perfect. In a transformational framework, constituency must be adjusted in the course of the derivation to account for these mismatches. However, LFG does not allow such derivation, and captures within functional structure the relation (of identity) that holds between the constituent-structure object of the main clause and the understood subject of the complement phrase. The functional structure representation would be as follows:

(52)

$$\left[ \begin{array}{ll} \text{SUB} & \text{Boris} \\ \text{PRED} & \text{'considers } \langle \text{SUB}, \text{XCOMP} \rangle (\text{OBJ}) \\ \text{OBJ} & \text{[Natasha],} \\ \text{XCOMP} & \left[ \begin{array}{ll} \text{SUB} & [ \quad ], \\ \text{PRED} & \text{'boring } \langle \text{SUB} \rangle' \end{array} \right] \end{array} \right]$$

The two subjects are absolutely identical in functional structure, as indicated by the coindexing. They share *all* features. This type of control relation is referred to as *grammatical or functional control*.

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21. Consider, for example, Chomsky's (1981) Projection Principle, which holds that subcategorization is projected to all levels of syntactic representation.

XCOMP's are called *open complements* because the subject argument is open, and must be provided by a relation of grammatical control. In the above sentence, the open complement is adjectival, but it might also be verbal, nominal, or prepositional.<sup>22</sup>

- (53) Boris considered Natasha to be unusual.
- (54) Boris considered Natasha an unusual pet frog.
- (55) Everyone considered Kennedy out of the running.

The fact that *consider* takes a non-thematic argument would lead us to expect that idiom chunks and the dummy *there* would be possible in object position. As Bresnan (1982-a) and (1982-b) points out, this is correct:

- (56) Consider your goose cooked.

As Bresnan observes, this can have the idiomatic interpretation. The same is true for other control verbs involving extra-grammatical arguments:

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22. The third sentence is from Maling (1982), where there is an interesting discussion of what types of PP's make good complements.

(57) Close tabs seem to have been kept on Boris and Natasha.

One important property of this representation is that control relations are preserved by lexical rules. Lexical rules apply not only to predicate argument structure, but to all equations within the lexical entry. A rule that changes *OBJ* changes every occurrence of *OBJ* in the lexical representation in the same way. Consider again *consider*, which has the lexical form:

(58)  $(\uparrow\text{PRED}) = \text{'consider } \langle \text{SUB, XCOMP} \rangle (\text{OBJ})'$

to which the control equation is added redundantly:

$(\uparrow\text{OBJ}) = (\uparrow\text{XCOMP SUB})$

Now, the passive of *consider* will have the lexical form:

(59)  $(\uparrow\text{PRED}) = \text{'consider } \langle \emptyset, \text{XCOMP} \rangle (\text{SUB})'$

to which will be added the equation:

$(\uparrow\text{SUB}) = (\uparrow\text{XCOMP SUB})$

The same argument is controlling the XCOMP in both the active and passive forms.

- (60) a. They consider *Natasha* unusual.  
 b. *Natasha* is considered unusual.

Another example of the distinction between constituency and grammatical functions is provided by the facts of passivization. Notice that while in c-structure, both OBJ and NCOMP may have the same constituency, only the OBJ may passivize.<sup>23</sup>

- (61) a. Boris insulted a linguist.  
 b. A linguist was insulted by Boris.

- (62) a. Boris became a linguist.  
 b. \*A linguist was become by Boris.

To summarize, then, predicate complements have an open (subject) argument that is grammatically controlled by the main predicate's subject or object. This restriction on controllers (that they must be either subject or object) and on controllees (that they are necessarily subjects) is claimed to be universal. This correctly predicts the following contrast, where in spite of the similarity of the meaning of (63) and (64) (both from Bresnan (1979), (1982-a), and Williams (1980)) only the object may serve as grammatical controller:

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23. See also Grimshaw (1981), (1982) for discussion.

- (63) a. I presented it to John.  
 b. I presented *it* to John *dead*.
- (64) a. I presented John with it.  
 b. \*I presented John with *it* *dead*.

Evidence from Spanish and Icelandic discussed by Bresnan (1982-a) suggests that the restriction on controllers is best stated in terms of grammatical functions, rather than constituent structure and c-command relations.<sup>24</sup> Icelandic (Levin and Simpson (1981)) has oblique NP arguments which pattern with English oblique PP's in that they may not serve as controllers. Spanish, on the other hand, has objects (introduced by a preposition) which fail to c-command the controllee position.

Bresnan (1979) demonstrates that apparent exceptions to this restriction in English in fact provide confirmation of it. She gives the following examples where it *appears* that the predicate complements may be controlled by the object of a preposition:

- (65) a. You look on them as naive.      V PP AP' ?  
 b. They think of us as unfriendly.      V PP AP' ?  
 c. She speaks of him as sweet.      V PP AP' ?

Bresnan shows, however, that these cases involve the lexical incorporation of the prepositions into complex verbs (as proposed in Bresnan (1972)). (See also Williams (1980), who relates the possibility of control (in terms of c-command) with the reanalysis of sentences of the following type.)

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24. See Williams (1980) for an account of control restrictions in terms of c-command.

- (66) a. [<sub>V</sub>look] [<sub>PP</sub> [<sub>P</sub>on] [<sub>NP</sub>him]] → [<sub>V</sub> [<sub>V</sub>look] [<sub>P</sub>on]] [<sub>NP</sub>him]  
 b. [<sub>V</sub>think] [<sub>PP</sub> [<sub>P</sub>of] [<sub>NP</sub>him]] → [<sub>V</sub> [<sub>V</sub>think] [<sub>P</sub>of]] [<sub>NP</sub>him]  
 c. [<sub>V</sub>speak] [<sub>PP</sub> [<sub>P</sub>of] [<sub>NP</sub>him]] → [<sub>V</sub> [<sub>V</sub>speak] [<sub>P</sub>of]] [<sub>NP</sub>him]

Confirmation that the sentences in (65) necessarily involve the reanalyzed forms produced by (66) comes from the ungrammaticality of the sentences in (67). In these sentences, the reanalyzed form is impossible (since by the *lexical integrity principle* lexical categories must be inserted as a unit in c-structure):<sup>25</sup>

- (67) a. \*You look only on them as naive.  
 b. \*They think only of us as unfriendly.  
 c. \*She speaks only of him as sweet.

The non-reanalyzed form is fine, though, as long as the prepositional object is not required to be a grammatical controller, as Bresnan's examples show:

- (68) a. ?You look only on them.  
 b. They think only of us.  
 c. She speaks only of him.

Also, the object controllers can passivize, as only objects can:

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25. For example, in English, complex nouns such as *salt shakers*, having the structure [<sub>V</sub> N N] must not be discontinuous in c-structure. See Bresnan's examples, including:

- (i) *Those are tarnished salt shakers.*  
 (ii) \**Those are salt tarnished shakers.*

- (69) a. They are looked on as naive. [= regarded as naive]  
 b. They are thought of as unfriendly. [= considered unfriendly]  
 c. He is spoken of as sweet. [= called sweet]

These examples<sup>26</sup> show that grammatical controllers are necessarily subjects or objects, and that apparent prepositional object controllers have been reanalyzed as objects. With prepositional objects, the relation of grammatical control is impossible (as in (67)).

### 0.1.6.3 Open Adjuncts

The *consider* example involved lexically induced functional control. The XCOMP was subcategorized for by the lexical item. Adjuncts occur with a much freer distribution. They may have an open subject argument as well, but this argument is not lexically controlled. Consider the following example:

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26. Also, compare and contrast:

- (i) (a) It is John who is looked on as naive.  
 (b) \*It is on John who(m)/that is looked as naive.
- (ii) (a) It is John who is thought of as unfriendly.  
 (b) \*It is of John who(m)/that is thought as unfriendly.
- (iii) (a) It was of John that everyone spoke so enthusiastically.  
 (b) It was to John that we turned for assistance.

The problem with (i)-b and (ii)-b is that the complement has been deprived of a controller, since the extraction of the PP requires the non-reanalyzed version, and prepositional objects may not be controllers.

(70) Exhausted after a long day at the office, Natasha took a nap.

Here, the phrase 'exhausted after a long day at the office' may appear with any verb:

(71) Exhausted after a long day at the office, Natasha VERBed.

Its occurrence is in no way conditioned by the choice of a particular lexical item, unlike the appearance of the XCOMP of the verb 'consider'. Such adjunct phrases will be assigned the function 'XADJ' analogous to 'XCOMP', where the 'X' indicates an open argument. Consider the following sentence:

(72) Insulted, Natasha stormed out of the room.

To permit the subject of the XADJ to be interpreted, the assignment in phrase structure expansions of the function 'adjunct':

$$(\uparrow\text{XADJ}) = \downarrow$$

will be accompanied by the equation:

$$(\downarrow\text{SUB}) = \uparrow\text{G}$$

where G is a grammatical function (SUB, OBJ, etc.). The set of acceptable adjunct controllers may vary across languages.

So, open adjuncts are like predicate complements in that they also involve grammatical control of their subjects. They differ from complements in that the control relation is configurationally induced for adjuncts, but lexically induced for complements. That is, complements are subcategorized for by lexical items, while adjuncts are not.

#### 0.1.6.4 Closed Complements

Many of the verbs that subcategorize for open complements may also take *closed complements*, in which the argument structure is self-contained. Such complements are designated by the term 'COMP', and are distinguished from the open complement 'XCOMP'.<sup>27</sup> For example, the verb 'consider' may also take a COMP:

(73) Natasha considered [that the caviar was substandard].

(74) Natasha considered [that Boris was a nogood-nik].

In terms of constituency, 'that the caviar was substandard' is an S'. However, in terms of grammatical functions, it represents a complement of 'consider'. (No control relation is required, though, since it is a *closed* complement.)

To summarize, then, open complements require grammatical controllers; closed complements do not. Not all closed complements, however, fully specify the reference of their arguments. Consider the following example:

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27. Elsewhere, COMP may be written as SCOMP. The same closed complement is represented by both notations. The former will be used here.

(75) Reading mystery stories is fun.

As mentioned before, there is no overt subject of 'reading' present in c-structure; yet there is a subject in functional structure, which can serve as a reflexive antecedent. However, the subject of *reading* is not grammatically controlled: it couldn't be, since there is no possible controller! We will assume that a subject is provided in functional structure,<sup>28</sup> this subject being a functional anaphor, having as Predicate: PRO. The reference of the PRO may be determined by other sentential elements. In this case, there is said to be *anaphoric control*. In this example from Bresnan, the PRO's interpretation is clear:

(76) I had to speak to John recently about scratching himself in public.

The interpretation of PRO obeys many of the same properties as the interpretation of overt pronouns. The preceding sentence will be interpreted in much the same way as the following one.

---

28. this subject being introduced in the phrase structure expansion by the phrase structure annotation: ( $\downarrow$ PRED) = PRO.

(77) I had to speak to John recently about his scratching himself in public.

Bresnan (1979 and 1982-a) discusses some of the properties of anaphoric control, and its relation to the interpretation of overt pronouns. One similarity is that both PRO and real pronouns may have split antecedents. Compare:

(78) Tom told Mary that *they* should not scratch each other.  
       [*they* = Tom and Mary]

(79) Tom spoke to Mary about scratching each other in public.  
       [about Tom and Mary scratching each other]

This would be impossible with grammatical control, where the controller is uniquely determined by the control equation. Thus, we have seen that there are two distinct types of control, or referential dependency. Anaphoric control involves the identity of reference of PRO and some other NP in the sentence.<sup>29</sup> Grammatical control, in contrast, involves identity of f-structure of the subject of an open function (either an adjunct or complement) and another grammatical function. Grammatical control may be induced lexically, by lexical forms which contain a control equation, or configurationally, in the case of adjuncts, by a control equation introduced in phrase structure.

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29. If no such relation is established, then the PRO may be interpreted in accordance with discourse context, as in 'Reading mystery stories is fun'. This would not involve anaphoric control.

#### 0.1.6.5 Closed Adjuncts

Just as there were open and closed complements (XCOMP's and COMP's), so there are open and closed adjuncts (XADJ's and ADJ's). Adjunct phrases need not modify a particular phrase; they may provide additional information about the event as a whole, and in such cases, their subjects are not grammatically controlled. Consider the following example:

(80) Natasha kissed Boris in the garden.

*In the garden* does not have a functionally controlled subject.

Much work has been done in this framework on the theory of control, and there are general principles governing the distribution and interpretation of these open and closed functions. The reader is referred to Bresnan (1982-a) for details. In summary, though, *control* is a relation of referential dependency. *Grammatical control* involves *identity of f-structure*, while *anaphoric control* involves only *identity of reference* of an anaphor and some other element of the sentence. In the case of anaphoric control, no antecedent is required for well-formedness. However, grammatical control requires a controller, since the controlled subject (of the *open complement or adjunct*) has no independent identity.

### 0.1.7 The Constituency of Complements

The control equation for XCOMP's is provided only in f-structure, through the control equation from the lexicon. At the level of c-structure, there is no subject of the XCOMP present at all. This representation finds support from phonological evidence. Contraction, for example, distinguishes between those elements that are transformationally analyzed as "Wh-traces", and those subjects which in LFG are analyzed as cases of grammatical control. As discussed in Postal and Pullum (1978 and 1979) (as well as in Chomsky and Lasnik (1978), Jaeggli (1980), and elsewhere), there is a contrast between the following examples:<sup>30</sup>

- (81) a. Where do you want [PRO to go]?  
 b. Where do you wanna go?
- (82) a. Who do you want [<sub>WH</sub> t to visit us?]  
 b. \*Who do you wanna visit us?

In LFG, the null subject of (82) is structurally present, while that of (81) is present only in f-structure. This contrast would be explained if null elements in c-structure were phonologically detectable, while those in f-structure were not. This is an automatic

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30. The notation used here is that of GB, not of LFG.

consequence of c-structure being the input to the phonological component.<sup>31</sup>

Similar evidence against the assumption that PRO is structurally present is not available. Nor is there evidence to the contrary. Out of a desire to reduce the use of null structure to those cases where it is clearly required (as in the case of long-distance dependencies involving so-called "WH-movement"), Bresnan and Kaplan have assumed that PRO, like grammatically controlled subjects, is present only in f-structure. We will, however, make the opposite choice and assume that PRO in Russian is syntactically an NP, which is assigned ( $\uparrow$ PRED) = PRO in the phrase structure expansion.<sup>32</sup> This accounts in a natural way for the alternation found between overt NP's and PRO. More importantly, however, this will facilitate the account of structural casemarking by allowing casemarked subjects to be structurally present.<sup>33</sup> This is, however, an assumption that is not standard within LFG.

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31. (In Chomsky (1981:318(fn.)), this difference is explained in terms of the case-marking on the different types of null elements. He suggests that "non-Case-marked trace is 'invisible' to rules of the PF [Phonological] -component, a special case, perhaps, of the more general property (...) that elements must have appropriate features to be 'visible' in the interpretive components." These facts fall out of the LFG representation, with no further explanation required.)

32. This allows S' to be expanded as:

	NP	VP
	(( $\downarrow$ PRED) = PRO)	

rather than as:

(NP)	VP
( $\uparrow$ SUB PRED) = PRO	

33. Alternatively, we could assume a PS expansion of S to (NP) VP, where, by convention a node would be automatically generated, but optionally labelled. Nothing in the current analysis would be inconsistent with such a convention. This alternative would be more in keeping with the approach of Kaplan and Bresnan (1982).

This concludes the presentation of the LFG model.

## 0.2 CASE

### 0.2.1 The Role Of Case In Linguistic Theory

Case, as an abstract grammatical concept, has been invoked freely to account for a variety of phenomena, often within languages such as French and English where casemarking is usually undetectable. If such hypotheses are valid, they should be verifiable in languages where case is visible. One function of case in the framework of Chomsky's (1981) *Lectures on Government and Binding* has been to account for the distribution of lexical NP's. If the nominative case is assigned by INFL(ection), and infinitives lack inflection, then case will be assigned to the subjects of tensed clauses, but not to the subjects of infinitives. If one assumes that lexical NP's may be inserted only into slots that are casemarked, then one has constructed an explanation for the fact that infinitives do not have lexical subjects. For English, the claim that casemarking is responsible for lexical distribution is unfalsifiable, since abstract case becomes a theory-internal notion where there is no morphological realization of the case assigned. However, languages such as Russian strongly suggest that case may not be the appropriate factor, since, as will be discussed in Chapter 1, lexical infinitival subjects are normally not found in Russian, although infinitival subjects do appear to bear case. As Chomsky (1981:55) has observed, one of the most interesting areas of grammatical investigation involves syntactic elements that have no phonetic realization, although it is

also one of the most difficult, since information can be ascertained only indirectly.

The question of the nature of empty categories is a particularly interesting one for a number of reasons. In the first place, the study of such elements, along with the related investigation of anaphors and pronouns, has proven to be an excellent probe for determining properties of syntactic and semantic representations and the rules that form them. But apart from this, there is an intrinsic fascination in the study of the properties of empty elements. These properties can hardly be determined inductively from observed overt phenomena, and therefore presumably reflect inner resources of the mind.

In Chapter 1 we will argue that the process of case agreement in Russian allows us to obtain information about PRO subjects and their casemarking — indirectly. Moreover, the case agreement they trigger provides further support for postulating such inaudible syntactic elements. Furthermore, we will argue that it is possible to differentiate the casemarking on infinitival subjects from that of subjects of adverbial participles. Subjects of participles bear the same case as those of finite clauses, while infinitival subjects are assigned a different case. However, neither participial nor infinitival subjects normally occur with a lexical subject. Thus, casemarking does not appear to be relevant to the distribution of lexical subjects in Russian. One possible response to evidence of this sort is that the casemarking in these constructions is in some way exceptional, or else that the case involved in the generalization about lexical distribution is Abstract Case, not real case. However, in the latter case, it might as well be called Abstract Anything, and the

claim for it is seriously weakened.<sup>34</sup>

Another suggestion about the role of case assignment in language is put forth by Pesetsky (in prep.), who suggests that the nature of case assignment (in conjunction with categorial selection) is responsible for the differing distribution and interpretation of Quantifier and Noun Phrases. In Chapters 2, 3 and 4, however, we will argue that the distribution of these phrases and of the so-called "Genitive of Negation" may be accounted for more simply and more accurately by assuming a less abstract notion of case.

### 0.2.2 A Preview

Visible case distinctions provide valuable insight into the structural organization of language, since they highlight distinctions that may only be perceived with difficulty in other languages. For example, the distinction between complements and adjuncts that Bresnan (1979) argued for in English on the basis of rather subtle facts finds strong support from the casemarking distinctions found in Russian. As will be argued in Chapter 1, adjuncts agree in case with their functional antecedent, while complements (XCOMP's) occur in the instrumental case. We will then show that the domains within which

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34. Alternatively, such a theory might propose differences between different types of casemarking [Chomsky (1981:fn.) suggests that Russian involves some sort of exceptional case assigning mechanism for infinitival subjects]; or else abandon the claim that case is the relevant factor, and attribute the same effects to some related notion.

agreement may operate, and the domains within which sentential negation can trigger genitive casemarking of an object, provide additional support for the distinction between open and closed complements.

Since, ultimately, the true test of any theory is in its ability to express the relations within language(s) with naturalness, simplicity, and generality, we believe that the account of case assignment and agreement permitted by LFG will provide support for the framework itself. We will propose an account of structural, lexical, and functional case assignment, and of case agreement in Russian. As will be shown in Chapter 1, given the theory of control and the grammatical representation of LFG, there is a simple account of second predicate agreement facts that have been problematic for previous accounts. In Chapters 2 and 3, we will present an analysis of object case assignment, and compare it to an alternative approach within the framework of Chomsky's (1981) *Lectures on Government and Binding*. Finally, in Chapter 4, we will argue that the system of case assignment proposed makes the correct predictions for the distribution of various types of phrases, and provides a simpler and more accurate account than recent case proposals within the Government Binding theory.

Just as richly inflected languages provide fertile ground for investigation into linguistic theory, so the advances that have been made in the study of language can shed light on questions that plague Slavists about puzzling aspects of Russian. In the chapters that follow, we will look at problems that have been the subject of much discussion, such as the "genitive of negation" and the numeral system; and we hope to show that they may

be better understood within the context of the current model. However, many of the results are independent of the choice of theory, and will be of interest (it is hoped) to people who hold different theoretical assumptions.

**1. CASE AGREEMENT IN RUSSIAN**

Since case is a reflex of structural and grammatical relations, case marking and agreement can provide good evidence about the nature of such relations. Thus, an understanding of case can contribute to the resolution of seemingly unrelated syntactic questions. In this chapter, I will propose a strong correlation between case and grammatical control in Russian, on the basis of some interesting facts about the agreement of "second predicates" within postverbal infinitival clauses presented in Comrie (1974). Not unlike the phenomena of "long-distance" agreement in Icelandic and Greek (discussed by Andrews (1982-a)), these data pose problems for the transformational framework of the early 1970's. However, when these facts are considered within the theoretical framework of Lexical Functional Grammar (LFG), it becomes apparent that many of the seemingly aberrant phenomena can be explained by more general considerations of predicate complements and grammatical control in Russian. If my analysis is correct, the simplicity and naturalness with which case agreement of modifiers follows from the grammatical representation lend support to the theoretical framework.

I will begin by presenting the curious facts about the agreement of second predicates in Russian. In Section 1.2, before proceeding to an analysis of the same facts in the current framework, I will provide background information about the treatment of case assignment permitted by the LFG model. There we will see that functional structure provides a level of representation that integrates the information relevant to the

determination of case. Finally, in Section 1.3, I will argue that the case of modifiers then follows to a large extent from the grammatical representation. Within this framework, case agreement is precisely that: the modifier shares the case of its functional antecedent. Agreement is a natural consequence of the consistency of lexical information within functional structure.

## 1.1 DATA

### 1.1.1 Second Predicates

Comrie (1974) considers the distribution of the dative second predicate within infinitival clauses. The term 'second predicate' designates modifiers that are detached from the noun phrase to which they refer. As Comrie points out, words occurring in second predicate position of ordinary short sentences may either (a) agree in case with the noun they modify, or (b) occur in the instrumental case. He presents the following illustrations:

- (83)
- |      |           |                    |  |           |
|------|-----------|--------------------|--|-----------|
| Ivan | vernulsja | ugrjumyj/ugrjumym. |  | (= Co, 1) |
| Ivan | returned  | gloomy(NOM/INS)    |  |           |
- (84)
- |         |           |      |           |                           |
|---------|-----------|------|-----------|---------------------------|
| Mne     | nužno     | bylo | streljat' | pervomu/pervym. (= Co, 4) |
| me(DAT) | necessary | was  | to shoot  | first(DAT/INS)            |

'It was necessary for me to shoot first'

### 1.1.2 *Odin and Sam*

Curiously, though, there are two words that occur in second predicate position (of very common short sentences) only if they agree in case with their antecedent: *odin* 'alone' and *sam* 'oneself'. For these modifiers, as Comrie states (p. 124), "the noninstrumental Second Predicate is not only possible, not only preferred, but absolutely required."

(85) Ivan vernulsja odin/\*odnim. (= Co, 5)  
 Ivan(NOM) returned alone(NOM/\*INS)

(86) Mne nužno bylo idti odnomu/\*odnim.  
 me(DAT) necessary was to go alone(DAT/\*INS)

'It was necessary for me to go alone'

(= Co, 8)

According to Comrie (p. 124), "in stating the rules for modern Russian, then, we must indicate that these items are exceptions to the general rule putting Second Predicates optionally, and preferably, into the instrumental."

### 1.1.3 Second Predicate within Infinitival Clauses

Comrie is primarily interested in studying the second dative, which is often found in embedded infinitival clauses, although the antecedent in the matrix sentence may appear in a different case. Since the instrumental is excluded from the second predicate position with *odin* and *sam*, Comrie focuses, for the sake of simplicity, on sentences containing *odin* and *sam* in the embedded infinitival clauses. In this position, however, not only the instrumental case is excluded: the accusative, genitive, and locative are also ruled out (although the antecedent of *odin* or *sam* may appear in any of these cases). Only the second nominative and the second dative are permitted in this context.

### 1.1.4 Second Nominative with Subjective Infinitives

The second nominative is required within the infinitival clause if the subject of the infinitive is understood to be the same as the subject of the matrix sentence. (Such constructions are referred to as *subjective infinitives* and are distinguished from *objective infinitives*, whose subject is understood to be coreferential with the object of the matrix sentence.) Examples include:

(87) Vanja            xočet            priiti            odin/\*odnomu            (= Co, 24)  
 Vanja(NOM)    wants            to come        alone(NOM/\*DAT)

(88) Ljuda            priexala        pokupat'        maslo            sama/\*samoj.  
 Ljuda(NOM)    came            to buy            butter            herself(NOM/\*DAT)

(= Co, 28)

### 1.1.5 Second Dative with Objective Infinitives

When, however, *odin* or *sam* occurs with an objective infinitive (regardless of the casemarking of the matrix object with which the second predicate is understood to be coreferential), *odin* or *sam* is invariably in the dative.<sup>1</sup>

(89) Ja            velel            emu            priiti            odnomu.  
 I(NOM)    told            him(DAT)    to come        alone(DAT).

(= Co, 12)

(90) Direktor            posovetoval        mne            napisat'        stat'ju  
 (the) director        advised            me(DAT)    to write        (the) article  
  
                           odnomu(DAT).  
                           alone(DAT)

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1. It should be noted, however, that for some speakers, the second dative is not permitted unless there is an overt dative antecedent. For such speakers, no form of *odin* will make the sentences that follow acceptable.

(91) My            poprosili    Ivana    prijeti    odnomu/\*odnogo. (= Co, 33)  
 We(NOM) asked        Ivan(ACC) to go        alone(DAT/\*ACC)

(92) U            Koli            net        sil            prijeti  
 Around Kolja(GEN) (there)is not        (the) strength to come

samomu/\*samogo.  
 himself(DAT/\*GEN)

'Kolja doesn't have the strength to come himself'

(= Co, 34)

### 1.1.6 Second Dative with Overt Complementizers

*Odin* and *sam* must also be in the dative if there is an overt complementizer preceding the infinitive, as in (93) and (94):

(93) Volodja        ne    byl    tak    samonadejan,  
 Volodja        NEG was so presumptuous  
  
           čtoby            samomu    gnat'sja    za    ordenom.  
           as to(Comp.)    himself(DAT) chase    after    (a) medal.

'Volodja wasn't so presumptuous as to chase after (a) medal himself.'

(= Co, 37)

- (94)
- |        |         |              |            |          |           |
|--------|---------|--------------|------------|----------|-----------|
| Prežde | čem     | samomu       | vyprygnut' | iz       | samolëta, |
| Before | [comp.] | himself(DAT) | to-jump    | from     | airplane, |
|        | on      | velel        | vyprygnut' | mne.     |           |
|        | he      | ordered      | jump       | me(DAT). |           |

'Before jumping out of the airplane himself, he told me to jump out.'

(= Co, 40)

Note that the presence of an overt complementizer, even with a "subjective infinitive," necessitates second dative. Consider the following minimal pair:

- (95)
- |            |          |          |        |                   |            |
|------------|----------|----------|--------|-------------------|------------|
| Ljuda      | priexala | pokupat' | maslo  | sama/*samoj.      | (= Co, 28) |
| Ljuda(NOM) | came     | to buy   | butter | herself(NOM/*DAT) |            |
- (96)
- |            |           |                     |  |          |        |
|------------|-----------|---------------------|--|----------|--------|
| Ljuda      | priexala, | čtoby               |  | pokupat' | maslo  |
| Ljuda(NOM) | came      | in order to (Comp.) |  | buy      | butter |
- \*sama/samoj.  
(\*NOM/DAT)

### 1.1.7 Second Dative with Passive

Furthermore, in passive constructions (which are often rather unnatural in Russian), the second dative is strongly favored within the embedded clauses. Consider:

- (97) On byl ugovorěn přijti \*odin/?odnomu. (= Co, 110)  
 He(NOM) was persuaded to come alone(\*NOM/?DAT)

However, there are examples like:

- (98) Ja byl prinužděn borot'sja odin. (= Co, 111)  
 I(NOM) was forced to fight alone(NOM)

How can these facts be explained? This is a question to which I will return after describing how case is treated within the framework of Lexical Functional Grammar.

## 1.2 THE REPRESENTATION OF CASE

### 1.2.1 The Use of Features

In his article on the case system of Russian, Jakobson (1958) argues for a feature decomposition of case on the basis of semantic considerations and the extensive use of case syncretism within each of the many declension classes of Russian. He proposes an economical, 3-feature binary system for Russian case. The use of such a system results in economy both within the phrase structure component and, especially, within the lexicon (as 'lexicon' is understood here).

While the names of the features might be improved upon and while the question of the universality of these case features is worthy of further investigation, Jakobson's case system will be useful for the purposes of this discussion. He chooses the features [ $\pm$ marginal,  $\pm$ quantifying,  $\pm$ ascriptive] (where the negative value is assumed to be unmarked) and assigns them to the cases as shown in Table 1.<sup>2</sup>

TABLE 1                      ASSIGNMENT OF FEATURES TO CASES

	Marginal	Quantifying	Ascriptive
Nominative	-	-	-
Accusative	-	-	+
Genitive <sub>1</sub>	-	+	+
Genitive <sub>2</sub>	-	+	-
Locative <sub>2</sub>	+	+	-
Locative <sub>1</sub>	+	+	+
Dative	+	-	+
Instrumental	+	-	-

If cases are considered to be bundles of features, then feature matrices themselves may

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2. The term 'marginal' distinguishes the direct and non-direct cases. Only the [-Marginal] cases may occur in subject and object position. 'Quantifying' indicates the relevance of the extent to which the noun is a participant in the event. 'Ascriptive' puts emphasis on directionality.

be assigned to the [+N] constituents (using the notation of X-prime (X-bar) theory).

### 1.2.2 Assignment of Case

Within this framework, *structurally predictable case* is assigned according to grammatical principles (by means of annotations, which associate grammatical functions and case). I am assuming that the PS rules for Russian generate the unmarked word order with the appropriate casemarking annotations and that scrambling rules may operate on the PS rules to provide the relatively free surface word order of Russian. (An alternative would be that the PS rules generate unordered sets. Nothing crucial hinges on the assumption of ordering.) *Structurally unpredictable case* (that is, idiosyncratic or inherent case) is assigned through lexical information. (I will not be discussing irregular case assignment in Russian here. See Andrews' (1982-b) study of Icelandic case for an analysis of irregular case within the lexical interpretive theory.)

Case is checked by a constraint equation, which every [+N] form in the lexicon must contain. For example, the lexical entry for *ja* 'I' specifies that it may be used only in a position which is marked nominative:

(99)

$$\begin{aligned}
 ja, \text{ PRO, } (\uparrow\text{PRED}) &= 'I' \\
 (\uparrow\text{CASE}) &= {}_c[-, -, -]
 \end{aligned}$$

See Table I for the interpretation of  $[-, -, -]$ ; nominative case is unmarked for all three features.

Notice the great economy within the lexicon that derives from feature decomposition of case. Every declension class contains some degree of case syncretism. To account for the fusion of various cases within each paradigm, constraint equations need not contain arbitrary disjunctions, but merely feature specifications.<sup>3</sup> Consider, for example, the classes of plural adjectives. There are four endings: *-ye*, *-yx*, *-ym*, and *-ymi*. The first is used for nominative and accusative, the second for genitive-1, genitive-2, locative-1, and locative-2, the third for dative, and the last for instrumental.<sup>4</sup> Thus, they would be associated with constraint equations (100) (a), (b), (c), and (d), respectively.

---

3. The feature decomposition has some predictive power in determining what cases are likely to be fused. While case syncretism of nominative and accusative, or of accusative and genitive, is quite common, cases which are compositionally quite different do not share forms. See Jakobson (1935 and 1958) for discussion.

4. Actually, this is only when the head noun is inanimate. For animate nouns, the *-ye* ending is used for the nominative, and *-yx* is used for the accusative (and genitive and locative). The same difference in case fusion is found for nouns. To account for this, an additional equation would be required. This is not relevant to the point under discussion, however.

- (100) a.  $(\uparrow\text{CASE}) =_c [-, -, \pm]$   
 b.  $(\uparrow\text{CASE}) =_c [\pm, +, \pm]$   
 c.  $(\uparrow\text{CASE}) =_c [+ , - , +]$   
 d.  $(\uparrow\text{CASE}) =_c [+ , - , -]$

Further decomposition of nominal and adjectival endings could produce even greater economy and generalization through use of features; the above example is intended solely to illustrate how constraint equations would control the use of nouns and adjectives.

### 1.2.3 Phrase Structure Annotations

The Phrase Structure (PS) expansions permit constituents to be associated with grammatical functions. For example, (101) is a possible PS expansion:

$$(101) \quad \text{VP} \rightarrow \quad \text{V} \quad \text{NP} \quad \text{NP}$$

$$\quad \quad \quad (\uparrow\text{OBJ}) = \downarrow \quad (\uparrow\text{OBJ2}) = \downarrow$$

Structural case is assigned to NP's in Russian.<sup>5</sup> Suppose that objects normally appeared in case [x,y,z]. Then there would be a PS redundancy rule which assigned to the object NP:

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5. And crucially only to NP's; this will be justified in Chapter 4, where questions about case assignment will be considered in greater detail.

(102)

$$S \rightarrow V \quad NP$$

the casemarker:  $((\uparrow \text{CASE}) = [x,y,z])$

Structural casemarking assigns the unmarked case for structural positions. However, particular lexical items may impose irregular case requirements on their objects, and these then would override the structural assignment optionally (as is indicated by parentheses around the case assigning equation), while irregular lexical case assignment is obligatory.<sup>6</sup> Consider the possibilities:

(A) If structural case is not assigned, and irregular case is assigned, by a particular lexical item, for example as in (103),

(103)  $uuuuu: V, (\uparrow \text{PRED}) = 'uuuuu: \langle \text{SUB}, \text{OBJ} \rangle'$   
 $(\uparrow \text{OBJ CASE}) = [q,r,s]$

then the case of the object will be assigned by the lexical item.

(B) If the structural case is assigned, and irregular case is also assigned as above (in the verb *uuuuu*, second equation), then the sentence is ruled out by the principle of *consistency* [also called *functional uniqueness*], which requires that, in an

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6. Case assignment will be discussed more fully in later chapters. This is just intended to provide a general idea of how case assignment operates within the present framework, not to investigate actual details of Russian casemarking (which will be reconsidered in Chapter 4).

f-structure, a particular function name (such as CASE) must have a unique value.

(C) If structural case is assigned, and no irregular case information is received from any lexical item, then all is well. (This is the unmarked case.)

(D) If, however, structural casemarking fails to apply, and no irregular case is assigned, then the constraint equation contained in the lexical entry of a casemarked noun will not be satisfied, and again, the sentence will be ruled out.

In other words, only cases A and C will result in well-formed f-structures, and case will be assigned either by idiosyncratic lexical information (if and only if such information is provided) or else by the PS redundancy rules.

The *direct object* in Russian occurs most often in the accusative case. However, in negative sentences, it frequently occurs in the genitive. The negation alters the nature of the object's participation in the action, making it less direct. [See Jakobson (1935) for discussion.] The relation between positive and negative sentences with respect to the case of the direct object may be captured by means of a syntactic feature Q:<sup>7</sup>

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7. The genitive of negation will be discussed in more detail in Chapter 3.

(104)

$$VP \rightarrow \begin{pmatrix} ne \\ (\uparrow Q) = + \end{pmatrix} \quad V \begin{pmatrix} NP \\ (\uparrow OBJ) = \downarrow \\ (\downarrow CASE) = [-, , +] \\ ((\uparrow Q) = + \rightarrow (\downarrow CASE) = [ , +, ]) \& \\ (\downarrow Q) = + \\ (\downarrow CASE) = [ , - , ] \end{pmatrix}$$

The alternation between accusative and genitive in this position may be captured by assigning a partially specified feature matrix  $[-, , +]$ , with the second value left unassigned. The value of the second (quantifying) feature will vary, depending on the context in which the phrase occurs. In a negative sentence, the feature Q may spread, and by so doing, it will include the object within the scope of negation<sup>8</sup> and it will shade the accusative by requiring a positive value of the second case feature. If this fails to happen, then the default, unmarked value is provided by the final equation. Alternatively, this may be abbreviated by collapsing the case-assigning equations as follows:

$$(\downarrow CASE) = [-, (-), +].$$

Interestingly, this feature of quantification can be introduced either syntactically, through negation; or semantically, through specific lexical items which include a notion of quantification in their meaning. Some verbs take genitive objects (either optionally or obligatorily); for these verbs, the use of the genitive case for the object correlates with the "attenuation" or indefinite, nonabsolute nature of the object. "Intentional objects" (as

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8. The object being assigned a positive 'Q' value; this will be discussed in Chapter 2.

discussed by Quine (1960: 219-222)) occur in the genitive as well. Verbs taking genitive objects include those listed in (105) from Pul'kina and Zakhava-Nekrasova (n.d.:64):

- (105) a. *dobivat'sja* 'to achieve,' *dostigat'/dostignut'*, 'to attain or reach,' *želat'* 'to wish,' *doždat'sja* 'to wait for,' and others, which require a genitive object.
- b. *xotet'* 'to want,' *ždat'* 'to wait,' *iskat'* 'to look for,' *prosit'* 'to ask for,' *trebovat'* 'to demand,' and others, which appear with the genitive or the accusative (the latter being used to denote a generic or specific object or person)

The structural casemarking found on post-verbal NP objects is also found on another class of post-verbal NP's: time expressions. Just as there are accusative and genitive objects, there are accusative and genitive time-expressions:

- (106)  
 On ne spal ni odnu minutu.  
 He(NOM) NEG slept (not) one(ACC) minute(ACC)
- (107)  
 On ne spal ni odnoj minuty.  
 He(NOM) NEG slept (not) one(GEN) minute(GEN)

That is why this type of casemarking appears to be structural, and cannot be stated simply in terms of the function OBJ. Sentences of this type provide motivation for assigning case to a basic underlying word order, and allowing scrambling rules to apply subsequently, rather than assuming that word order is free and case assignment is formulated in terms of grammatical functions.

However, there are instances where grammatical functions are associated with a particular case assignment. For example, 2nd objects are marked with the dative case in Russian. Complements provide another example of this type, as will be seen shortly.

*Complements* are, by definition, specified within the predicate argument structure of the lexical items with which they occur. The subject of the complement is *grammatically* or *functionally* controlled (this relation being expressed by means of a control equation in the lexicon).<sup>9</sup> The symbol *XCOMP* is used to designate the set of adjective complements (ACOMP's), noun complements (NCOMP's), prepositional complements (PCOMP's) and verbal complements (VCOMP's). Consider, for illustration, the English sentence:

(108) John strikes them as a fool.

(109)

*strike*:     (↑PRED) = 'strike as <SUB, OBJ, XCOMP>  
                  (↑SUB) = (↑XCOMP SUB) [control equation]

Similar constructions in Russian occur with the NCOMP or ACOMP obligatorily in the instrumental. Consider *sčitat'* 'to consider' and *najti* 'to find', whose OBJ grammatically controls the SUB of the complement; or *okazat'sja* 'to turn out to be' and *stat'* 'to start to be', which have subject control over the complement's subject.

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9. The control equation establishes that the XCOMP's subject will be identical with the matrix object. This was discussed in the Introduction, and will be illustrated below.

- (110)  
 On eë sčital *krasivoj*.  
 He(NOM) her(ACC) considered pretty(INS)
- (111)  
 On eë našel *umnoj*.  
 He(NOM) her(ACC) found clever(INS)
- (112)  
 On okazalsja *durakom*.  
 He(NOM) turned-out-to-be (a)fool(INS)
- (113)  
 On stal *lenivym*.  
 He(NOM) became lazy(INS)

The italicized words can occur in no other case.

This generalization about the case of (case-bearing) complements can be stated quite simply within the present framework where casemarking is formulated in terms of grammatical functions. The following PS redundancy rule will account for the

casemarking of complements.<sup>10</sup>

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10. In addition to accounting for the types of complements mentioned, the assignment of instrumental to complements is consistent with the facts about sentences containing *byt'* 'to be'. *Byt'* can have either of two meanings: (a) an equative, definitional sense, and (b) an attributive, predicative reading. When *byt'* is overt, these differences correspond to differences in the casemarking of the following noun or adjective. Compare:

(i) On byl pisatel'.  
 NOM NOM  
 'He was a writer (by profession)'

(ii) On byl pisatelem.  
 NOM INS  
 'He was a writer (temporarily)'

The question of the semantics is beyond the scope of this chapter, but both the type of reading and the casemarking are consistent with an analysis in which *byt'* occurs with an XCOMP in (ii) but not in (i). When *pisatel'* has the temporary, predicative sense, it is functioning as a complement and is regularly marked with the instrumental. In construction (i), however, the copula is functioning as a grammatical formative, and the main predicate is contributed by the post-copular phrase.

This dual analysis of the copula construction appears to generalize to other languages. Milsark (1977) and Stowell (to appear) argue that the same distinction between *be* sentences expressing temporary states and those expressing essential properties is relevant in English. Stowell proposes that the former, should be analyzed as raising-type constructions (e.g. *a man was [t sick]*) and that *be* is a raising verb. (When raising fails to occur, we get *there was [a man sick]*.) Within the lexical interpretive theory, this is equivalent to saying that *be* can take an XCOMP, which is precisely what is suggested for Russian by the instrumental marking of *pisatelem* in (ii) above.

(114)

Assign to the PS expansion

$$\dots \quad \text{XP} \quad \dots$$

$$\uparrow(\text{XCOMP}) = \downarrow$$

the following equation:

$$X = [+N] \rightarrow$$

$$(\downarrow\text{CASE}) = [+ , - , -]$$

(where XP abbreviates the set of categories NP, PP, AP, VP (cf. Jackendoff (1977) and Bresnan (1977-b)))

#### 1.2.4 Russian Phrase Structure Rules

The simplified PS rules (115) and (116) illustrate PS rules complete with their annotations. (I temporarily omit the casemarking of subjects, but I will discuss it in Section 1.3. The casemarking of objects will be considered in Chapter 2.)

(115)

$$S \quad \rightarrow \quad \text{NP} \quad \text{VP}$$

$$(\uparrow\text{SUB}) = \downarrow \quad \uparrow = \downarrow$$

(116)

$$\begin{array}{c}
 \text{VP} \rightarrow \text{ne} \\
 (\uparrow\text{Q}) = +
 \end{array}
 \left( \text{V} \left( \begin{array}{l} \text{NP} \\ ((\uparrow\text{OBJ}) = \downarrow) \\ ((\downarrow\text{CASE}) = [-, (-), +]) \\ ((\uparrow\text{Q}) = + \rightarrow (\text{Q}) = + \ \&) \\ (\downarrow\text{CASE}) = [ , +, ] \end{array} \right) \left( \begin{array}{l} \text{NP} \\ (\uparrow\text{OBJ2}) = \downarrow \\ (\downarrow\text{CASE}) = [ +, -, + ] \end{array} \right) \left( \begin{array}{l} \text{XP} \\ (\uparrow\text{XCOMP}) = \downarrow \\ \text{X} = [+N] \rightarrow \\ (\downarrow\text{CASE}) = [ +, -, - ] \end{array} \right) \right) \text{(PP*)(XP)}$$

### 1.2.5 Summary

To summarize, then, lexical rules produce fully inflected forms. [+N] constituents contain constraint equations which ensure that casemarked forms are inserted into positions which have been assigned case. Case may be assigned either by grammatical rules of PS annotation, or else by verbs that impose lexical restrictions on the case of the grammatical functions they govern.

With this as background, let us now consider the casemarking of the second predicate in Russian.



modify. Being adjuncts, they can occur freely with any verb.<sup>11</sup>

(120)

Ivan	čitaet(,)	ugrjumyj.
Ivan(NOM)	reads(,)	gloomy(NOM)

(121)

Oni	prišli	domoj	ustalye.
They(NOM)	came	home	tired(NOM)

So, adjuncts agree in case with their antecedent, while complements occur only with a limited class of verbs and appear only in the instrumental. Furthermore, it is not surprising that complement second predicates are marked as instrumental, since noun and adjective complements always take the instrumental case in Russian (as discussed earlier).

### 1.3.2 Restrictions on the Distribution of *odin* and *sam*

Comrie observes that *odin* and *sam* cannot occur as second predicates in the instrumental. There is, however, a more general constraint: *odin* and *sam* (on the

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11. Adjuncts are often separated from the rest of the sentence by pauses. Syntactic detachment, indicated by the optional pause in the following sentences, is not relevant here.

readings under discussion)<sup>12</sup> cannot occur as ACOMP's.<sup>13</sup>

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12. *Odin* is also the numeral 'one' as in (*odin iz nix* 'one of them') and, as such, it can occur as a complement:

(i) On                okazalsja                odnim    iz ...  
      He                turned-out-to-be                one(INS) of ...

13. Restrictions on what may occur as an ACOMP may follow from independent principles. It appears that ACOMP's must be interpreted as "qualifying" (as opposed to "quantifying"). *Odin* and *sam* do not really qualify the noun; under the relevant reading, they cannot occur within the NP in normal adjectival position (which in English and Russian is prenominal). It is interesting that while this is true in English and Russian, in French, where *seul* 'alone' can occur as a normal modifier, it can also occur as an ACOMP. The same is true of the related Russian adjective *odinokij* 'lonely'.

(i) (a) \*the alone man

(b) \*I consider him alone.

(ii) (a) \*odin        čelovek  
           (the) alone person

(b) \*Ja sčitaju ego odnim.  
       I consider him alone

(iii) (a) la fille seule  
           the girl alone

(b) Je la crois seule  
       I believe her (to be) alone

(iv) (a) odinckij čelovek  
           (the) lonely person

(b) Ja sčitaju ego odinokim.  
       I consider him (to be) lonely

- (122)  
 \*Ona sčitala menja odnoj.  
 She(NOM) considered me(ACC) alone(INS)
- (123)  
 \*Ona okazalas' odnoj.  
 She(NOM) turned-out-(to-be) alone(INS)

The distinction between complements and adjuncts is useful, and indeed necessary, to properly account for the distribution of second predicates. It is clearly more adequate than the "general rule putting Second Predicates optionally, and preferably, into the Instrumental," suggested by Comrie (1974:124). Such a rule treats *odin* and *sam* as being anomalous, thus failing to capture the generalization that they are excluded from all complement positions.

### 1.3.3 Adjuncts within Infinitival Clauses

By focusing his attention on *odin* and *sam*, Comrie in effect limits the class of second predicates under consideration to a subclass: adjuncts. He shows that adjuncts within subjective and objective infinitival clauses act differently. (It should be noted that *odin* and *sam* are the only adjuncts that can occur within infinitival clauses.)<sup>14</sup> Adjuncts within subjective infinitival clauses agree in case with the nominative matrix subject, while those occurring with objective infinitives do not agree in case with the matrix object with which they are coreferential, appearing instead obligatorily in the dative. This distribution will be explained by the analysis found later in this section.

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14. This is a language particular restriction.

### 1.3.4 Subjects of Nontensed Clauses

In order to account for the dative adjuncts, Comrie postulates underlying dative subjects of infinitival clauses. In this way, here as elsewhere, the adjuncts agree in case with their antecedents. Comrie justifies his suggestion by introducing evidence from Old Church Slavonic, where datives could appear on the surface as infinitival subjects, and by showing that even in Modern Russian, the dative can occasionally be overt, as in the following example he gives from Gorky:

(124)

A nedavno,	pered	tem kak	vzoiiti	lune,
recently,	before	(Comp.)	rise(inf.)	moon(DAT)
po nebu	letala	bol'šuščaja	černaja	ptica.
about sky	was flying	huge	black	bird

'Recently, before the moon was to rise, a huge black bird was flying about the sky.'

(= Co, 55)

Overt datives preceding infinitives not only occur in archaic literary Russian; they are also common in standard Modern Russian in expressions like:<sup>15</sup>

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15. Whether these are actually subjects in contemporary Russian, or merely show casemarking reminiscent of the former system of overt Russian infinitival dative subjects, is irrelevant to the point under discussion.

(125)

Kak mne skazat'?  
 how I(DAT) say(Inf.)

'How could I say?'

In all cases but one,<sup>16</sup> whenever the subject of an infinitive appears, it is in the dative. Comrie proposes a general rule making the subject of infinitives dative, analogous to the rule making the subject of tensed verbs nominative. Such a case rule is not unusual. The dative case used for infinitive subjects in Russian is not unlike the *for*-phrase used in English; Quicoli (1972) has argued that the subjects of infinitives in Ancient Greek are marked with the accusative case and Simpson (1982) also argues for the need to have

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16. Infinitives do appear with nominative subjects in what Jakobson (1963) refers to as elliptical constructions.

(i) A oni kričat'.  
 and they(NOM) cry(Inf.)

(Such constructions are also extensively discussed in Birnbaum (1965). One might propose structures for such sentences containing a null verb (with a meaning like 'start').)



This rule indicates that case is assigned within S' clauses (cf. rule (147) below).<sup>18</sup>

Given this analysis, all adjuncts have antecedents within the same clause, with which they agree in case. Since the adjunct's subject is not always uniquely determined, it is not grammatically controlled by the matrix verb. Following Andrews (1982-b), we may assign as its subject a variable *G*, which is permitted to range over grammatical functions

18. "Tensed" is not precisely the right notion, however. Notice that the class of verb forms which assign nominative to their subjects must include the (present and past) adverbial participles, although the markers on these forms are aspectual. Evidence for the nominative subjects of adverbial participles comes from the agreement of adjuncts.

(ii) Podbežav k stancii odin, Ivan...

Having-run to (the) station alone(NOM), Ivan(NOM)...

Here *odin* agrees with the subject of the participle, rather than with *Ivan*, since even when *Ivan* is missing from the sentence, *odin* must be nominative. The following sentence (from G.C. Rappaport (1979)) is acceptable for many speakers in less formal speech:

(ii) Podbežav k stancii, poezd uže otošël.

Having-run to (the) station, (the) train already left.

*Odin* can still occur only in the nominative case.

(iii) Podbežav k stancii odin, poezd uže otošël.

Having-run to (the) station alone(NOM), the train already left.

[Similar examples involving long-form nominative adjectives are found in Švedova, ed. (1970:637), although they are said to be conversational. Examples such as the following (from Simpson (pers. comm.)) are acceptable, although they are felt to be colloquial:

(iv) Pridja domoj p'janyj, moj muž menja sil'no udaril.

Coming home drunk(NOM, m.), my husband (NOM) me(ACC) strongly hit.

Examples such as (iv) though, provide evidence against an alternative analysis proposed by Schein (1980-a). See Simpson (in prep.) for discussion.]

(SUB, OBJ, OBJ2, etc.). The annotation  $(\downarrow\text{SUB}) = (\uparrow\text{G})$  ensures that the assigned subject is contained within the same clause nucleus. (*Clause nucleus* is the functional structure analog of a simplex sentence. As defined in Bresnan (1982-a), it is the minimal f-structure which contains both a SUB and a PRED as function names.) The grammar must further specify, as in (127), that the adjunct and its subject agree in case.

(127) Assign to	S →	... XP ... ( $\uparrow\text{XADJ}$ ) = $\downarrow$
the annotation		( $\downarrow\text{SUB}$ ) = ( $\uparrow\text{G}$ ) ( $\downarrow\text{CASE}$ ) = ( $\downarrow\text{SUB CASE}$ )

The revised phrase structure rules appear in Table II.

However, if adjuncts agree in case with an antecedent within the same clause and if infinitival subjects are dative, why do dative adjuncts not occur within subjective infinitival clauses? This is a consequence of the representation of grammatical control, as I will now argue.

### 1.3.5 Grammatical Control

The proposal is that *sam* or *odin* always agrees in case with the functional subject of the infinitive, which is normally dative. However, in the case of subjective infinitives, the subject of the infinitive is grammatically controlled by the subject of the matrix verb. The lexical entry for the verb *xotet'* 'to want', for example, includes the following information:

(128) *xotel'*: ( $\uparrow$ PRED) = 'want <SUB, VCOMP>  
 ( $\uparrow$ SUB) = ( $\uparrow$ VCOMP SUB) [control equation]

Grammatical control entails the identity of all features (and, in particular, of case). This identity is an essential property of the representation of grammatical control, asserted by the control equation (which is required for lexical forms containing a complement (XCOMP)).

Therefore, in sentence (129),

(129)

On	<i>xotel</i>	<i>pojti</i>	<i>odin.</i>
He(NOM)	wanted	to go	alone(NOM)

the subject of the infinitive is identical with the subject of *xotel* and is therefore nominative. It is with this nominative functional subject of the infinitive that the adjunct *odin* agrees. Given the PS rules in Table II and the mini-lexicon in Table III,<sup>19</sup> we can construct the functional structure for (130), as is seen in (131).

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19. Notice that given such lexical representations, agreement is an automatic consequence of the consistency of lexical information within functional structure. Agreement (of number, gender, and person) is obtained by means of information that verbs and adjectives contain in their lexical forms about their subjects. The lexical representation for *govorit*, for example, would include the following information:

govorit: V,     (↑PRED) = 'say <SUB>'  
                   (↑SUB NUM) = SG  
                   (↑SUB PER) = 3

As with information about case, lexical redundancy rules would relate particular suffixes, and the information they convey, to the lexical items which contain them.

The question arises: should the equations listed above for *govorit* be constraint or constituting equations? I have chosen constituting equations, because it seems that for Russian, the endings truly provide the feature content. In the absence of an overt subject, the information from the verbal ending is transferred to the pronominal subject. In (i), for example, *I* is understood to be the subject, because of the ending on the verb.

(i) Prijdu.  
 (I) will come(1,sg)

This interpretive device is particularly common with the third person plural form of the verb. The subject is then understood to be the indefinite *they* or *someone* (something like the French *on*).

(ii) Govorjat, čto ...  
 Say(3,pl), that...  
 'It is said that...'

The third person singular form of the verb is used when the subject is presumed to be inanimate. (This distinction plays a crucial role in Turgenev's short story "Stučit" (meaning 'something is making a noise') from *Zapiski Oxotnika* (A Sportsman's Sketches).)

Languages may well differ in whether number/gender information is represented by means of constraint or constituting equations.

A noun or pronoun contains information within its lexical form as to number/gender/person, and this is added to the information received from the verb or adjective of which it is the subject. Agreement, then, is guaranteed by the principle of "consistency". No function is permitted to have more than one value, and therefore conflicting information would not produce a well-formed functional structure. Sentence (iii) contains inconsistent information about the subject's number, and is therefore ruled out by the principle of consistency.

(iii) \*Oni       govorit.  
 pronoun(3,pl) talk(3,sg,present)

TABLE II REVISÉD PHRASE STRUCTURE RULES FOR RUSSIAN

(1) S → NP VP  
 (↑SUB) = ↓                      ↑ = ↓  
 (↓CASE) = [α, -, α]  
 (↑TENSE) = - α

(2) VP →  $\left( \begin{array}{l} ne \\ (\uparrow Q) = + \end{array} \right)$  Verb  $\left( \begin{array}{l} NP \\ (\uparrow OBJ) = \downarrow \\ (\downarrow CASE) = [-, (-), +] \\ ((\uparrow Q) = + \rightarrow (\downarrow Q) = + \\ \& (\downarrow CASE) = [ , +, ] \end{array} \right) \left\{ \begin{array}{l} NP \\ (\uparrow OBJ2) = \downarrow \\ (\downarrow CASE) = [+ , - , +] \\ \\ XP \\ (\uparrow XCOMP) = \downarrow \\ X = [+ N] \rightarrow \\ (\downarrow CASE) = [+ , - , -] \end{array} \right\} \dots$

... (PP\*)  $\left( \begin{array}{l} XP \\ (\uparrow XADJ) = \downarrow \\ (\downarrow CASE) = (\downarrow SUB CASE, \\ (\downarrow SUB) = (\uparrow G) \end{array} \right) \left( \begin{array}{l} S' \\ (\uparrow COMP) = \downarrow \end{array} \right)$

TABLE III

## MINI-LEXICON #1

<i>odin</i>	ADJ,	(↑PRED) = 'alone <SUB>' (↑SUB NUM) = sg (↑SUB GEND) = m (↑CASE) = <sub>c</sub> [-, -, -]
<i>on</i>	PRO,	(PRED) = 'he' (↑ NUM) = sg (↑GEND) = m (↑PER) = 3 (↑CASE) = <sub>c</sub> [-, -, -]
<i>pojti</i>	V,	(↑PRED) = 'go <SUB>' (↑TENSE) = - (↑ASPECT) = perf.
<i>xotiel</i>	V,	(↑PRED) = 'want <SUB,VCOMP>' (↑SUB NUM) = sg (↑SUB GEND) = m (↑TENSE) = past (↑ASPECT) = imperf.

(130) On xotel pojti odin.

(131)

SUB	<table style="border-collapse: collapse;"> <tr><td style="padding-right: 10px;">PRED</td><td>'he'</td></tr> <tr><td style="padding-right: 10px;">NUM</td><td>sg</td></tr> <tr><td style="padding-right: 10px;">GEND</td><td>m</td></tr> <tr><td style="padding-right: 10px;">PERS</td><td>3</td></tr> <tr><td style="padding-right: 10px;">CASE</td><td>[-,-,-]</td></tr> </table>	PRED	'he'	NUM	sg	GEND	m	PERS	3	CASE	[-,-,-]				
PRED	'he'														
NUM	sg														
GEND	m														
PERS	3														
CASE	[-,-,-]														
PRED 'want <SUB,V-COMP>'															
TENSE past															
ASPECT imperf															
VCOMP	<table style="border-collapse: collapse;"> <tr><td style="padding-right: 10px;">SUB</td><td>[ ]<sub>i</sub></td></tr> <tr><td style="padding-right: 10px;">PRED</td><td>'go &lt;SUB&gt;'</td></tr> <tr><td style="padding-right: 10px;">TENSE</td><td>-</td></tr> <tr><td style="padding-right: 10px;">ASPECT</td><td>perf.</td></tr> <tr><td colspan="2" style="padding: 10px 0 10px 40px;">XADJ SUB [ ]<sub>i</sub></td></tr> <tr><td colspan="2" style="padding: 10px 0 10px 40px;">PRED 'alone &lt;SUB&gt;'</td></tr> <tr><td colspan="2" style="padding: 10px 0 10px 40px;">CASE { [-,-,-] }<sub>i</sub></td></tr> </table>	SUB	[ ] <sub>i</sub>	PRED	'go <SUB>'	TENSE	-	ASPECT	perf.	XADJ SUB [ ] <sub>i</sub>		PRED 'alone <SUB>'		CASE { [-,-,-] } <sub>i</sub>	
SUB	[ ] <sub>i</sub>														
PRED	'go <SUB>'														
TENSE	-														
ASPECT	perf.														
XADJ SUB [ ] <sub>i</sub>															
PRED 'alone <SUB>'															
CASE { [-,-,-] } <sub>i</sub>															

To summarize: the adjunct *odin* must be nominative, since it must agree with its antecedent, the subject of the infinitive (which is grammatically controlled by the nominative matrix subject). Given the functional representation, the controller and controllee could not differ in any feature (including case).

The theory presented in Bresnan (1982-a), which discusses the principles of control, distinguishes *grammatical control* from *anaphoric control*. The difference is that the former involves identity of f-structures, while the latter involves identity of reference.

As mentioned in the Introduction, grammatical control is expressed by a control equation in the lexical form of any item whose PRED contains a complement (XCOMP).

This is of the form:

(132) Subject control:   (↑SUB) = (↑XCOMP SUB)  
           Object control:   (↑OBJ) = (↑XCOMP SUB)

Any lexical rule applying to a lexical form also applies necessarily to the control equation, if there is one.

Anaphoric control is freer than grammatical control. An anaphorically controlled subject is represented as a free anaphor, having the feature [+PRO] within functional structure. No control equation is provided to determine the value of the subject, but there are certain conditions on anaphoric control (some of which follow from independent conditions on anaphora). Certain thematic, semantic, and pragmatic conditions will govern the interpretation of the anaphors, and although these conditions may force a particular reading in a particular context, the antecedent of the anaphor need not be uniquely determined and may not even be present in the f-structure.

### 1.3.6 Object Control

If the analysis of subject control is correct, why, then, is there no case agreement in objective infinitives between the matrix object and the pronominal subject of the infinitive (with which *odin* or *sam* agrees)? I will argue that this follows from a more general property of Russian control constructions, namely that there is no "object control" of VCOMP's. This is equivalent to claiming that there is no control equation in the lexicon of the form:

$$(133) \quad (\uparrow\text{OBJ}) = (\uparrow\text{VCOMP SUB})$$

The verbs that take objective infinitives include those listed below:

(134) *prosit'* 'to ask', *ugovarivat'* 'to persuade', *zastavljat'* 'to force', *učit'* 'to teach', taking accusative objects; and

*prikazyvat'* 'to order', *velet'* 'to order', *sovetovat'* 'to advise', *poručat'* 'to entrust', *predlagat'* 'to offer', *zapretit'* 'to prohibit', *razrešat'* 'to permit', taking dative objects.

For *prosit'*, which seems fairly representative, there is no grammatical control of the infinitive. Consider:

- (135) Ja poprosila ego ne byt' žestokim.  
 I(NOM) asked(having feminine subject) him(ACC) NEG be cruel(INS)
- (136) Ja poprosila ego ne byt'  
 I(NOM) asked(having feminine subject) him(ACC) NEG be  
 isključennoj iz školy.  
 expelled(INS,f) from school

In (135), the subject of *žestokim* is interpreted as the matrix object *ego*, while in (136), the subject of *isključennoj* is the matrix subject, *ja* (which is also the semantic object of the verb 'expel'). (The gender markings on the verbs make these the only readings.) Since the interpretation of the subject of the embedded verb depends on the context, the subject is not grammatically controlled. *Prosit'* can also occur without any overt object, as in:

- (137) On prosil pomolčat'  
 He(NOM) asked[PRO = them, e.g.] to be quiet.

The absence of a possible controller in (137) again shows that there is no grammatical control.

The claim that grammatical control over VCOMP by objects is impossible in Russian is a strong one,<sup>20</sup> and it makes certain testable predictions. It would eliminate the

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20. It should be noted, however, that this control restriction applies only to VCOMP's. Object control is permitted with ACOMP, PCOMP, and NCOMP. Such control is found with verbs like *sčitat'* 'to consider'.

possibility in Russian of constructions which are found in other languages, involving verbs like the English *believe*, whose object (although not contained in the predicate argument structure) controls the subject of its VCOMP.

(138) a. I believed him to have gone.

b. *believe* V, (↑PRED) = 'believe <SUB,VCOMP>(OBJ)'  
(↑OBJ) = (↑VCOMP SUB)

Indeed, there is no equivalent structure in Russian. A translation of sentences like (138a) or (139) requires overt complementizers:

(139) I heard them cry.

(140) Ja slyšala, kak oni kričali.  
I heard how(that) they cried

Crucially, *believe* differs from *persuade*-type verbs in that it does not contain an OBJ in predicate argument structure.

(141) *persuade* V, (↑PRED) = 'persuade <SUB,OBJ,VCOMP>'  
(↑OBJ) = (↑VCOMP SUB)

(As Bresnan (1982-b) discusses, this is shown by the fact that *believe*'s object is not subject to selectional restrictions unlike that of *persuade*.) Thus, while a Russian equivalent of *persuade* could exist hypothetically with anaphoric control, without the option of grammatical control by an OBJ over a VCOMP, no equivalent of *believe* is possible. If the OBJ is mentioned neither in predicate argument structure nor in a control

equation, then the functional structure for a sentence like (139a) would be "incoherent";<sup>21</sup> therefore, the theory rules out the possibility of such constructions in Russian.

If my analysis of casemarking is correct, then the following contrast indicates that there is no grammatical control by the subject of a passive over the subject of the infinitival clause:

- (142) \*On byl ugovorën prijti odin. (= Co, 110)  
 He(NOM) was persuaded to come alone(NOM)
- (143) ?On byl ugovorën prijti odnomu. (= Co, 110)  
 He(NOM) was persuaded to come alone(DAT)

The theory in fact predicts this.<sup>22</sup> Since passivization is a lexical rule that replaces OBJ by SUB throughout the lexical entry, if there can be no control equation ( $\uparrow$ OBJ) = ( $\uparrow$ VCOMP SUB), then it follows that passivized object control cannot be obtained:

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21. As mentioned in the Introduction, *coherence* is a well-formedness condition which requires that every semantic form contained within the f-structure be the PRED value of a grammatical function mentioned (either in the predicate argument structure or a constituting equation) in some other semantic form. (See definition in Kaplan and Bresnan (1982).)

22. Notice that the dative adjunct in the second sentence is agreeing with the dative functional subject of *prijti* (which is regularly casemarked, since it is not subject to grammatical control). *Ugovorit'* 'to persuade' is assumed to have the predicate argument structure <SUB,OBJ,COMP>, and the subject of the COMP will be marked dative, like the subject of any other infinitival S or S'.

(144)

PASSIVIZATION

|→ (↑SUB) = (↑VCOMP SUB)

In cases where there is apparently a passive construction and an acceptable occurrence of *odin*(NOM) in the embedded infinitival clause, I would suggest (as would Comrie) that we are dealing with an adjective which has been formed from a past participle, but which has been lexicalized (with subject control). That is, it has become an independent lexical item, unlike passivized forms that are related to active forms by a productive lexical redundancy rule. Many past participles have been lexicalized in a similar fashion and are listed independently as adjectives. Consider (145) (= (98)).<sup>23</sup>

(145)

Ja	byl	prinužděn	borot'sja	odin.
I(NOM)	was	obliged(forced)	to fight	alone(NOM)

( = C, 111)

Comrie cites this example from Borrás and Christian (1971), and explains (p. 144) that it has the meaning "i had to fight alone, not that anyone actually directly forced me to do something, thus not the same as [(146)]":

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23. Interestingly, Rochette (1980) has evidence from French that the equivalent past participles *forcé* and *obligé* have been lexicalized as adjectives with subject control over the following VCOMP (as has the English *obliged*).

(146) Menja     prinudili                     borot'sja     odnomu. (= Co, 112)  
 I(ACC)    (they(someone)) forced to fight     alone(DAT)

'They forced me to fight alone'

Therefore, although subject control of infinitives is permitted, the subjects of passive sentences cannot exert grammatical control over infinitives, since the precursor from which such a control relation would be derived is not well-formed in Russian. [This assumes that lexical redundancy rules necessarily relate existing lexical items; and excludes in principle lexical derivations involving non-existing forms.]<sup>24</sup>

Let us now return to the verb *prosit'* 'to ask' and consider what its lexical entry would look like. Since the subject of the embedded infinitive is not grammatically controlled, the infinitive itself is not a VCOMP. It must rather be a COMP, a closed complement whose subject is controlled anaphorically. Assuming a PS rule expanding S' as follows,<sup>25</sup>

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24. In passing, we should note that this type of evidence supports an analysis (like the present one) in which passive forms are derived from active ones, in favor of an approach that merely allowed two distinct mappings of grammatical functions to the same logical arguments. Support for an analogous treatment of *-sja* forms will be found in Section 1.4.

25. Notice that this is a special case of the generalization that tenseless clauses have dative subjects, which is represented by the PS redundancy rule ((125)); here  $\alpha = +$ .



agreement paradox pointed out by Babby (1973-a). He shows that *vy* requires the "plural" form of verbs:

- |                           |             |
|---------------------------|-------------|
| (i) a. <i>Vy prišli.</i>  | 'You came'  |
| b. * <i>Vy prišël.</i>    |             |
| c. * <i>Vy prišla.</i>    |             |
| (ii)a. <i>Oni prišli.</i> | 'They came' |
| b. <i>On prišël.</i>      | 'He came'   |
| c. <i>Ona prišla.</i>     | 'She came'  |

Adjectives, however, behave differently. Long form adjectives agree in number with the sense of *vy*, and may be singular or plural, while short form adjectives are always plural. This gives the following paradigm when *vy* is taken to be masculine singular, for 'you are indifferent':

- |                                |   |
|--------------------------------|---|
| (iii) a. <i>Vy ravnodušny.</i> | [ <u>short form</u> , pl]               |
| b. * <i>Vy ravnodušen.</i>     | [short form, m, sg]                     |
| c. * <i>Vy ravnodušnye.</i>    | [long form, pl, NOM]                    |
| d. <i>Vy ravnodšnyj.</i>       | [ <u>long form</u> , m <u>sg</u> , NOM] |

It is apparent that verbs and short form adjectives exhibit one type of agreement, which Babby (following tradition) calls *formal agreement* while long form adjectives involve another, *agreement in sense*. The latter operates in the presence of a case feature.

Surely it is not coincidence that short form adjectives behave in some ways like verbs. Many are derived from verbs. However, the similarities between short form adjectives and verbs derive not from the fact that they have the same constituency, but rather from the fact that they share the same morphological endings. It is the endings which encode the information relevant to agreement. The past tense and past participle endings are almost precisely those which occur on short form adjectives.

There is, then, a simple solution to the apparent agreement paradox within the present framework. The ending *-li* or *-ly*, for adjectives which have plural nouns or *vy* as the subject, includes the following specifications:

- (iv) ( $\uparrow$ SUB NUM) =  $\alpha$  PL  
 ( $\uparrow$ SUB FORMAL) = -  $\alpha$

While the long form adjectival ending *-ye* has the marking:

- (v) ( $\uparrow$ SUB NUM) = + PL

Obviously, these would be distinguished from the endings *-la* and *-aja*:

- (vi) a. *-la*:           (↑CASE) = <sub>c</sub> -  
                               (↑NUM) = - PL  
                               (↑GEND) = f  
                               (↑FORMAL) = -
- b. *-aja*:           (↑CASE) = <sub>c</sub> [-, -, -]  
                               (↑NUM) = - PL  
                               (↑GEND) = f

This lexical representation also provides simple solutions to other agreement paradoxes pointed out by Babby within the transformational framework.

If this lexical representation is adopted, then *poprosila* should also contain the specification (↑FORMAL) = -.

Facts such as these suggest that information about agreement is best represented in terms of lexical information and consistency, rather than by some abstract AGREEMENT node, whose features are to be copied or matched. Different lexical items partition the set of agreement features differently, and have different agreement requirements.

TABLE IV MINI-LEXICON #2

<i>ego</i>	PRO, (↑PRED) = 'he' (↑NUM) = sg (↑PER) = 3 (↑GEND) = m (↑CASE) = <sub>c</sub> [-, ±, +]
<i>odnomu</i>	ADJ, (↑PRED) = 'alone <SUB> (↑SUB NUM) = sg (↑SUB GEND) = m (↑CASE) = <sub>c</sub> [+ , - , +]
<i>ona</i>	PRO, (↑PRED) = 'she' (↑NUM) = sg (↑GEND) = f (↑PERS) = 3 (↑CASE) = <sub>c</sub> [- , - , -]
<i>pojti</i>	V, (↑PRED) = 'go <SUB> (↑TENSE) = - (↑ASPECT) = perf
<i>poprosila</i>	V, (↑PRED) = 'ask <SUB,VCOMP> (↑TENSE) = past (↑SUB NUM) = sg (↑SUB GEND) = f (↑ASPECT) = perf



### 1.3.7 Overt Complementizers

S' is necessarily assigned a closed grammatical function (e.g. SUB, OBJ, COMP), as Bresnan (1982-a) explains. Since S' contains a syntactic subject, functional control of the subject of S' is precluded.<sup>28</sup> Therefore, when there is an overt sentential complementizer associated with an infinitive, there is no grammatical control of the subject of the infinitival S' clause. The subject of the infinitive can be understood to refer to a noun which is not the matrix subject, or the coreferential noun may be omitted entirely.

(151)

U	nego	sliškom	malo	deneg,	čtoby
around	him(GEN)	too	little	money	in-order-to
	kupit'	sebe	mašinu.		
	to buy	himself(DAT)	(a) car		

'He has too little money to buy himself a car'

(152)

Sliškom	xolodno,	čtoby	ostat'sja	zdes'.
(It is) too	cold	in-order-to	stay	here

'It is too cold to stay here.'

Thus, anaphoric rather than grammatical control is operative in these sentences, and any adjuncts should be in the dative. This prediction holds true in (153), where the adjunct

---

28. Bresnan (1982-a) does not require S' to contain a structural subject, but rather explains the assignment of a closed grammatical function to S' in terms of the possibility of S' having a structural subject.

agrees with the dative functional subject of *idti*.

(153)

On	ne	takoj	durak,	čtoby	idti
He(NOM)	NEG (is)	such (a)	fool	as-to (Comp.)	go
	tuda	odnomu.			
	there	alone(DAT)			

### 1.3.8 Other Cases of Control

This analysis makes the correct predictions for the casemarking of adjuncts occurring in embedded infinitival clauses (A) with adjectives whose subject grammatically controls that of the following VCOMP, and (B) with deverbal nominals, whose infinitival subjects are anaphorically controlled.

First, consider adjectives like *dolžen* 'must', *objazan* 'obliged', *vynužden* 'forced', *gotov* 'ready', *nameren* 'intending' *rad* 'glad', and *sčastliv* 'happy'. These adjectives can take VCOMP's whose subjects are grammatically controlled by the adjective's own subject. As discussed by Gvozdev (1961), these adjectives express modality, and are very similar in meaning to verbs of modality which exert grammatical control over their verbal complement. As Gvozdev points out, the sense of:

- (154)  
 On            rad            [            pojtí].  
 He(NOM)<sub>i</sub> (is) glad(M) [[ ]<sub>i</sub> to go]

is very close to that of:

- (155)  
 On            xočet            [            pojtí].  
 He(NOM)<sub>i</sub> wants            [[ ]<sub>i</sub> to go]

Our theory then predicts that *sam* or *odin* would occur as adjuncts in the nominative case, as in fact they do:

- (156)  
 On            gotov            pojtí            odín/\*odnomu.  
 He(NOM) (is) ready            to go            alone(NOM/\*DAT)
- (157)  
 Ona            dolžna            pomoč'            tovarišču            sama/\*samoj.  
 She(NOM) must            help            (her)comrade(DAT,m) herself(NOM/\*DAT)

Moreover, not all instances of grammatical control involve nouns in the nominative. As mentioned in footnote # 20, objects can control the subjects of PCOMP's, NCOMP's, and ACOMP's. When, for example, an object grammatically controls an ACOMP which consists of one of the above adjectives followed by a VCOMP (whose subject is controlled by the ACOMP's subject, which itself is controlled by the matrix object), it is predicted that an adjunct within the embedded clause to appear in the accusative, in agreement with the matrix object. While many speakers do not accept such awkward constructions, those who tolerate them show the expected preference for the case of *odin*.

(158)

Ona	sčitala	ego		
She(NOM)	considered	him,(ACC)		
	gotovym	putešestvovat'	*odnim INST	
			*odin NOM	
			*odnomu DAT	
			?odnogo ACC	
[ [ ] <sub>i</sub>	ready(INS)	[ [ ] <sub>i</sub>	to travel	[ [ ] <sub>i</sub>
			alone(ACC)]])	

Now consider deverbal nominals which take infinitival complements. There is no grammatical control of their infinitival complements' subjects, since often the subject is not coreferential with any other noun in the sentence. Since the subject of a nontensed verb is dative, and the subject of the infinitive is anaphorically controlled, we would expect adjuncts within the infinitival clause to appear in the dative as well. This prediction holds true, as the following sentences show:

(159)

U	nego	bylo	želanie	zanimat'sja
around	him	was	(the)desire(NOM)	to take up
	muzykoj		*sam/samomu.	
	music(INS)		himself(*NOM/DAT)	

(160)

Popytka	končit'	rabotu	*odin/odnomu
(The)attempt(NOM)	to finish	work	alone(*NOM/DAT)
ne	uvenčalas'	uspexom.	
NEG	was crowned	with success	

(161)	Samoe	važnoe	—	umenie
	(the) most	important (thing)	(is the)	ability
	rabotat'	*odin/odnomu.		
	to work	alone(*NOM/DAT)		

### 1.3.9 Summary

In this chapter I have presented and discussed some data about case agreement in Russian. First, I have shown that the distinction between complement and adjunct is essential to any examination of second predicates in Russian. The case restriction placed on *sam* and *odin* follows from the fact that they cannot occur in complement position. Second, I have considered the agreement of second predicates within the framework of LFG. The seemingly strange distribution of second datives — with objective infinitives, and with subjective infinitives when and only when there is an overt complementizer — turns out to be a simple consequence of the difference between grammatical and

anaphoric control.<sup>29</sup> This analysis makes the correct predictions for infinitives dependent on adjectives and deverbal nominals.

---

29. There is a problem, however, in accounting for sentences with *obeščat'* 'to promise'. When there is no object in the matrix sentence, *obeščat'* acts like any other verb with subject control. However, when a direct object intervenes, the data are very fuzzy. To some extent, the sentence-final *odin* is acceptable in either the dative or the nominative. All of these sentences are somewhat unnatural, and speakers prefer to use a complementizer. This would lead us to postulate two separate entries for *obeščat'*, one in which the subject controls the embedded infinitive, and one in which the verb takes a COMP. [This has been independently argued for in English; see Bresnan (1982-a). Similar problems also arise in French; see Rochette (1980).] More data are necessary, since there seems to be a good deal of dialect variation. Although Comrie generally preferred the dative to the nominative:

(i) Volodja                    obeščal    materi            vernut'sja    odnomu/??odin.  
       Volodja(NOM)    promised    mother(DAT)    to return     alone(DAT/??NOM)

my informants showed the reverse preference, consistent with grammatical subject control).

Evidence in favor of two representations for the verb *obeščat'* is provided by Simpson (1982). She points out that when *obeščat'* occurs with an object, it need not have a uniquely determined controller of the embedded subject. She provides an example from Švedova, ed. (1970):

(ii) Traktorist obeščal synu prokatit'sja na traktore. (= S, 76)  
       (The) tractor-driver(NOM) promised son(DAT) to ride on (the) tractor.

which can have the meaning 'The tractor driver promised his son a ride on the tractor,' where it is understood that the son will do the riding.

#### 1.4 MORE CONTROL RESTRICTIONS

In the preceding sections, a general restriction was proposed for Russian: that, unlike NCOMP's, ACOMP's, and PCOMP's, VCOMP's may not be controlled by the matrix object. Strikingly, this asymmetry shows up as well with the subjects of a large class of *-sja* verbs. Thus, while sentences in (162) are acceptable, (163) is ungrammatical:

(162) a.

Ona	sčitaetsja	krasavicej.
She(NOM)	considers- <i>sja</i>	(a) beauty(INS)
'She is considered a beauty'		

b.

Ona	sčitaetsja	krasivoj.
She(NOM)	considers- <i>sja</i>	pretty(INS)
'She is considered pretty'		

c.

Ona	naxoditsja	v ploxo <sup>o</sup> sostojanii.
She(NOM)	finds- <i>sja</i>	in (a) bad state.
'She is in a bad state'		

(163)

*Ona	sčitaet- <i>sja</i>	rabotat' ploxo.
She(NOM)	considers- <i>sja</i>	to work badly.
'She is considered to work badly'		

Most, although not all, *-sja* forms are semantically related to a non-*sja* form. If we assume that *-sja* verbs are full-fledged lexical items, related to their non-*sja* counterparts (when such counterparts exist) lexically, by a process similar to that proposed by Grimshaw

(1982) for a class of French reflexives,<sup>30</sup> the reappearance of the asymmetry finds explanation. There can be no productively derived *-sja* form which exercises subject control over an embedded infinitival clause, because such a form could have no legitimate source. That is, for such derived reflexives,<sup>31</sup> subject control of the reflexive form over a VCOMP would be possible if and only if the non-reflexive source had object control of the VCOMP, and the claim is that such control is impossible in Russian.

The fact that productively derived (and only productively derived) *-sja* verbs exhibit this restriction is apparent when the classes of *-sja* verbs are investigated. For many classes, the non-*sja* object corresponds to the *-sja* form subject. These include:

#### I. Reciprocals

Example:

<i>videt'sja</i>	to see each other
<i>videt'</i>	to see

---

30. For example, Grimshaw's Middle Rule: SUBJECT |→ ∅  
 OBJECT |→ SUBJECT  
 (↑REFL) =<sub>c</sub> +

31. The term 'reflexive' is being used loosely throughout this section to refer to *-sja* verbs, although the *-sja* verbs may have a wide range of interpretations, including reciprocal, passive, middle, reflexive, and others.)

(164)  
 \*Ja videla ego kurit'.  
 I(NOM) saw him(ACC) smoke

(165)  
 \*My videlis' kurit'.  
 We(NOM) saw-*sja* smoke  
 'We saw each other smoke'

## II. Passives<sup>32</sup>

Example:

*zakryvat'sja* to be closed  
*zakryt'* to close

It should be noted that *-sja* passives derived from verbs having human objects are not acceptable. Thus (166) is excluded:

(166)  
 \*Trotsky zastavljalsja ...  
 Trotsky forced-*sja* ...  
 'Trotsky was forced to ...'

from Schein (1980-b:9)

---

32. Imperfective verbs in Russian have passive forms constructed with *-sja* verbs, while perfective verbs have passives with *byt'* (to be) and the past participle.

### III. Middle Forms

Examples (as mentioned before):

*sčitat'sja* to be considered

*sčitat'* to consider

(167)

\*Ja sčitala ego delat' ošibku.  
I considered him(ACC) to be making (a) mistake(ACC)

(168)

\*On sčitaetsja delat' ošibku.  
He is considered to be making a mistake

### IV. Verbs expressing beginning, end, or continuation of action

Examples:

*načinat'sja* to begin (intransitive)

*načinat'* to begin (transitive)

*končat'sja* to finish (intransitive)

*končat'* to finish (transitive)

*prodolžat'sja* to continue (intransitive)

*prodolžat'* to continue (transitive)

(169)

Professor prodolžal lekciju.  
(The) professor continued (the) lecture(ACC)

(170)

Lekcija prodolžalas'.  
(The) lecture continued.

- (171)
- |               |            |               |
|---------------|------------|---------------|
| Lekcija       | prodolžala | byt' skučnoj. |
| (The) lecture | continued  | to be boring. |
- (172)
- |               |              |               |
|---------------|--------------|---------------|
| *Lekcija      | prodolžalas' | byt' skučnoj. |
| (The) lecture | continued    | to be boring. |

There are other classes of *-sja* verbs which are also productively derived, but which do not occur with infinitival complements, and so have no bearing on this issue.<sup>33</sup>

Although in each of these classes, there is a different productive relationship between the *-sja* and non-*sja* forms, in all cases the reflexive form is derived from a transitive verb having predicate argument structure: <SUB,OBJ>. The new *-sja* verb will be of the form: <SUB, Ø>. Whether the process involved is an operation on grammatical functions, changing object to subject (as for Middle and Passive Formation) or an operation on the logical structure (as proposed by Grimshaw for true reflexivization and inchoativization, and as is likely to account for Russian Reciprocal Formation) is irrelevant. The crucial thing is that a reflexive output with predicate argument structure: <SUB, Ø ,VCOMP> would require as input a non-*sja* form: <SUB,OBJ,VCOMP>, where the VCOMP is controlled by the object. Since this is excluded in Russian (as discussed in

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33. Such classes include:

- Reflexives (*myt'sja* 'to wash oneself', *myt'* 'to wash')
- Inchoative verbs, expressing feelings (*radovat'sja* 'to be happy', *radovat'* 'to make happy')
- De-argumented forms (*kusat'sja* 'to bite (object unspecified)', *kusat'* 'to bite')
- Change in state (*ostanavlivat'(sja)* 'to stop' *izmenjat'(sja)* 'to change')

previous sections), the non-existence of the hypothetical *-sja* forms is explained.

In contrast, when idiosyncratic *-sja* forms are found which are lexicalized independently of any other lexical form, subject control by the *-sja* verb over a VCOMP is generally possible. Consider:

*sobirat'sja* to plan  
*sobirat'* to gather

(173)

On <i>sobiralsja</i>	<i>rabotat'</i>
He planned	to work.

*namerivat'sja* to intend  
*namerivat'* DOES NOT EXIST

(174)

On <i>namerivalsja</i>	<i>rabotat'</i> .
He intended	to work.

*starat'sja* to try  
*starat'* DOES NOT EXIST

(175)

On <i>staralsja</i>	<i>rabotat'</i> .
He tried	to work.

*bojat'sja* to be afraid

*bojat'* DOES NOT EXIST

(176)

On *bojalsja*            *rabotat'*.

He was afraid        to work.

Note that this explanation for the lack of subject control over a VCOMP by *-sja* verbs is along the same lines as the explanation for the unacceptability of subject control with passive forms. This is hardly surprising, since within this framework, both Passive and *-sja* formation (for several of the classes of *-sja* verbs discussed) are lexical processes involving a lexical rule of the form OBJ  $\rightarrow$  SUB. Since control relations are preserved in the lexical derivational processes, subject control which would necessarily be derived from object control over VCOMP's is excluded. Therefore, these two similar lexical processes show precisely the predicted output. Subjects of passive and *-sja* verbs which are *not* derived from objects (because the verbs are independently lexicalized and not related to active or non-*sja* forms, respectively), are *not* subject to that restriction. This was seen in sentence (147) (repeated below) and sentences (173) through (176) in this section.

(177)

Ja byl prinužděn borot'sja odin.  
 I(NOM) was obliged to fight alone(NOM)

Thus, this analysis provides a unified explanation for control restrictions of passive and -sja subjects.

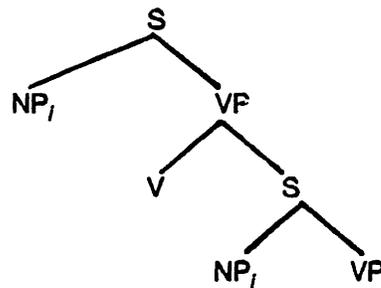
## 1.5 CONCLUSIONS

As we have seen, functional structure integrates information about syntactic structure and lexical properties. Thus, within the lexical interpretive theory, constituent structure and propositional structure (predicate argument structure) belong to two different components, and grammatical relations mediate between the two. On the contrary, transformationalists have traditionally considered that, at least at the level of deep structure, propositional and constituent structure should be made to coincide. Where they do not coincide, however, exceptional mechanisms are required.

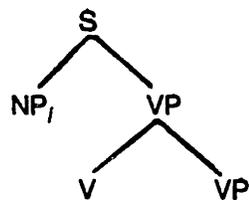
Subjective and objective infinitival clauses in Russian provide a case where, although propositional structures are the same, the constituent structures seem to differ (as the agreement facts indicate). Comrie tried to account for this divergence, within the transformational framework of 1974. He (rather tentatively) suggested a rule of

restructuring, which he called the *Cohesion Principle*.<sup>34</sup> This rule was to apply only to subjective infinitives and would be blocked from applying by an intervening object or overt complementizer. To quote his proposal (from Comrie (1974:134)):

I should like to argue that a main verb lacking any object, but having a subjective infinitive, forms a particularly cohesive unit, i.e. from the underlying structure:



we get ultimately:



There are problems with this proposal, though. The Cohesion Principle is at best

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34. Similar restructuring rules have been proposed to account for quantifier movement in French. Rochette (1980) argues that the French phenomena as well are nicely explained in the lexical framework in terms of grammatical control and infinitival complement structure.

imprecise. If rules for cohesion and case agreement were stated explicitly, it seems that the analysis would have to assume (a) that case agreement must be performed at a stage before the deletion of the underlying dative pronouns, and (b) that case agreement must take place at a stage after the deletion of the subjects of subjective infinitives, in order to permit "the treatment of the whole as a simple unit, i.e. any predicate of the embedded VP is treated as a matrix predicate" (Comrie (1974:135)). But this implies that pronoun deletion is not accomplished by a single rule of Equi. The necessity of abandoning a unitary rule of Equi calls the analysis into question.

Even if this problem could be resolved, there would be other difficulties, very similar to those pointed out by Andrews (1982-a), and by Quicoli (1972) in his discussion of rule interaction in Greek. If Equi is a cyclic rule (as has generally been assumed), then in sentences which contain deeply embedded second predicates, the agreement is dependent on structures in higher cycles. However, by the time the appropriate rules apply on the upper cycles, the pronoun which determines agreement would already have been deleted by Equi and would be unavailable for determining the case of the adjunct.

Furthermore, the Cohesion Principle provides no account for the passive agreement facts.

Within our framework, however, constituent structure and functional structure are autonomous levels of representation. Therefore, the correct syntactic distinctions can be formulated within constituent structure, while at the same time, the correct propositional representation is ensured in functional structure by the principles of control. Notice that if

all infinitivals were sentential, there would be no explanation for the fact that infinitival subjects which are subject-controlled fail to be marked dative like other subjects of tenseless S's. The analysis given here obviates this problem by distinguishing between VP and S' infinitivals (where the former are VCOMP's whose subjects are supplied within functional structure by the control equations).

Agreement of adjuncts within functional structure is then quite straightforward: an adjunct agrees in case with its functional subject, which is identical with some other grammatical function within its clause nucleus.

This analysis assumes that *odin* and *sam*, when they occur within infinitival clauses in the dative case, are agreeing with a dative infinitival subject. One might consider an alternative approach whereby nouns in ungoverned position receive the dative case (and *odin* and *sam*, having no antecedent in the same clause, would be marked dative as well). However, such a proposal fails to account for adjuncts agreeing in case with (ungoverned) nominative subjects of adverbial participles (discussed in footnote #18). The following contrast indicates that *sam* and *odin* should indeed be viewed as agreeing with their functional antecedents:

- (178)      Čtoby                    pojti            odnomu, ...  
              in-order-to            go                alone(DAT) ...
- (179)      Podbežav                k                stancii      odin, ...  
              Having-run            to                (the)station alone(NOM)

We have also seen that the system of representation of the lexical interpretive theory permits us to articulate the grammatical distinctions required for a simple account of case agreement. The puzzling distribution of second predicates is explained by more general considerations of casemarking, predicate complements, and grammatical control. Given the principles of grammatical control, it becomes apparent that adjuncts merely reflect the case of their functional subject. Just in case this subject is grammatically controlled by a grammatical function of the matrix predicate, the adjunct will agree in case with the matrix antecedent as well. Thus, agreement of adjuncts is explained on the level of functional structure with great simplicity.

2. LEVELS OF REPRESENTATION: THE GENITIVE OF NEGATION

One of the major goals of linguistic theory over the last quarter of a century has been to determine the proper partitioning of the grammar into distinct but interrelated components. The ultimate aim is, of course, to have a model which accurately reflects the mental organization of linguistic information.

As new facts and ideas have appeared, particular models have been reorganized or superseded completely. The history of generative grammar provides a series of structural metamorphoses of grammatical models. In the first chapter, it was shown that Lexical Functional Grammar permits an explanation of the distribution of second predicates in Russian, whereas previous models were inadequate. Likewise, the current lexical approach permits clarification of other agreement paradoxes pointed out by Babby (1973-b) (see footnote # 27 in Chapter 1).

Lexical Functional Grammar presents a significantly different organization of the grammar than true transformational approaches, since the former eliminates the derivational process in favor of a functional representation which integrates the information contributed by several components.

One of the most interesting areas of investigation into grammatical theory involves the question of the structural properties of various models, and the extent to which apparently different representations are, or are not, notational variants. Given the complexity of the systems involved, and the fact that each may be more or less elaborated

and refined in different areas, it can often be quite difficult to compare and evaluate systems. This is all the more difficult since no system is definitively established, and all are sufficiently powerful to be able to adapt themselves in light of new evidence. This has indeed been the trend in recent years: the transformational and lexical models have been moving closer together in several respects. This is not to deny, however, that there are substantive differences. The differences in the structure of the models allow for different types of explanatory clustering of properties and phenomena, and often startlingly different explanations for the same facts. It is believed that a comparison of approaches to a single problem can be enlightening, both for an understanding of the phenomenon (since different analyses may shed light on different aspects of the questions involved), as well as for an understanding of the theoretical differences which underlie the analyses. While comparison of analyses of a single phenomenon does not in itself constitute a basis for a choice between theories, it may at least serve to clarify the points of contention between theories.

In this chapter, I would like to discuss a phenomenon which has intrigued linguists for some time: the genitive of negation. Any analysis of case in Russian would be incomplete without an account of this phenomenon, and thus far I have deliberately avoided discussion of it. This is a particularly interesting area to explore, since some fascinating work is being done by Pesetsky (in prep.) within the Government Binding framework. Moreover, the appearance of the genitive in these contexts is related to other important processes in Russian and other languages, which have yet to be understood completely.

## PART I THE GENITIVE OF NEGATION

As mentioned in Chapter 1, the direct object of a negative sentence may optionally appear in the genitive case. (Evidence that this is indeed the correct generalization will be put forth in Section 2.3.) This may be represented in the PS expansion:<sup>1</sup>

$$\begin{array}{lcl}
 (180) \text{ VP} \rightarrow & ne & V \qquad \qquad \qquad \text{NP} \\
 & (\uparrow Q) = + & ((\downarrow \text{CASE}) = [ -, (-), + ]) \\
 & & (\uparrow \text{OBJ}) = \downarrow \\
 & & ((\uparrow Q) = + \rightarrow (\downarrow Q) = + \ \& \ (\downarrow \text{CASE}) = [ , + , ])
 \end{array}$$

The feature 'Q' is assumed to be associated with logical operators such as quantifiers and negation.

This will correctly produce the genitive case optionally on the object NP precisely in those cases where the object is normally (i.e., in affirmative sentences) marked accusative. In cases where there are lexically imposed object case requirements, then this direct case assignment (of ACC/GEN) would fail to apply, and genitive objects would not be generated.

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1. The symbol '→' indicates implicature. If  $(\uparrow Q) = +$ , then the positive value of the Quantifying Case Feature is assigned.

## 2.1 INTERPRETATION OF GENITIVE OBJECTS

Much has been written about the factors which contribute to the choice of accusative or genitive direct objects of negated sentences. The well-known correlation between GEN/ACC objects and definiteness has been observed by many people. Reformatskij (1967)<sup>2</sup> writes that in Russian, where there are no articles, the contrast between definiteness and indefiniteness is expressed through the choice of accusative or genitive objects in negative sentences. He cites the contrast between the following two sentences:

- (181) Ja ne vižu knigu. (DEFINITE)  
 I NEG see book(ACC)  
 'I don't see the book.'
- (182) Ja ne vižu knigi (INDEFINITE)  
 I NEG see book(GEN)  
 'I don't see a book.'

However, as Ravič (1971) observes, this association is not symmetrical. That is, while the accusative is rather strictly correlated with definiteness, the genitive version may have either a definite or indefinite interpretation. So, a definite object may be expressed by either an accusative or a genitive NP.

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2. Christian (1961) had also noted the correlation in "Some Consequences of the lack of a definite and indefinite article in Russian."

- (183)  
 On ne videl ètu knigu.  
 He NEG saw this(ACC) book(ACC)
- (184)  
 On ne videl ètoj knigi.  
 He NEG saw this(GEN) book(GEN)

Thus, a sentence like (185) may have either of two readings.<sup>3</sup>

- (185)  
 Ja ne čital knig.  
 I NEG read(pst) books(GEN)

- (a) 'I didn't read (any) books.' (INDEFINITE)  
 (b) 'I didn't read (the) books.' (DEFINITE)

#### NULL Q?

It has been suggested that the reading in (a) above results from the presence of a null quantifier which is also responsible for the genitive casemarking. See Pesetsky (1981-a) for the details of this analysis, which is along the lines of suggestions made by Kayne (1975, 1981) to account for the *pas de* construction in French. (The similarity between the French and Russian constructions has been observed by Jespersen (1917) and many others.) This would mean that the genitive is within a quantifier phrase having a

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3. Both readings (a) and (b) are possible, although for some speakers, the reading in (a) is preferred. There appear to be dialectal and/or generational differences in the degree to which the (a) reading is preferred, and the (b) reading seems to be becoming less frequent in colloquial Russian.

quantificational head that is not phonologically realized.

This is not, however, the view of the present analysis, and arguments against this position will be presented in Section 2.1.2.

### *SCOPE OF NEGATION*

In discussions of the nuances which determine the choice of genitive or accusative objects, a variety of factors have been invoked — definiteness, concreteness, style, among others. One of the most plausible suggestions, put forth by many people, is that the difference relates to the scope of negation.<sup>4</sup> For example, in the following sentence,

(186) 'I did not see the book.'

(a) Ja ne videl knigu.  
I NEG saw book(ACC)

(b) Ja ne videl knigi.  
I NEG saw book(GEN)

The accusative would be used if one were talking about a specific book to convey the information that one hadn't seen it. The emphasis of the negation is on the action. In the second case, the genitive case on the object emphasizes the fact that the book is within a negative sentence (and that I did NOT SEE THE BOOK). The occurrence of a genitive in

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4. See, for example, Ward (1965), who makes a similar suggestion that he attributes to Morison. This idea was further developed in Klenin (1978), and is also proposed in Babby (1980-a).

this context was grammatically conditioned historically (and still is in Polish), although the obligation to use a genitive in this context is being felt decreasingly. When used, it draws attention to the negation.

In short, the genitive is used when the object is within the scope of the negation. If, as suggested before, the case alternation of objects may be attributed to the absence or presence of a feature 'Q' in the environment of the phrase, then we might view the feature 'Q' as one which spreads over the scope of negation or quantification. As Jakobson (1958) viewed the Quantifying case feature, which is responsible for the accusative / genitive alternation, it focuses "on the extent to which the entity takes part in the message," this scope being relevant to negation as well as to quantifiers.<sup>5</sup> So, the 'Q' feature associated with *nie* may optionally spread to the direct object 'book', thus marking it genitive and including it within the scope of negation. Although sentences (a) and (b) above have identical constituent structure, they differ in that the scope of negation is wider in (b) as the 'Q' feature has spread further in (b) than in (a).

The notion that objects occur in the genitive when within the scope of negation is not new. This is Babby's (1980-a) proposal. The current claim, however, is somewhat stronger: *only* objects undergo casemarking which is sensitive to the scope of negation. While other sentential elements may fall within the scope of negation, their casemarking

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5. In other languages as well, negation and quantification tend to pattern together for purposes of casemarking. See Carlson's (1979) analysis of the partitive case in Finnish, for example.

does not reflect that fact. We will first present support for the current analysis of object casemarking; later we will show that the account of object casemarking can explain the complete distribution of the "genitive of negation."

Klenin (1978) provides examples which support the scope distinction found in negative sentences with accusative and genitive objects. In (187), where the object is in the genitive, the object is within the scope of negation.

(187)

On ne rešil vse<sub>x</sub> zadač. (= K, 3; from Padučeva (1974:155))  
 He NEG solved all(GEN) problems(GEN)

Klenin, following Padučeva, observes that the sentence is potentially ambiguous, since what is negated is: [*rešil vse<sub>x</sub> zadač*]. The most natural reading would be 'he didn't solve *all* the problems,' equivalent to (188):

(188)

On rešil ne vse<sub>e</sub> zadači. (= K, 4)  
 He solved NEG all(ACC) problems(ACC)

involving constituent negation. The other possible reading is the equivalent of (189):

(189)

On ne rešil nikakix<sub>x</sub> zadač. (= K, 5)  
 He NEG solved any(GEN) problems(GEN)

If, however, the object appears in the accusative case, Klenin observes that this has a different interpretation.

(190)

On ne rešil vse zadači.  
 He NEG solved all(ACC) problems(ACC)

This is most naturally interpreted as 'none of the problems were solved': *On [ne rešil] vse zadači.*" She has another similar example:

(191)

Pavlov ne ponjal ves' naš razgovor. (= K, 6-b)  
 Pavlov NEG understood all(ACC) our(ACC) conversation(ACC).

'Pavlov failed to understand our entire conversation.'

Another example involving negative scope restricted to the verb is provided in the recent edition of the Academy Grammar (1980, vol. 2:417), where it is stated that an accusative object is required when one verb is negated in favor of another, as in:

(192)

On ne prosmatrivaet stat'ju, a čitaet.  
 He NEG looks-over article(ACC), but reads (it)

In contrast, in idiomatic or fixed expressions where the object is necessarily included in the scope of negation, the genitive case is required on the object. Examples from the Academy Grammar (1980, vol. 2: 416) include:<sup>6</sup>

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6. Other fixed expressions that are not intrinsically negative, however, show the reverse tendency. See Ravič (1971:258) for examples like: [sžeč' mosty] = 'to burn (one's) bridges' (in the sense of cutting oneself off from one's past). If the genitive is used with this expression, it takes on the more literal meaning of (not) burning bridges (the kind that go over rivers).

- (193) a.  
 ne govorja xudogo slova  
 NEG saying unkind(GEN) word(GEN)  
 'without saying an unkind word'
- b.  
 ne obraščat' vnimanija  
 NEG pay attention(GEN)

In the current analysis, then, the feature 'Q' marks the scope of negation, and determines the genitive casemarking of an object within that scope.<sup>7</sup> This general approach was suggested by Chvany (1975:134) when she formulated her rule of genitive marking:

It is probable that a more general version of GENITIVE MARKING will involve the copying of a quantifying feature from NEG or other quantifiers, a feature eventually spelled out in genitive desinences on the markable constituents of the quantified NP. The grammar of Russian quantifiers is of harrowing complexity, particularly with respect to agreement (Crockett, forthcoming). Further refinements of GENITIVE MARKING must await the solution of such problems.

Within the perspective of Jakobsonian case features, the quantifying feature determines in a very specific way the accusative · genitive alternation. It is in the spirit of building on previous work and recent developments in both Slavic linguistics and linguistic theory that the present work is intended.

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7. The interpretation of genitive objects will be discussed in Section 2.9.

### 2.1.1 Sources of Genitive Marking

Genitive objects are found in Russian not only with the so-called "genitive of negation," but also in affirmative (or negative) sentences involving partitives. These two processes resulting in genitive casemarking of objects appear to be distinct, however. The *partitive genitive* is attributable to a null quantifier. These processes may be represented by the following PS expansions:<sup>8</sup>

$$(194) \quad VP \rightarrow \left( \begin{array}{c} ne \\ (\uparrow Q) = + \end{array} \right) \quad V \quad \uparrow = \downarrow \quad \left( \begin{array}{c} NP \\ ((\downarrow CASE) = [-, (-), +]) \\ (\uparrow OBJ) = \downarrow \\ ((\uparrow Q) = + \rightarrow (\downarrow Q) = + \ \& \ (\downarrow CASE) = [ , +, ] \end{array} \right)$$

$$(195) \quad QP \rightarrow \left( \begin{array}{c} Q \\ \uparrow = \downarrow \\ ((\downarrow PRED) = \text{'some'}) \end{array} \right) \quad NP \quad \left( \begin{array}{c} (\uparrow DOM) = \downarrow \\ (\downarrow CASE) = [-, +, +] \end{array} \right)$$

where ' $\uparrow DOM$ ' represents the domain of the quantifier

Thus, there are two proposed sources of genitive marking: sentential negation and a (potentially null) quantifier. The strict genitive of negation, produced by (194), is possible only in post-verbal position, since it is only in this position that casemarking is sensitive to the feature 'Q'. This same case assignment is found for objects and post-verbal time

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8. Note that in the first expansion below, the value of the quantifying case feature varies depending on the environment in which the NP occurs.

expressions (as was illustrated in Section 1.2).<sup>9</sup> In Sections 2.2 and 2.3, it will be shown that this is the correct generalization about the distribution of the genitive of negation.

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9. In fact, for reasons that will be discussed in Chapter 4, object position is also the only one in which the null quantifier of (195) may be found. Note the following contrast:

- (i) \*Devušek rabotali.  
Girls(GEN) worked.
- (ii) Pjat' devušek rabotali.  
5 girls(GEN) worked
- (iii) On vypil moloka.  
He drank milk(GEN)
- (iv) On vypil mnogo moloka.  
He drank much milk(GEN)

The following (from Jakobson (1935:39)) might be taken as a counter-example to this claim:

- (v) Ljudej sobralos'  
(There) gathered people(GEN).

It will be argued later, though, that in this sentence *ljudej* is not functioning as subject.

### 2.1.2 Justification for redundancy

This redundancy — two sources of genitive marking — might at first seem to be an undesirable aspect of this analysis. Both sources are independently necessary, however.

#### *PARTITIVE GENITIVE*

There are instances where the object appears in the genitive without sentential negation. This is the partitive genitive construction.

(196)

Prinesi čaju.  
Bring tea(GEN<sub>2</sub>)

With the partitive genitive, many nouns have special 2nd genitive form, which Jakobson called GEN<sub>2</sub>. [The standard genitive form for *čaj* 'tea' is *čaja*.] For many singular nouns and all plural nouns, however, the distinction between GEN<sub>1</sub> and GEN<sub>2</sub> is neutralized, as is seen in the following example (from Babby (1980-a: 80)):

(197)

Prinesi ogurcov.  
Bring cucumbers(GEN)  
'Bring some cucumbers.'

There is no other genitive form for 'cucumbers'.

*GENITIVE OF NEGATION*

Just as there are genitive objects whose casemarking is not attributable to negation, likewise there are occurrences of genitive objects in negative sentences whose casemarking cannot be explained by the presence of a partitive quantifier. We have already seen examples of this kind (cf. (187)). The genitive of negation can occur with definite NP's (including proper names). To cite just one example:

(198)

Nikak	ne	možet	prostit'	nam	svoego	poraženija.
No-how	NEG	can(3,sg)	forgive	us(DAT)	his(GEN)	defeat(GEN)

'He just can't forgive us his defeat.'

(from Romašov, = B, 172·b (p. 160))

Thus, although semantics alone may not settle the question of whether a null quantifier is involved in a sentence like (199), (200) clearly is incompatible with a null quantifier analysis for the genitive phrase.

(199)

On	ne	čital	knig.
He	NEG	read(pst)	books(GEN)

'He didn't read (any) books.'

(200)

Priexav      posle   dolgoj   vojny,   on   ne   uznaet  
 Having-come after   (a)long   war,   he   NEG recognizes

svoej                      ženy.  
 his[REFL]{GEN}   wife(GEN).

[from BBLST, p. 839]

One characteristic of the partitive genitive construction is that it can occur with mass nouns or plural count nouns, but not with singular count nouns.

(201)

\*Prinesi ključa.  
 Bring key(GEN,sg)

Thus, in sentence (182), *Ja ne vižu knigi* ('I don't see the book(GEN)'), the object *knigi* is

not a partitive.<sup>10</sup>

### *DISTINCT PROCESSES*

In other words, the formulation of the expansions in (194) and (195) predicts that we would find both negative sentences with genitive objects but no null quantifier interpretation; and genitive objects of affirmative sentences, but only with the null quantifier interpretation. This is indeed the case.

It is, however, more common to find the genitive object in negative sentences than in affirmative ones, a fact that is predicted by the assumption that null quantifiers are one source of genitive objects, while sentential negation is an additional source, providing additional cases of genitive marking only in negative sentences.

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10. Sentences which (according to the present analysis) involve the genitive of negation do not have affirmative counterparts with genitive objects.

- (i) *Otveta ot polka ne prišlo.* (from Růžička, p. 23)  
Answer(GEN) from (the) regiment NEG came(N,sg)
- (ii) \**Otveta ot polka prišlo.*  
Answer(GEN) from (the) regiment came(N,sg)

The Academy Grammar (1980, vol. 2:403) classifies such sentences as (i) above as involving "*otricanie kak objazatel'nyj èlement predložénija*" (negation as an obligatory element of the sentence).

Further evidence that the genitive of negation is (as the term correctly suggests) not independent of the negation will be presented in Section 2.9.

Moreover, the existence of two sources of genitive marking may explain the dialect differences with regard to the use of the "genitive of negation." First, it should be noted that in negative sentences, the genitive object is always possible,<sup>11</sup> at least in the standard dialect, and the genitive case has been the "normal," prescribed case for the objects of negative sentences. (This genitive may, however, be more or less natural because of the semantic implications of the feature 'Q' of indefiniteness or non-concreteness, which may be more or less appropriate in a particular context.) It would not be at all surprising for a language to evolve in such a way as to reduce or eliminate redundancy by redistributing the functional load of the parts of the system. This may be what is happening today.<sup>12</sup> The sentential negation as a source for genitive casemarking seems to be fading, relinquishing the casemarking function to the null quantifier. This appears, though, to be a change in progress, which would explain the great dialectal and generational differences.

Many linguists have observed changing usage of the genitive of negation. P.A. Restan, in an article entitled "The objective case in negative clauses in Russian — the genitive or accusative?", presents interesting statistics about the change in the use of the genitive with negative sentences over a period of about forty years. As summarized by Ward (1965: 213-214):

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11. See Chvany (1975:122) or Popova (1973) for discussion. This is perhaps less true now, though, than it was some years back.

12. Another possible explanation for this change will be suggested in Section 2.9.

Having examined 2,119 negative sentences covering a period from 1918 to 1959, he [Restan] finds that the accusative is used in 31%, the genitive in 69% of his examples. Furthermore, the occurrence of the negative accusative is higher in dialogue (36.4%) than in narrative (28.1%) and in the newspapers which he examined the occurrence of the negative accusative has increased from 21.7% in 1918-1923 to 38.3% in 1959.

This change has been observed by many other linguists as well.<sup>13</sup> Available statistics do suggest a change in progress, as does the general confusion about usage, although no principle derivable from previous analyses of genitive of negation would explain why such a change should occur, and what the exact nature of the change might be.

Further support for postulating two distinct processes which result in genitive object marking is adduced by more careful observation of the use of partitive genitive. The "second genitive" or "partitive genitive" is a case (characterized by the ending *-u*), which is not very frequent in contemporary Russian, and which is apparently disappearing. Only

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13. Including: Klenin (1980:65 and 1978:163), Timberlake (1975), Ravič (1971:254), Ward (1965), Peškovskij (1955:297), Gvozdev (1955:154), Uglitsky (1956:377ff.), and Borrás and Christian (1971). Timberlake notes the increasing acceptance of accusative, in place of the genitive of negation, in grammars over the past 150 years. Ravič also presents statistics (from Saforewiczowa (1959:77-109 and 1960:69-137)) of the use of the accusative in place of genitive of negation by representative authors of the 18th, 19th, and 20th centuries, showing an increase from 14% in the 18th century to 40% in the 20th.

certain declension classes even distinguish a second genitive form.<sup>14</sup> Following Jakobson, we assume the 'genitive<sub>1</sub>' is distinguished from 'genitive<sub>2</sub>' by the positive value of the third feature, [Ascriptive]. Thus 'genitive<sub>1</sub>' = [-, +, +], while 'genitive<sub>2</sub>' = [-, +, -].<sup>15</sup>

The second genitive occurs with quantificational expressions, including overt and null quantifiers.

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14. Nouns which have a distinct second genitive form belong to a small class of:

"masculine nouns referring to *concrete material substances or objects in the mass* which show a genitive in *u (-ju)* in certain constructions only. Their number is limited by the fact that they are all nouns which cannot be combined with numerals; that is to say, they are all aggregative or quantitative nouns, and not nouns denoting single objects. Some Russian grammars give a comprehensive list of these words, including many where a genitive in *a (-ja)* is far more usual nowadays than one in *u (-ju)*."

(as characterized by Borras and Christian (1971:20-21))

15. This does, however, misleadingly suggest that the second genitive is the less marked of the two genitives, and analogously, that the second locative is the less marked of the two locatives [see Table I in Chapter 1 for feature specifications according to Jakobson]. Both second cases are rarely used and are apparently disappearing (cf. Panov (1968) on the loss of the 2nd genitive). If the Jakobsonian feature decomposition is correct, then it appears that the three features are not completely independent. Perhaps quantificational items are normally also ascriptive, and thus, the least marked value for [Ascriptive] given [+Quantifying] is in fact '+'.<sup>15</sup>

- (202)  
 Ivan vypil mnogo čaju.  
 Ivan drank-up much tea(GEN-2)
- (203)  
 Ivan vypil čaju.  
 Ivan drank-up tea(GEN-2)

When it occurs, the first genitive is normally also possible. Crucially, though, the use of the second genitive is associated with the presence of a quantifier (whether overt or null).

Therefore, (195) above should be amended:

- (204)
- |      |                    |                       |
|------|--------------------|-----------------------|
| QP → | Q                  | NP                    |
|      | ↑ = ↓              | (↑DOM) = ↓            |
|      | ((↓PRED) = 'some') | (↓CASE) = [- , + , ±] |

Because of the inherent partitive meaning of the second genitive, it occurs most naturally with a certain class of verbs. With such verbs, the second genitive is possible in positive and negative sentences; this was observed by Klenin (1978), who also noted that, in negative sentences, the second genitive is only possible if it is also possible in the corresponding affirmative sentence. Her examples (p. 177):

- (205)  
 On s"el sup / \*supu. (= K, 36a)  
 He ate (up) soup(ACC / \*GEN-2)
- (206)  
 On ne s"el sup / supa / \*supu. (= K, 36b)  
 He NEG ate (up) soup(ACC/GEN-1/\*GEN-2)

- (207) On ljubil            sup / \*supu.            (= K, 37a)  
 He liked            soup(ACC / \*GEN-2)
- (208) On ne ljubil        sup / supa / \*supu.    (= K, 37b)  
 He ne liked        soup(ACC/GEN-1/\*GEN-2)

Thus, the partitive genitive appears with quantifiers, while it does not occur (normally) with the genitive of negation (except where a true null quantifier is plausible). It had been pointed out by Jakobson himself<sup>16</sup> that it is the genitive<sub>1</sub>, rather than the genitive<sub>2</sub> that is associated with negation. This fact provides further motivation for distinguishing two distinct processes: genitive marking by virtue of sentential negation, which does not involve null quantifiers; and genitive marking by quantifiers (null or otherwise), where the second genitive is permissible.

Comparing other Slavic languages to Russian with respect to the partitive genitive and the genitive of negation provides additional, although indirect, support for the distinction between the two processes. In Czech and Polish, where the partitive genitive construction is similar to the same construction in Russian, the genitive of negation has evolved quite differently than in Russian. In Polish, the genitive of negation is obligatory in simple sentences, but optional in embedded clauses. In Czech, on the contrary, the genitive of negation is on the verge of extinction (having once existed in approximately

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16. According to Chvany (1975:264 and pers. comm.)

the same contexts as in Russian, but now being maintained only as an archaism),<sup>17</sup> although the partitive construction is alive and well and quite similar to that of Russian. Thus, the distinct historical development of the two processes confirms the present claim that they are not to be unified.

### 2.1.3 Predictions

According to this analysis, the possibility of genitive occurring with *ne* or null quantifiers exists only in object position. In the previous chapter, there were examples of lexical rules which have the effect of changing object to subject in the lexical representations. We have discussed Passive and certain classes of *-sja* formation in Chapter 1, both of which have this effect. In many languages of the world, there are also processes which transform subjects to objects. Such processes include *there* insertion (see Bresnan (1982-b)) in English and *il* extraposition in French (see Grimshaw (1982)). If such a process existed in Russian, it would be somewhat hard to detect, for two reasons. First, Russian has relatively free word order, and the object may appear pre-verbally.

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17. See Barnetová, et. al. (1979:691, 839) for a comparison of Czech and Russian.

(209)	Knigu	čital	on.
	Book(ACC)	read(pst)	he(NOM)
(210)	On	čita!	knigu.
	He(NOM)	read(pst)	book(ACC)

Second, in Russian, the subject position need not be lexically filled. Russian does not use dummy subjects, as is seen with impersonal expressions.

- (211) a.      Temneet.  
              (It) gets dark.
- b.      Xolodeet.  
              (It) gets cold.

But *if* Russian had such a lexical rule, the above analysis would predict that the argument which was originally the subject, but had become the object of the derived lexical entry, would be casemarked accordingly, and when accompanied by a sentential *ne* or a null quantifier, would appear in the genitive. Indeed, we find such sentences. Parallel to (212)(a) and (b), we find (c):

- (212) a. There do not exist such countries.
- b. Il n'existe pas de nations pareilles.  
*il*(dummy subject) NEG exist such nations.
- c. Ne suščestvuet takix stran.  
 NEG exist(3,sg) such(GEN) countries(GEN)

Notice that in (c), the verb *suščestvuet* is third person singular, like other impersonal verbs which lack lexical subjects, and there is no agreement between the verb and *takix stran* (plural).

Notice also that, although (212c) is the most natural word order, (213) is also possible:

- (213)
- |           |                |                 |
|-----------|----------------|-----------------|
| Takix     | stran          | ne suščestvuet. |
| Such(GEN) | countries(GEN) | NEG exist(3,sg) |

Although (213) could be related to (212c) in the same way that (209) is related to (210), it is normally claimed that such genitive NP's as *takix stran* are in fact subjects, parallel to the nominative subject of (214):

(214)

Takie strany ne suščestvujut.  
 Such(NOM) countries(NOM) NEG exist

The next section will contain evidence that they are objects.

## 2.2 DO THERE EXIST GENITIVE SUBJECTS?

Babby devotes an entire book to *Existential Sentences and Negation in Russian*, and he has a good discussion of the history of thinking on the subject of these genitive subject-like NP's. There has been disagreement as to whether they should be considered to be subjects, direct objects, or oblique objects. Part of the problem in resolving the issue is that these terms themselves have often lacked a precise definition. Within the current LFG framework, however, grammatical functions play a well-defined role in mediating between logical and categorial representation. This system thus permits three types of generalizations to be stated: thematic, structural, and relational (or functional). Certain types of processes may best be formulated in terms of grammatical functions, while other generalizations may be related to other levels of representation. In recent work in Russian grammar (cf. *Academy Grammar* (1980)), as in recent work in syntax in general, it has proved useful to separate out the concepts of 'logical subject' (*sub"jekt*) and 'syntactic subject' (*podležaščee*). This basically corresponds to the distinction between logical arguments and grammatical functions in LFG. For the remainder of this discussion, we will be concerned with the grammatical *function* 'SUB', since it is this notion of SUBJECT that appears to be most directly involved in a wide variety of

processes across languages.

I would now like to address the question of whether these genitive phrases are subjects, and I will argue that they are not. Evidence will be presented, much of which was laid out by Babby, who (at least on this specific issue) arrives at almost the same conclusion.

#### *EVIDENCE*

Whether subjecthood is taken as a primitive or as a derived notion, it is one that is central to grammatical theory. It has also proved to be one of the most difficult to define. There is a large clustering of properties associated with subjecthood. (See Chvany (1975) for a discussion of the subject "par excellence" in Russian, and Keenan (1976), for a more general discussion of subjecthood.) However, the notion of 'subject' is not reducible to a single logical argument, since the subject may correspond to a variety of semantic roles (agent, theme, experiencer, etc.). In general, there is no one-to-one correspondence between grammatical functions (such as subject) and logical arguments. In some languages, the subject may occupy a specific syntactic position, but in many languages, there is no evidence that subjecthood should be configurationally defined.<sup>18</sup>

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18. See, for example, Mohanan's (1981) discussion about subjects in Malayalam, and Simpson's (in prep.) analysis of Warlpiri.

Thus, 'subject' is not naturally reducible to a structural notion, either.<sup>19</sup>

Although similar clusterings of subject-oriented properties are found in different languages, languages exhibit some variation in their definition and use of subjecthood. The question is: for any particular language, which of those properties should be taken as defining characteristics of subjecthood, and which are (at least to some extent) a consequence of subjecthood. We will be considering syntactic processes in Russian that are sensitive to subjecthood, such as agreement, case assignment, control, and the interpretation of gerunds and reflexives.

As the following table indicates, it is not clear where to draw the line between subjects and non-subjects, and there has been much disagreement in the literature as to the proper definition of subjecthood in Russian: while there is a class of NP's which are clearly subjects, and a class of NP's which are clearly not, there is likewise a class whose subjecthood is disputed.

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19. It is, however, structurally defined in GB. See Simpson (in prep.) for consideration of the theoretical consequences of the attempt to do so, and for an interesting discussion of this issue in general.

TABLE I SUBJECTS, PSEUDO-SUBJECTS, AND NON SUBJECTS

	appear in nominative within "tensed" clauses	induce SUB-Verb agreement	may control subject of gerund	may serve as ante- cedent for reflexive
<p>CLASS A CLEAR SUBJECTS</p> <p>[<i>On rabotaet.</i>] [He(NOM) works(3,sg)]</p>	YES	YES	YES	YES
<p>CLASS B ~~~~~</p> <p>Possessor [<i>U menja byla kniga</i>] [Around me(GEN) there was book(NOM)] [= I had (a) book]</p> <p>Genitives under negation [<i>Knigi ne budet.</i>] [Book(GEN) there-will-not-be]</p>	NO	NO	SOMETIMES	SOMETIMES
<p>CLASS C NON-SUBJECTS</p> <p>[<i>On videl knigu.</i>] [He(NOM) saw book(ACC).]</p>	NO	NO	NO	NO

Traditional Russian grammar considered that subjecthood was limited to Class A — NP's that appear in the nominative case and induce subject-verb agreement. While it is generally agreed that this set of NP's are subjects, it is unclear whether nominative case assignment and verbal agreement are necessary, or merely sufficient, conditions for subjecthood.<sup>20</sup> In this section, we will argue for the more restrictive definition of subjecthood (whereby an overt NP subject of a "tensed" clause necessarily receives nominative casemarking and induces subject-verb agreement), and suggest that Class B, which we will call "Pseudo-subjects"<sup>21</sup> more naturally patterns with Class C and should not be considered to be subjects. This restrictive definition of subjecthood provides a straightforward account of agreement; while relaxing the definition in no way simplifies the account of reflexivization and control.

### 2.2.1 Agreement

In Russian, verbs exhibit agreement only with subjects. Unlike other languages (such as French), there is no case in Russian of a verb agreeing with an object. More precisely, present tense forms agree with the subject in number and person, while past

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20. See Chvany (1975), for example, for an analysis in which Class B is treated as subjects (although Chvany was well aware that they do not make ideal subjects).

21. G.C. Rappaport (1979) calls these "subjectoids".

tense forms (and short form adjectives) agree in number and gender.<sup>22</sup>

If we accept the current analysis, and the distinction between the subjects of Class A and the non-subjects of Classes B and C, then agreement can be stated with great simplicity, and the generalization is that agreeing forms always agree with their subjects. In cases where a subject is lacking, we find the verb in the third person, neuter, singular form. Thus, the agreement with subjects may be seen as a natural consequence of the information which is lexically encoded along with the morphological endings of those verbs. For example, the verb *čitaem* ('read', 1st person pl.) would contain the following information in its lexical entry:

(215)

*čitaem*  
 (↑SUB NUM) = + PL  
 (↑SUB PER) = 1

This analysis is quite close to the approach of traditional Russian grammars, which associate subjecthood with nominative casemarking and verbal agreement. They classify other types of sentences as impersonal, i.e. subjectless.

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22. Actually, this is slightly more complicated. See fn. # 27 in Chapter 1 for discussion of *vy*. For simplicity, we omit the additional feature 'Formal' for purposes of this discussion.

Those who wish to treat Class B (or any subclass thereof) as subjects will need to stipulate that certain types of subjects will exhibit agreement, while others will not. In such an analysis, agreement may occur only with subjects, but it does not occur with all subjects. This has been claimed by many linguists, including Babby (1980-a). Babby dismisses out of hand the simple generalization about agreement that we suggest.

It is, however, not difficult to demonstrate that the strict 'nominative + agreement' definition of subject employed in earlier Russian grammar is wrong: if it is applied consistently (rather than selectively, which seems to have been the practice) it leads to a number of patently incorrect, counter-intuitive statements about the structure of common Russian sentences.

(p. 30)

The counter-example Babby proposes is the lack of verbal agreement in the following sentence with the presumed subject:

(216)  
 Prošlo                                      *pjat'*                      *dnej.*  
 (there) passed(3,N,sg)    5(NOM/ACC)    days(GEN)

However, Babby fails to provide convincing evidence that *pjat' dnej* is in fact the subject.

He argues, basically, that it must be the subject because it is nominatively casemarked.

Several remarks are in order:

I. Such numerals have identical nominative and accusative forms. Therefore, while it is clear that the entire NP *pjat' dnej* is not marked genitive, it is not obvious that it is

nominative.<sup>23</sup>

II. Babby argues that *pjat'* must be nominative in such sentences partially on the basis of the casemarking of the phrase *te pjat' dnej* (*te* = 'those'). However, *te pjat' dnej* is quite a different expression, and although our analysis would also predict that *te pjat' dnej* may only function as the subject, this in fact says nothing about the subjecthood of *pjat' dnej*. [An analysis of both types of phrases will be presented in Section 2.4.] Notice that *te pjat' dnej* requires verbal agreement, whereas *pjat' dnej* does not. This was pointed out by Babby himself in another context (p. 51):

(217)	Te	pjat'	čelovek	prišli.
	Those(NOM)	5	people	came(pl)
(218)	?*Te	pjat'	čelovek	prišlo.
	Those(NOM)	5	people	came(N,sg)

III. Babby provides a very good discussion about the confusion involved in various

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23. Interestingly, in Polish, where such quantifier phrases do not trigger verbal agreement, and the nominative and accusative forms of the numbers *are* distinguishable, it is only the accusative form of the numeral that is acceptable. Example:

(i) Pięciu panow schodzi/oby do pokoju. (Brooks (1975:332))  
 5(ACC) men(GEN) would-enter(3,sg,N) (the)room.

definitions of subject. He distinguishes between intuitive or "functional"<sup>24</sup> notions of subject, and examination of the behavioral and "encoding" (i.e. syntactic) properties which hold of subjects. This is an important distinction, and we will show in Section 2.5 that, whatever may be the intuitive feeling that *pjat' dnej* is in some sense the subject of sentence (216), there is syntactic evidence against this position.

Thus, the simple account of agreement we have proposed can only be maintained if non-agreeing numeral phrases (like the one in (216)) are non-subjects. This is precisely what we will claim; this conclusion is consistent with (and predicted by) our analysis of genitive of negation, quantifier phrases, and extraposition, as will be seen later in this chapter. For now, it suffices to restate that (modulo non-agreeing numeral phrases) verbs that agree, agree with their subjects. This is the simplest possible statement of agreement, and if this is the correct analysis, then the pseudo-subjects which are marked

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24. Babby argues that linguists who suggest that there are genitive subject NP's "are trying to capture the 'functional equivalence' between the nominative subject NP in AES [Affirmative Existential Sentences] and the corresponding genitive NP in NES [Negative Existential Sentences] by calling the latter a 'genitive subject'. (...) But the only way to capture this functional equivalence in a taxonomic framework is to refer to the genitive NP in NES by means of the same *term* that is used to refer to the nominative NP in AES, i.e., to call it a 'genitive subject.'"

with the genitive case are not, in fact, subjects.<sup>25</sup>

When agreement fails to occur, precisely because there is no subject available for agreement, then the verb appears in the 3rd person, singular, neuter form. [We will return to this observation in Section 2.3.] This is the same form found with impersonal verbs, such as was seen in example (211a): *Temneet*, ('(it) gets dark(3,sg)'). Thus, again, pseudo-subjects pattern with non-subjects: neither can trigger agreement.

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25. The present claim, though, that (in main clauses) overt nominative NP's and overt subject NP's are in one-to-one correspondence (a claim with which Babby disagrees), would actually allow agreement to be stated in terms of either subjecthood or nominative case. This would require that nominative case assignment also be strictly structural and independent of grammatical function.

[For reasons that will become clear in Chapter 4, however, this does not appear to be the correct approach for Russian: although NP subjects are necessarily nominative, there is strong evidence of PP subjects, which do not bear case. Defining 'subject' in terms of nominative case-marking alone would be impossible.]

That is, one might think that agreement was triggered by nominative NP's rather than by subjects. Although, for Russian, this looks like a round-about way of expressing the fact that the verb agrees with the subject, as Annie Zaenen (pers. comm.) points out, this would reduce the differences presumed to exist between Russian and Icelandic. The relevance of Icelandic in deciding the issue, however, is unclear, since, as Andrews (1982-b) points out, the nominatives that trigger agreement in Icelandic were historically subjects.

### 2.2.2 Gerund Constructions

To test whether genitive pseudo-subjects act syntactically like subjects or non-subjects, it is necessary to look at constructions which in some way select for subjects. In Russian, clauses which contain adverbial participles contain (functional) subjects which are controlled by the subject of the matrix sentence. This is a rather strong constraint in standard Russian, although it may be violated in colloquial speech (see G.C. Rappaport (1979)). So:

- (219)
- |                 |           |         |       |        |
|-----------------|-----------|---------|-------|--------|
| Zakončiv        | rabotu,   | on      | pošël | domoj. |
| Having-finished | work(ACC) | he(NOM) | went  | home.  |

(= B, 45, p.38)

(219) is interpreted as 'after he, finished the work, he, went home.'

A non-subject NP is a poor controller:

- (220)
- |                 |            |           |               |             |
|-----------------|------------|-----------|---------------|-------------|
| ?*Zakončiv      | rabotu,    | Ivanu     | bylo          | skučno.     |
| Having-finished | work(ACC), | Ivan(DAT) | be(past,N,sg) | bored(N,sg) |

Genitive pseudo-subjects also make poor controllers:

(221)

\*Zakončiv rabotu, Ivana bol'še net.  
 Having-finished work(ACC), Ivan(GEN) any-longer (is)not.

'Having finished work, Ivan(GEN) is no longer here'.

### 2.2.3 Reflexives

All subjects can be the antecedents of reflexives in Russian. Some non-subjects may also be acceptable as antecedents of reflexives in Russian (especially phrases which are topics [see Yokoyama (1979)] or agents). Thus, the ability of a phrase to serve as a reflexive antecedent is a necessary but not a sufficient condition for subjecthood. Examples of non-subject antecedents include the following from Klenin (1974) and Chvany (1975), respectively:

(222)

Blгодарja svoemu uporstvu im byli  
 Thanks to his[REFL](DAT) persistence(DAT) (by)him(INS) were

sozdany klassnejšie rysaki poslednix let.  
 created the best first-class trotters of recent years

(= K, 2.57 (p. 67))

(223)

Mne žal' sebja i svoju sobaku.  
 I(DAT) feel-sorry-for myself(ACC) and my[REFL](ACC) dog(ACC)

(= Ch, 1.9-a)

Compared to these non-subjects, the genitive pseudo-subjects are even less acceptable

as antecedents of reflexive pronouns. Although there are a few speakers who accept (224), most reject it absolutely:

(224)  
 \*Ivana        ne        bylo            v        svoej            komnate.  
 Ivan(GEN)   NEG   was(3,N,sg)   in   his[REFL](LOC)   room(LOC)  
 (= Ch, 4.20-b)

Thus, here again, the unacceptability of (224) strongly suggests that *Ivana* is not the subject of the sentence. [And even to account for those speakers who accept (224), classifying *Ivana* as a subject in no way simplifies the account of reflexivization, since some non-subjects must be allowed as reflexive antecedents. Therefore the marginal acceptability of (224) in no way demonstrates the subjecthood of the genitive pseudo-subject.]

#### 2.2.4 Word Order

It has been observed by many people<sup>26</sup> that sentences involving the genitive of negation most naturally contain these phrases post-verbally. While subjects normally are pre-verbal, oblique NP's which do not trigger agreement are most often post-verbal. While Russian word order is relatively free, and largely determined by discourse

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26. Such as Peškovskij (1956:366-367), Pesetsky (1981-a:8), Babby (1980-a:14ff.), Karcevskij (1927:125-126), and Lobanova (1975:202-203).

considerations (such as the given - new distinction),<sup>27</sup> it is still not insignificant that we should find such a contrast. Consider this example from Karcevski cited by Babby (1980-a:14):

- (225) Zdes' ne voditsja. losej. (= B, 25-b)  
 Here NEG be-found(3,sg) elks(GEN,pl)
- (226) Zdes' losi ne vodjatsja. (= B, 26-b)  
 Here elks(NOM,pl) NEG be-found(3,pl)

Where there is verbal agreement, as in (226), the subject most naturally precedes the verb. However, when there is no agreement, as in (225), the most natural order is for the verb to precede the NP. In this respect as well, pseudo-subjects are distinguished from subjects.

### 2.3 RUSSIAN EXTRAPOSITION

On the basis of this evidence that the genitive NP's are not subjects, we maintain the belief that the genitive NP's show the normal casemarking for quantified or negated objects precisely because they are objects, and we will now formulate the rule of

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27. Interesting work on this subject is currently being carried out by Ol'ga Yokoyama (pers. comm.). See also Isačenko (1966).

extraposition.<sup>28</sup>

(227)

Lexical Redundancy Rule (for verbs)

$$\begin{aligned} (\uparrow\text{SUB}) & \mapsto (\uparrow\text{OBJ}) \\ (\uparrow\text{OBJ } Q) & =_c + \end{aligned}$$

It was noted earlier that the extraposed constructions in French and English require dummy subjects (*il* and *there*). These subjects contain only form, but no semantic content:

SUB [FORM *there* ]

In Russian, it appears that dummy subjects are not required. However, it is difficult to determine whether these extraposed constructions involve the *lack* of a subject, or the existence of a subject whose *form* is null. Following relational grammarians such as Postal and Perlmutter, Baker (1982:9) suggests a universal constraint that verbs must contain the SUB function. He provides evidence from Italian, based on agreement, that indicates the existence of a non-thematic functional subject, even though no subject is present in c-structure. Similar facts in Russian support this proposal. First, there are a few lexical items (discussed by Chvany (1974) and Corbett (1979)), which show a different

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28. The term "extraposition" may not be the most fortunate. It is chosen to suggest the analogy with English and French; however, word order plays a much less significant role in determining grammatical relations in Russian than it does in English and French. Perhaps "demotion" might be a better name for the process, which is stated in terms of grammatical functions.

stress pattern depending on whether they are agreeing with a subject, or are in subjectless constructions. One word of this type is *doľžno* 'must'. In such cases, the agreeing form is found in constructions with extraposed phrases. Granted, there are only a few lexical items involved. However, further support for this representation will be found in Section 2.3.3. For the present, we will assume this to be the correct analysis. We will therefore assume that, by convention, verbs which do not have subject arguments will be provided with an extra-grammatical subject argument. The simplest assumption is that this argument is unmarked for all features.

This last assumption, however, is sufficient to explain the fact that in sentences with objects derived by subject extraposition, the verb has the same form it would have if it were agreeing with a 3rd person, neuter, singular subject (that is, a subject unmarked for all features): by this analysis, that is exactly what is happening. The verb is failing to agree with its *object*, but it is regularly agreeing with its non-thematic dummy subject. Thus, we need only assume that the verbal endings found in such sentences contribute the following information to their lexical entry:<sup>29</sup>

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29. Where [N] is assumed to be an abbreviation for [-F], [-M]; thus the subject has the unmarked values for Number, Gender, and Person.

(228)

 $(\uparrow\text{SUB NUM}) = -\text{PL}$ 
 $(\uparrow\text{SUB GEN}) = \text{N}$ 
 $(\uparrow\text{SUB PER}) = 3$ 

Notice that the assumption that dummy subjects are unmarked for all features also accounts for the agreement facts related to other impersonal verbs without subjects (consider again example (211a): *Temneet*, ('(it) gets dark(3,sg)').<sup>30</sup>

Moreover, with this analysis, the correlation between nominative casemarking and verbal agreement is quite natural, since both casemarking and verbal agreement are a function of grammatical relations; and, within tensed clauses in Russian, both nominative case assignment and verbal agreement with NP's are limited to (and required of) subjects.

## PREDICTIONS

### 2.3.1 Transitive Verbs

The formulation of the extraposition rule makes several interesting predictions. First, as Grimshaw (1982) argued for French, the application of extraposition to transitive verbs is excluded, since the principle of function - argument biuniqueness (defined in the

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30. This is also the case in many other languages. In Icelandic, for example, impersonal verbs also show the agreement expected with subjects unmarked for all features.



other things, he notes that these genitive phrases are necessarily non-agentive. Thus, extraposition is impossible with a verb such as *rabotat'* 'to work', and the following sentence is excluded:

(233)

\*Ne rabotalo ni odnogo mal'čika.  
 NEG (there) worked(N,sg) not one(GEN) boy(GEN)

just as (234) is:

(234)

\*There worked a boy.

We assume that agentivity<sup>32</sup> is incompatible with object position, and that it is this restriction that accounts for the non-agentivity of such extraposed phrases. This restriction would hold of lexical forms; an association of:

< ... OBJ ... >  
 |  
 AGENT

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32. Where 'agent' is defined as the *doer* argument (of Marantz (1981)).

would be ill-formed.<sup>33</sup> Given this stipulation, the non-occurrence of (233) and (234) is accounted for. Notice that this restriction indirectly requires the subjects of passives to be non-agentive, since their precursor objects could not have been agents. This then makes all passive subjects (that are [+Q]) prime candidates for extraposition.<sup>34</sup> The fact that almost all passive verbs permit extraposition is pointed out (in different terms) by Pesetsky.

#### FURTHER CONSEQUENCES OF EXTRAPOSITION

Notice that, ordinarily, both accusative and genitive cases are possible in the direct object position of negated sentences.

(235)

On ne videl	ětu	stranu.
He NEG saw	this(ACC)	country(ACC)

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33. Pesetsky (1981-a:21) has a similar condition that he calls the "Agent Rule" : "If an argument of a predicate is agentive, then it receives its  $\theta$ -role from the maximal projection of that predicate."

Perlmutter and Postal propose a similar generalization: "that for an intransitive clause to be initially unergative, a universally sufficient condition is volitional quality of the action." (as summarized in Rosen (to appear))

[Causative constructions in certain languages suggest, however, that this condition may not be universal.]

34. Bəbūy (1980-a:fn.) has a different explanation for the prevalence of genitives with passives. He suggests that it is related to the use of *byt'* 'to be', with which the passive is constructed. (*Byt'* in its existential usage requires extraposition when negated.)

(236)  
 On ne videl ètoj strany.  
 He NEG saw this(GEN) country(GEN)

However, extraposition is only possible provided that the value of 'Q' is positive, which also results obligatorily in the genitive casemarking of the object. Therefore (237) is not generated, but (238) is:

(237)  
 \*Ne suščestvuet takuju stranu.  
 NEG exist(3,sg) such(ACC) country(ACC)  
 (238)  
 Ne suščestvuet takoj strany.  
 NEG exist(3,sg) such(GEN) country(GEN)

Extraposition is possible only when the object of a negated verb is to be marked genitive, because of the condition on the rule.

Although objects of negated sentences may normally be marked either accusative or genitive, there is one well-known exception to this alternation: phrases containing the intensifying negative particle *ni* seen in (231). In object position, such phrases are almost exclusively found with the genitive case.<sup>35</sup> Since the *ni* reinforces the negation, the phrase containing it logically falls within the scope of sentential negation, and therefore will inherit the feature '+Q' and will receive genitive case. This explains the contrast

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35. See, e.g. Ravič (1971), the Academy Grammar (1980, vol. 2).

pointed out by Pesetsky among others.<sup>36</sup>

- (239)      ??Ja ne polučal            nikakie pis'ma.            (= P, (v)-fn. 14)  
               I NEG received            no(ACC) letters(ACC)
- (240)      Ja ne polučal            nikakix pisem.            (= P, (vi)-fn. 14)  
               I NEG received            no(GEN) letters(GEN)

However, the unusual character of this phrase is evident only in direct object position, where casemarking is sensitive to the feature 'Q' (and the scope of negation). As predicted by this account, the behavior of *ni* in subject position is unaffected. Thus, (241) is perfectly acceptable, as is (242), which represents the extraposed version (which, here as always, has the genitive object).<sup>37</sup>

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36. See, e.g., Pesetsky (1981-a: fn. 14), Ravič (1971).

37. This contrast is mentioned, but left unexplained, by Pesetsky. Babby (1980-a:21) also discusses it:

"It is often claimed in the literature that the presence of *ni odin* 'strengthens' the negation and therefore tends to precipitate genitive marking (i.e. 'impersonality'). Statements of this kind are too vague to be of any real value: Even if it were possible to make a notion like 'strengthen negation' explicit, it would not contribute to our understanding of how genitive marking operates since it cannot account for the existence of sentences [involving *ni* preceding a nominative subject]."

The present analysis meets both objections. The "strengthening" of the negation is accomplished by the contribution of the feature 'Q', and the contrast between acceptable nominative subjects preceded by 'ni' and marginally acceptable accusative objects preceded by 'ni' is predicted by the optionality of extraposition, and the obligatory genitive casemarking of objects in the presence of the feature 'Q'.

(241)

**Ni odna devuška** ne prišla.  
 Not one(NOM) girl(NOM) NEG came(3,F,sg)

(242)

Ne prišlo **ni odnoj devuški**.  
 NEG (there) came(3,sg) not one(GEN) girl(GEN)

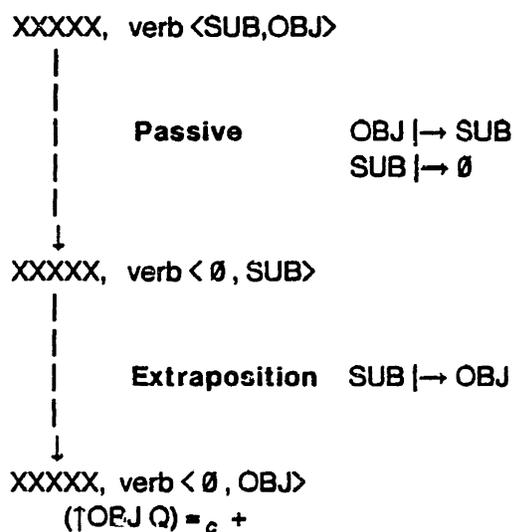
An analysis which considered the boldfaced phrases in (239) and (240) to be objects and the boldfaced phrases in (241) and (242) to be subjects would have great difficulty accounting for the fact that whatever should be responsible for genitive marking of subjects and objects does not operate uniformly, since, by such an account, genitive marking of *ni* phrases is obligatory in object position, but optional in subject position. However, the current analysis considers (239), (240), and (242) to be on a par; all three involve objects, and the objects are within the scope of negation, and therefore receive genitive marking.

### 2.3.2 Passive and *-sja* forms

If the rule is formulated as in (227), one would expect that the rule could also apply to the subjects of passive forms, and of the *-sja* forms discussed in Chapter 1. And so it does:

- (243) Ni odin gorod ne byl vzjat. (= Ch, 2.21-a)  
 Not 1(NOM) city(NOM) NEG was(3,M,sg) taken(M,sg)
- (244) Ni odnogo goroda ne bylo vzjato. (= Ch, 2.21-b)  
 Not 1(GEN) city(GEN) NEG was(3,N,sg) taken(N,sg)
- (245) Zdes' vodjatsja losi. (= B, 25-a)  
 Here be-found(3,pl) elks(NOM)
- (246) Zdes' ne voditsja losej. (= B, 25-b)  
 Here NEG be-found(3,sg) elks(GEN)

In such cases, it seems as though the extraposition rule is partially reversing the effect of the passive or *-sja* formation processes. Consider passive:



The reversal, though, is only partial, since the missing argument is not reinstated, and the object is now restricted in a way that it had not been before. Moreover, the same sort of apparent reversal occurs in English:

(247) There was a book stolen

### 2.3.3 Statement of the lexical rule

The extraposition rule makes it possible for certain subjects — namely, those of intransitive verbs — to become objects, thereby receiving the genitive case. The claim is that it is only by means of this process that the genitives in (244) and (246) got to be that way. No explanation is needed, therefore, for the fact that the subjects of other types of predicates (such as predicate nominals)<sup>38</sup> do not appear in the genitive.<sup>39</sup>

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38. In copular usage, *byt'* contributes grammatical information, but does not contribute the main predicate, which comes rather from the predicate NP, AP, or PP. Thus, *On šťastliv* ('He (is) happy') would have a structure like:

$$\left[ \begin{array}{l} \text{SUB} \left[ \begin{array}{ll} \text{PRED} & \text{'h}\sigma\text{' } \\ \text{NUM} & \text{- PL} \\ \text{GEN} & \text{M} \end{array} \right] \\ \text{PRED} \quad \text{'happy <SUB>'} \end{array} \right]$$

39. The unacceptability of sentences like the second is discussed by Chvany (1975:59).

- (248)  
 On ne byl pisatel'.  
 He(NOM) NEG was(M,sg) writer(NOM)
- (249)  
 \*Ego ne bylo pisatel'.  
 He(GEN) NEG was(N,sg) writer(NOM)

The situation is the same with other constructions containing an occurrence of the copula which does not contribute the main predicate of the sentence. As has been argued by Maling (to appear), adjectives do not normally subcategorize for objects. Thus, the fact that adjectives do not undergo extraposition may be explained by the more general observation that adjectives do not take objects as arguments.

- (250)  
 Dom ne vysok.  
 House(NOM) NEG tall(short form adjective)
- (251)  
 \*Doma ne vysok.  
 House(GEN) NEG tall(short form adjective)
- (252)  
 Ni odin gorod ne byl čist.  
 Not one(NOM) city(NOM,M) NEG was(3,sg) clean(M,sg)
- (253)  
 \*Ni odnogo goroda ne bylo čisto.  
 Not one(GEN) city(GEN,M) NEG was(N,sg) clean(N,sg)

(= P, 23b)

However, as Babby (1980-a:26-27, fn. 8) points out, there are (albeit only a few) cases of predicate adjectives which occur with the genitive of negation. For example:

(254)

Ne slyšno za dver'ju ni golosa, ni šagov. (G. Kubanskij, = B, p. 27)  
 NEG audible beyond (the) door not voice(GEN), not steps(GEN).  
 'There were no voices or steps audible beyond the door'

However, these are precisely the cases where adjectives may take ordinary accusative objects (see Borrás and Christian (1971:197-198)). Consider other examples from Babby (1980-a:27):

(255)

Zametno *tropinku*.  
 Visible path(ACC)  
 'The path is visible'

Thus, this small class of adjectives (of verbal origin) take objects. They are exceptional in that they allow objects. The casemarking is a direct consequence of the function assignment. So the appearance of the genitive case in a negative context is perfectly predictable (and need not result from the application of the rule of extaposition).

(256)

*Tropinki nezametno.* (= B, p. 27)  
 Path(GEN) not visible

It would also be completely expected that, analogous to the existence of sentences such as (257) in English, there would be sentences like (258) in Russian, with verbs whose subjects are embedded beneath verbs of subject control.

(257)

There started to be a riot.

(258)

Stalo	ne	suščestvovat'	takix	ljudej.
(There) started(N,sg)	NEG	exist	such(GEN)	people(GEN)

( = P, 108a)

In (258), we find the verb in the impersonal (unmarked) form, since the subject of *stat'* must be identical with the subject of *suščestvovat'*, which in this case means that it is unmarked for all features. The fact that the verb shows agreement with the embedded dummy subject (which is grammatically controlled by the matrix subject) provides further support for the existence of such a subject.

Sentence (258) is acceptable because *stat'* does not impose selectional restrictions on its subject, since *stat'* takes an extra-grammatical subject argument: *stat'* ( $\uparrow$ PRED) = 'to become SUB <X-COMP>'. If a verb imposes selectional restrictions on its subject, such restrictions cannot be satisfied by a semantically empty dummy subject. Thus (259) is acceptable, while (260) is not:

(259)

Takie	ljudi	staralis'	ne	prijti.
Such(NOM)	people(NOM)	tried	NEG	to come

(260)

*Staralos'	ne	prijti	takix	ljudej.
(There) tried	NEG	to come	such(GEN)	people(GEN)

Notice that if the verb *staralos'* in (260) is interpreted as having a functional PRO subject, like the verb *prišěl* ('came'(M,sg)) in the sentence "Prišěl" ('He came'), then (260) will be ruled out for a different reason. This PRO subject is also required to control the V-COMP, and serve as subject to *prijti*, but the extraposed *prijti* is incompatible with the existence of a (non-dummy) subject. This representation will then be semantically incoherent. The extraposed *prijti* has the predicate argument structure: <OBJ>(SUB). If the (skeletal) f-structure were of the form:

$$\left[ \begin{array}{l} \text{SUB} \quad [\text{PRED} \quad \text{PRO} ], \\ \text{PRED} \quad \text{'try <SUB,VCOMP>'} \\ \\ \text{VCOMP} \left[ \begin{array}{l} \text{SUB} \quad [ \quad ], \\ \text{PRED} \quad \text{'come <OBJ>(SUB)'} \\ \text{OBJ} \quad [\text{PRED} \quad \text{'people'}] \end{array} \right] \end{array} \right]$$

the SUB of *prijti* ('to come'), grammatically controlled by the subject of *staralos'*, contains a PRED value. However, this PRED value will not be linked up to any argument within its minimal clause nucleus, because the SUB of *prijti* is extra-grammatical. Therefore, this f-structure would be *semantically incoherent* [see the Introduction for the definition of semantic coherence]. Thus, on either interpretation, (260) is ruled out.

### 2.3.4 Genitive Marking and Grammatical Functions

Notice that in the present analysis, the genitive casemarking is an automatic consequence of the fact that the relevant NP's are objects (since the function 'object' is necessarily associated with the post-verbal NP position that receives ACC/GEN marking). This is quite different from the view expressed by Babby (1980-a). Curiously enough, although Babby in fact argues against the (surface) subjecthood of genitive phrases, he fails to relate their objecthood with their genitive casemarking. Rather, he assumes that (underlying) subjects and objects are caseless at a point in the derivation where oblique cases have already been assigned (and that it is this characteristic of being caseless that allows subjects and objects to undergo "genitive marking".) It is unclear why he assumes that casemarking is dependent on deep structure grammatical relations (which in LFG correspond to logical arguments) rather than surface structure relations;<sup>40</sup> particularly in

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40. Perhaps because this allows him to continue to use the direct case condition, which unifies subjects and objects, to explain the distribution of the genitive of negation in spite of the fact that, on the surface, there are no subjects at all affected by genitive marking. In any event, we will argue in Chapter 4 that the Direct Case Condition is not tenable.

light of evidence of this type which strongly suggests the reverse.<sup>41</sup> The LFG framework, in allowing for the interaction of surface (i.e. c-structure) position and grammatical relations permits a simple account of the apparent nominative / genitive alternation.

### 2.3.5 Indefiniteness

Let us now consider the constraint that, for this rule to apply, 'Q' must be +. It has long been recognized that *there* insertion in English could apply only with indefinite NP's (see Milsark (1974)). Thus,

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41. In fact, he recognizes that the rule of Genitive Marking is best stated at the level of surface structure, but states the generalization in terms of surface case, which encodes deep structure grammatical relations. (In Babby's framework, surface case reflects the deep structure grammatical relations, which determine all casemarking except the distinction between subject and object: this awaits surface structure). According to Babby (1980-a:151):

"The reason that solutions like the 'transformational' one in Section 7.1.0 cannot adequately state the environment of negative genitive marking is that they are formulated in terms of syntactic position or grammatical relations rather than surface case. It should be obvious that subjects, direct objects, and adverbs of time form a natural class (=common denominator) only at the level of surface case, not grammatical relations. Therefore, a general rule of genitive marking must be formulated in terms of surface case, and not grammatical relations."

(261) There was a fly in my soup.

(262) \*There was the fly in my soup.  
[on the relevant non-list reading]

A similar condition holds of the *il* extraposition in French (see Grimshaw (1982)).<sup>42</sup>

(263) Il passe un train toutes les heures. (= G, 50 (from Martin (197C))  
There passes a train every hour.

(264) \*Il passe le train toutes les heures.  
There passes the train every hour.  
[on the relevant reading, where *il* is understood as a dummy element, and the meaning is 'the train passes every hour']

Likewise, a similar constraint is found in Arabic.<sup>43</sup> This (universal '??') condition on

42. There are, however, rare exceptions to this restriction. Grimshaw (1982) cites the following example (originally from Damourette et Pichon (1930), cited by Martin):

(i) M<sup>me</sup> A — Il vient tes élèves, tantôt?  
— There are-coming(3,sg) your students, soon?

M P — Il les vient.  
— There they[clitic-object] come(3,sg)

These are quite exceptional, however.

43. See Fassi Fehri (1982) for an analysis.

extraposition<sup>44</sup> also holds in Russian, and the claim is that the 'indefiniteness' can be expressed, at least in Russian, by a single feature 'Q' which is needed independently for the casemarking of objects.

Chvany (to appear) argues persuasively against accepting the feature [ $\pm$  definiteness] as a primitive. The current approach attempts to find syntactic correlates to this much invoked notion, and proposes the feature 'Q', with which semantic indefiniteness tends to be associated. However, it is the syntactic feature that conditions processes such as casemarking and extraposition.

As mentioned earlier, the feature 'Q' is associated both with sentential negation and with quantifiers. So far in the discussion of Russian extraposition, however, we have concentrated on a single source, sentential negation. If, though, this analysis is correct, and 'Q' is the relevant feature for application of extraposition, then we should also find cases of extraposed QP's in affirmative sentences. Again, since the word order in Russian is rather free, such instances might be hard to detect. If such QP's were extraposed, as predicted, to become objects, we would expect there to be no agreement

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44. If it is the case that languages like Italian, which do not impose restrictions on this object position, involve a process which is more or less the inverse of Extraposition (i.e. a rule involving movement of OBJ to SUB), as has been suggested by Rizzi (1981) in the Government Binding framework (and Baker (1982) in the LFG framework), while languages such as French, English and Russian do involve movement from SUB to OBJ, then this might be a universal constraint on Extraposition rules of this type. If, however, Italian and Russian involve the same process, then this constraint would not be universal. This question will be reconsidered in Section 2.10.

of the main verb with the extraposed phrase. Indeed, we find:

- (265)  
 Pjat' mal'čikov prišli.  
 5 boys(GEN) came(3,pi)
- (266)  
 Prišlo pjat' mal'čikov.  
 (There) came(3,N,sg) 5 boys(GEN)
- (267)  
 Pjat' mal'čikov prišlo.  
 5 boys(GEN) came(3,N,sg)

The lack of agreement follows from our analysis of extraposition.<sup>45</sup> Before going on to present syntactic evidence that these non-agreeing numeral phrases are not subjects, it would be useful to discuss quantifier phrases in general; then we will return to the evidence which supports our analysis of these numeral phrases.

## 2.4 PHRASES CONTAINING QUANTIFIERS

The modern Russian quantifier system has evolved, through a concurrence of historical accident, confusion, and perhaps certain normative influences, into one which is rather complex and highly idiosyncratic. The details of adjectival modifiers have led some linguists to claim in disgust that they escape any rational analysis. However,

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45. However, this in itself does not demonstrate that the extraposition analysis is correct. Babby accounts for the lack of agreement in a different way. The extraposition analysis does, however, predict the lack of agreement, and no further explanation is necessary.

numeral phrases are not totally irregular, and in this section, we will consider the representation of these phrases. The correct analysis permits explanation of peculiarities related to their distribution. It is also important to consider these phrases carefully, because questionable conclusions have helped to build the foundation of various theories about Russian casemarking.

Ignoring the more complicated issues involved in the casemarking of modifiers, I would like to sketch the numeral system briefly. Since the behavior of compound numerals is determined by the right-most element, it is sufficient to discuss the numerals: 1; 2, 3, and 4; and those greater than 4; since the others are predictable from these.<sup>46</sup> In general, 1 is strictly singular; 2, 3, and 4 govern the genitive singular; and numerals greater than 4 occur with a genitive plural NP. Thus, we have three classes of numerals in modern Russian, but only two distinctions of grammatical number: singular and plural.<sup>47</sup> In Old Russian, there were three types of grammatical number, singular, dual, and plural, and the numeral system was basically as sketched below:

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46. Numbers greater than 4 ending in 1, 2, 3, or 4 do behave slightly differently than their one-digit counterparts. These differences are not relevant to the present discussion, however, but such differences will be mentioned in future footnotes.

47. The term 'numeral' is used here to avoid confusion with grammatical 'number': plural / singular.

TABLE II OLD RUSSIAN NUMERALS

	1	2	3	4	n > 4
Adjectival	x	x	x	x	
Nominal					x
Used with singular	x				
Used with dual		x			
Used with plural			x	x	x

As the dual died out, it was replaced with the genitive singular, because of morphological similarities, and the numerals '3' and '4', which were morphologically similar to '2' also started to be used with the genitive singular. As we will suggest in this section, it appears that, over time, the numerals '2', '3', and '4', which had once been strictly adjectival, and those '5' and above, which were once totally nominal in character, have been converging.

#### 2.4.1 Numerals greater than 1

Phrases containing such numerals are distinguished according to the case which is assigned to them. If the quantifier phrase is nominative or accusative ( $[ - , - , \pm ]$ ), then the quantified NP (which we might consider to be the domain 'DOM' of the quantifier) will appear in the genitive case. If, however, the phrase is assigned some other case, then the quantifier and the noun it modifies will appear in that case.

(268) *Fjat' MAL'ČIKOV prišli.*  
 5(NOM) boys(GEN,pl) came(pl)

(269) *Ja čitala pjat' KNIG.*  
 I read 5(ACC) books(GEN)

BUT

(270) *Ja pomogla **pjati mal'čikam.***  
 I helped 5(DAT) boys(DAT,pl).

(271) *Ja govorila **o pjati mal'čikax.***  
 I was speaking about 5(LOC) boys(LOC,pl)

(272) *Ja prišla **s pjat'ju mal'čikami.***  
 I came with 5(INS) boys(INS,pl)

(273) *Ja prišla **bez pjati mal'čikov.***  
 I came without 5(GEN) boys(GEN,pl)

In (270) through (273), the phrases in boldface show concord, just like that which is found in any NP between modifier and head. The modifier (in this case *pjat'*) agrees in case with its head. Following Pesetsky, we will assume that these phrases are NP's. For some reason (or for no particular reason), we do not find NP's showing concord between nominative or accusative numerals and a head noun. As Pesetsky points out, there are other Slavic languages where such concord is found, and we will also assume that this is something of an accidental gap in Russian; at least we have no explanation of it.

The exact nature of this gap is, however, not obvious. There are several possibilities:

[1] There is one paradigm for the numeral '5':

	<u>'5'</u>
NOM	pjat'
ACC	pjat'
GEN	pjati
LOC	pjati
DAT	pjati
INS	pjat'ju

[2] There are two paradigms, one nominal, the other adjectival.

	<u>'5': Noun</u>		<u>'5': Adjective</u>
NOM	pjat'	NOM	*
ACC	pjat'	ACC	*
GEN	*	GEN	pjati
LOC	*	LOC	pjati
DAT	*	DAT	pjati
INS	*	INS	pjat'ju

Of these two possibilities, the second would provide a very natural account of the government relations we observed. If we assume that the head of a phrase (1) bears the case assigned to the phrase as a whole, and (2) may govern the case of its complement; then the fact that the nominative and accusative forms of '5' govern the genitive case on the following NP would not be surprising, since they represent the head of the NP in which they appear. The failure of the oblique cases (i.e. those other than the NOM and ACC) to govern the genitive plural would follow from the assumption that they function as

adjectival modifiers, rather than head nouns. Agreement of the oblique forms with the NP also follows from their modifier status, just as the failure of the NOM and ACC forms to show concord is completely expected. This is the solution that we will adopt, because it explains the distribution of these numerals with the least number of stipulations. This is the unmarked situation for relations involving heads of phrases: the head governs; the modifiers agree.

However, there are other possibilities. The system could be as follows:<sup>48</sup>

<u>'5': Noun</u>	<u>'5': Adjective</u>
NOM pjat'	NOM pjat'
ACC pjat'	ACC pjat'
GEN *	GEN pjati
LOC *	LOC pjati
DAT *	DAT pjati
INS *	INS pjat'ju

Is it that, in the adjectival paradigm, the number *pjat'* lacks a NOM/ACC form altogether, or does it merely lack a form which is *distinct* from the nominal one? Should we assume that phrases such as *pjat' mal'čikov* are structurally ambiguous: being alternately headed by *pjat'* and by *mal'čikov*? If so, then an explanation is required for the ability of the modifier [in the latter case] to govern the case of the head, but only when the modifier appears in the nominative and accusative case, since the following are ungrammatical (with *mal'čikov* = GEN, pl):

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48. This is basically the system assumed by Pesetsky, although the elements of the first column are assumed to be quantifiers, and they are considered to be caseless. Evidence in Section 2.5.6, however, suggests that case is relevant to these forms.

\*[pjati mal'čikov]<sub>DAT</sub>  
 \*[pjati mal'čikov]<sub>LOC</sub>  
 \*[pjat'ju mal'čikov]<sub>INS</sub>

Since this involves complicating the system, and there is nothing that requires this move, we conclude that system 2 is preferable. So, to generate such phrases, we propose:<sup>49</sup>

$$(274) \quad NP' \rightarrow \left( \begin{array}{c} AP \\ (\uparrow MOD) = \downarrow \\ (\uparrow AGR) = (\downarrow AGR) \\ (\uparrow CASE) = (\downarrow CASE) \\ (\uparrow CNT) = (\downarrow CNT) \end{array} \right) \quad NP$$

$\uparrow = \downarrow$

where 'AGR' is a variable which is to range over NUM and GEND.

and we assume that some subjectival paradigms (such as '5') lack nominative and accusative forms while others (such as *mnogie* 'many') are complete. It is reasonable that such accidental gaps would have a morphological, rather than a syntactic basis.

Since only the features of the head automatically percolate up to the mother, if one assumes that quantifiers are inherently [+Q], this feature will not become a feature of the NP' phrase.

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49. For details about agreement in Russian, the reader is referred to Crockett (1976), who has lots of interesting data about concord and agreement. Here, the feature 'CNT' (count) is included, but it is intended only as a first approximation. Crockett suggests a refinement of the notion of countability involving features such as 'homogeneous', etc.. This is not intended to be opposed to her more subtle analysis of these facts.

As we have discussed, we will assume that the phrases in which the quantifier governs the genitive differ from those above in headedness; that is, that in (268) and (269), *pjat'* functions as the head. The case assigned to these phrases (necessarily nominative or accusative) will be manifested on *pjat'* alone, while the NP will appear in the genitive.<sup>50</sup> Since the quantifier is the head of the phrase, the entire QP will be [+Q].

$$(275) \quad \text{QP} \rightarrow \begin{array}{cc} \text{Q} & \text{NP} \\ \uparrow = \downarrow & (\uparrow \text{DOM}) = \downarrow \\ (\downarrow \text{CASE}) = {}_c[-, -, \pm] & (\downarrow \text{CASE}) = [-, +, +] \end{array}$$

This is the general case for phrases of this type, headed by a quantifier, and therefore marked [+Q]. We will refer to such phrases as quantifier phrases or QP's.<sup>51</sup>

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50. This differs from Pesetsky's analysis of these phrases. He considers that *pjat' mal'čikov* may be either an NP or a QP, and that the verb will agree only with the NP.

51. As discussed in the Introduction, 'QP' is used as an abbreviation for an XP that is [+K], where the X' features assumed are [ $\pm$ N], [ $\pm$ V], [ $\pm$ K]. The feature 'Q' is distinct from the categorial feature 'K', although assuming that quantifiers are (by definition) [+Q] guarantees that all QP's will be as well, since the phrase will share the features of its head.

Given this representation, the PS rules might better be stated more generally:

S → XP VP

VP → V XP

to allow NP, PP, and QP to appear in these positions. Arguments that this is the correct distribution of these phrases are found in Chapter 4.

Notice that a similar expansion, including the genitive marking of the noun phrase following the head, is required for possessive constructions.<sup>52</sup>

$$(276) \quad \text{NP}' \rightarrow \begin{array}{c} \text{NP} \\ \uparrow = \downarrow \end{array} \left( \begin{array}{c} \text{NP}' \\ (\uparrow \text{POSS}) = \downarrow \\ (\downarrow \text{CASE}) = [-, +, +] \end{array} \right)$$

Notice that while, for numeral phrases, QP and NP constructions are in complementary distribution (QP occurring in nominative or accusative exclusively, NP occurring exclusively in the other cases), the complementary distribution is not found with other types of quantifiers. Recall that the explanation for the lack of an adjectival form of *pjat'* in the nominative and accusative was simple morphological accident. Nothing precludes the existence of adjectival quantificational modifiers in other paradigms, and in fact, the systematic lack of such forms would be surprising. *Mnogie* 'many', for example, has such forms. This gives the following pair of sentences, in which the first, by this analysis, has a QP subject, while the second has an NP.

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52. Perhaps these two expansions should in fact be consolidated, since so-called 'nominal quantifiers' like *million* may appear in NP' phrases (in any case) with a following DOM in the genitive, as will be discussed in Section 2.5.7.

(277)

*Mnogo*    *vozdušnyx šarov*    letjat    na tex vysotax,  
 Many    balloons(GEN)    fly(pl)    at those heights

gde    letajut    transportnye i    passažirskie  
 where    fly    cargo    and passenger

samolëty.    (= Cr, 85-b; from Skoblikova (1959))  
 airplanes

'Many balloons fly as high as cargo and passenger airplanes'

(278)

**Mnogie**    **vozdušnye šary**    letajut.  
 Many(NOM,pl)    balloons(NOM,pl)    fly(pl)

*Mnogie* is said to be more "individuating" (cf. Klenin (1980)), while *mnogo* tends to refer to a collective (cf. Borrás and Christian (1971:312)). This is consistent with the present analysis that *mnogo* is the head of the phrase (which thus refers to a large group of...), while *mnogie* modifies the plural head *šary* in (278).

This difference is found systematically between the two types of constructions. Borrás and Christian discuss, for example, the difference between *nemnogie ljudi* (not-many, several (adj. NOM), people (NOM)) and *nesko'ko čelovek* (not-many, several (quant.) people(GEN)); the first suggests "a few taken individually," while the second suggests "a few collectively." (p. 313)

Not surprisingly, this sort of contrast in meaning and usage is possible only where both variants are possible. In oblique cases, the distinction is neutralized; but this does not mean that *pjati devuškam* (5(DAT) girls(DAT)) may be analyzed alternately as an NP (headed by *devuškam*) or a QP (headed by *pjat'*). Syntactically, it remains an NP. The

reverse is true of *pjat' čelovek*, which, in spite of the non-existence of a nominative and accusative adjectival form of *pjat'*, is nonetheless syntactically a QP.

One other peculiarity about Russian quantifiers was already mentioned. The numerals '2', '3', and '4' govern a non-plural DOM. Again, however, this is only relevant in the nominative and accusative cases (where QP's are found); in the oblique NP phrases, the concord is complete:

(279)

*Dva ČELOVEKA prišli.*  
2(NOM) person(GEN,sg) came(pl)

(280)

*Ja čitala dve KNIGI.*  
I(NOM) read 2(ACC) book(GEN,sg)

(281)

*Ja pomogla dvum mal'čikam.*  
I helped 2(DAT) boys(DAT,pl)

(282)

*Ja govorila o dvux mal'čikax.*  
I(NOM) was speaking about 2(LOC) boys(LOC,pl)

(283)

*Ja prišla s dvumja mal'čikami.*  
I(NOM) came with 2(INS) boy(INS,pl)

(284)

*Ja prišla bez dvux mal'čikov.*  
I(NOM) came without two(GEN) boys(GEN,pl)

It would be desirable to find an explanation of the distinction between nominative and accusative numeral phrases (which by the current analysis are necessarily QP's) and oblique numeral phrases (which are necessarily NP's). One might seek to account for this difference in terms of case assignment, and the difference between structural case

positions and non-structural case positions.<sup>53</sup> However, it becomes clear that what is relevant is the particular cases, rather than the case positions or case mechanisms.

When we look at lexically assigned accusatives or structurally assigned genitives, it becomes apparent that all nominatives and accusatives are distinguished from all oblique cases. Lexically assigned accusatives still allow quantifier phrases with genitive NP's:<sup>54</sup>

(285)

On smotrel na *pjat'* *kartin.*  
He looked at 5(ACC) paintings(GEN).

(286)

\*On smotrel na *pjat'* *kartiny.*  
He looked at 5(ACC) paintings(ACC)

The prepositional object in (285) cannot be considered to have been reanalyzed as an

53. It has, in fact, been described as being attributable to the difference between subject and object positions and other positions (cf. Worth 1959).

54. It has been suggested that prepositions like *na* do not lexically govern their objects, but rather that the objects receive case by a "marked assignment of structural case" (cf. Babby (1980-b), Freidin and Babby (1982)). However, there is no evidence to support such a claim. These objects do not show the structural case alternation of ACC/GEN, as the following sentence demonstrates.

(i) \*On ne smotrel na *pjati kartin.*  
He NEG looked at 5(GEN) paintings(GEN)

Furthermore, prepositional phrases, which may appear in subject and object position, but may not appear in oblique positions (as will be discussed in Chapter 4), also may not follow *na*:

(ii) \*On smotrel na *okolo pjati kartin.*  
He(NOM) looked at [about 5(GEN) paintings(GEN)]<sub>PP</sub>

object. The following example shows that the same distribution of numeral phrases is found with prepositions that govern the accusative, even when they cooccur with a direct object and are separated from the verb. [There are no cases of two accusative objects in Russian.]

(287)

On kupil bilet dlja menja za pjat' rublej.  
He bought ticket(ACC) for me(GEN) for5(ACC) roubles(GEN,pl).

In contrast, structurally assigned genitives exhibit concord, like all other oblique phrases.

(288)

On ne čital dvux knig.  
He NEG read 2(GEN) books(GEN,pl)

(289)

\*On ne čital dvux knigi.  
He NEG read 2(GEN) book(GEN,sg)

Thus, both concord and absence of concord can be found in either structurally assigned or lexically assigned case positions.

In other words, what is relevant above is morphological case, not abstract case mechanisms. Certain types of generalizations are best stated in terms of grammatical functions or structural positions. Beyond that, though, other types of generalizations are storable in terms of the real, morphological case that has been assigned. Failure to distinguish the levels at which such generalizations should be stated has led to confusion

in the literature.<sup>55</sup>

In summary, then, nominative and accusative phrases containing numerals above 1 (not ending in 1) are QP's. When these numerals occur in phrases to which other cases are assigned, they do not function as the head, and exhibit concord with the head noun.

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55. For example, as mentioned in the preceding footnote, Freidin and Babby (1982) suggest that accusatives assigned by prepositions (as in (285)) must be instances of direct case assignment because they fail to show concord.

We can account for these facts if we assume that prepositions which appear to impose accusative case marking on their NP-complements do not impose any case marking, and that the accusative case marking on these NP-complements results from a marked assignment of structural case (see Babby 1980-b:fn. 6). Note that it is unlikely that accusative case marking results from reanalysis of the predicate plus preposition as a predicate because WH-movement of the NP-complement is not possible, whereas WH-movement from the V-complement is allowed (...).

(fn. 21, p. 37)

This proposal, however, fails to account for the fact that accusative assigned via structural casemarking may alternate with the genitive, while prepositionally governed accusative clearly does not (see previous footnote).

They also argue on the same basis that (288) cannot involve structural case assignment (because of the concord). We believe that it is important to distinguish carefully between principles of case assignment, and morphological generalizations about the case assigned. This is particularly important since Freidin and Babby go on to draw conclusions about the nature of the three types of case assignment they propose — structural, inherent, and semantic — partially on the basis of the conclusions just discussed.

QP's are then (by definition) [+Q], and are therefore eligible for extraposition. When such extraposition has occurred, the extraposed QP will fail to agree with the verb, since it is not the subject. QP's which have not been extraposed will agree, like any other subject, with the main verb. This accounts for the apparent "optional" subject-verb agreement with numeral phrases (c.f. (265) vs. (267)). Further evidence that these non-agreeing numeral phrases are not subjects will be presented in Section 2.5.

#### 2.4.2 Numerals ending in 1

The numeral 'one' (*odin*(M), *odno*(N), *odna*(F)) and any numeral ending in 'one', are modifiers — showing concord — which are necessarily singular. This view of the numeral 'one' as being something other than a true quantifier is not new.<sup>56</sup> Thus, it can only occur with a singular head,<sup>57</sup> and any verb agreeing with the phrase must be singular as

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56. The adjectival nature of *odin* as opposed to the nominal quantifiers from 5 to 1000 is pointed out by Vinogradov (1947). Worth (1959:120, fn. 6) explicitly distinguishes 1 from true quantifiers.

It must be noted that the word *odin* "one", as was pointed out by Jury Serech, *Probleme der Bildung des Zahlwortes als Redeteil in den slavischen Sprachen* (Lund, 1952), p. 56 et. al., and despite the Academy *Grammatika russkogo jazyka II* 1, 343, or more recently E.M. Galkina-Fedoruk et. al. *Sovremennyj russkij jazyk* (Moskva, 1957) pp. 295f., is not a numeral at all: *odin* expresses neither plurality nor quantification lexically, but does express plurality grammatically (*odni sideli, drugie stojali*, etc.), and is therefore the very opposite of a numeral."

57. That is, where it is in fact being used numerically, not in the example of the preceding footnote, where *odni* is being used as *les uns...* in French, to express the idea of 'some...'. .

well.<sup>58</sup>

(290)

Odna	studentka	prišla.
1(F)	student(F)	came(F,sg)

(291)

Dvadcat' odin	student	prišël.
Twenty - 1	student(M,sg)	came(M,sg)

Since these numerals occur within NP [-Q] constituents, extraposition is ruled out.

Therefore, our analysis predicts that the verbs would necessarily agree with the subject in number and gender.

(292)

*Prišlo	dvadcat' odin	student.
(There) came(N,sg)	twenty - 1	student(M,sg).

(293)

Prišël	dvadcat' odin	student.
Came(M,sg)	twenty - 1	student(M,sg)

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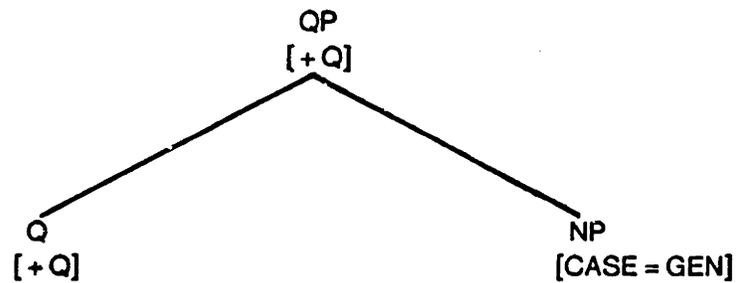
58. There are occasional cases where 21 occurs with a pluralized verb, however; although this is considered incorrect. An example from Crockett:

- (i) Dvadcat' odin student[sg] javilis'[pl] na êkzamen.  
 (The) 21 students appeared at the exam.

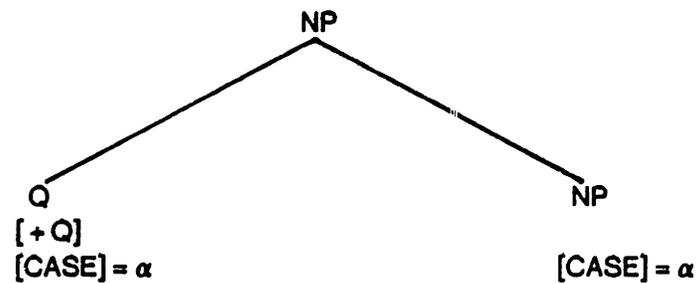
### 2.4.3 Other Quantifiers

We have, then, a distinction between two types of phrases, those which are [+Q] and those which are [-Q].

I.



II.



This analysis accounts for verbal agreement. That is, in Case I, extraposition is possible because of the [+Q] feature. Therefore, numeral phrases such as *pjat' želovek* should be found both as subjects (in which case there is verbal agreement), and as extraposed pseudo-subjects (in which case no agreement is found). This corresponds to (265) and

(267), respectively. Quantifiers which exhibit concord with the following NP occur in a configuration of type II (e.g. *odin*), and therefore cannot be extraposed. In such cases, subject - verb agreement is obligatory.

The same distinctions are found with non-numerical quantifiers. Some show concord, and are NP's of type II, while others govern the genitive case of their DOM and are of type I. In such cases, the correct predictions are made for verbal agreement.

Example of type I: *mnogo* 'many'

(294)

Mnogo devušek	prišli.
Many girl(GEN,pl)	came(pl)

(295)

Prišlo	mnogo devušek.
(There) came(N,sg)	many girl(GEN,pl)

Example of type II: *nekotorye* 'several'

(296)

Nekotorye	mal'čiki	prišli.
Several(NOM,pl)	boy(NOM,pl)	came(pl)

(297)

*Prišlo	nekotorye	mal'čiki.
(There) came	several(NOM,pl)	boys(NOM)

#### 2.4.4 Those several strange phrases

Something very peculiar happens with pronouns like *te* 'those', *eti* 'these', *vse* 'all' and *každye* 'each'. They can stand alone, as in (298):<sup>59</sup>

(298)

Vse prišli.  
All(pl) came(pl)

'Everyone came'

However, when they cooccur with other phrases containing quantifiers, rather than serving as specifiers to the following phrase, such pronouns appear to be the more prominent phrase. The following phrase serves, rather, as an adjunct to these pronouns.

As mentioned earlier in this section, numerals ending in 1 are necessarily within singular NP's, and verbs which agree must also be in the singular.

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59. This is in contrast to some other (non-numerical) quantifiers, which may not stand alone:

(i) Mnogo studentov prišli.  
Many students came(pl).

(ii) \*Mnogo prišli.  
Many came(pl).

(See Corbett (1979) for discussion.)

- (299)  
 Dvadcat' odin student prišël.  
 Twenty - 1 student came(sg)
- (300)  
 \*Dvadcat' odin student prišli.  
 Twenty - 1 student came(pl)

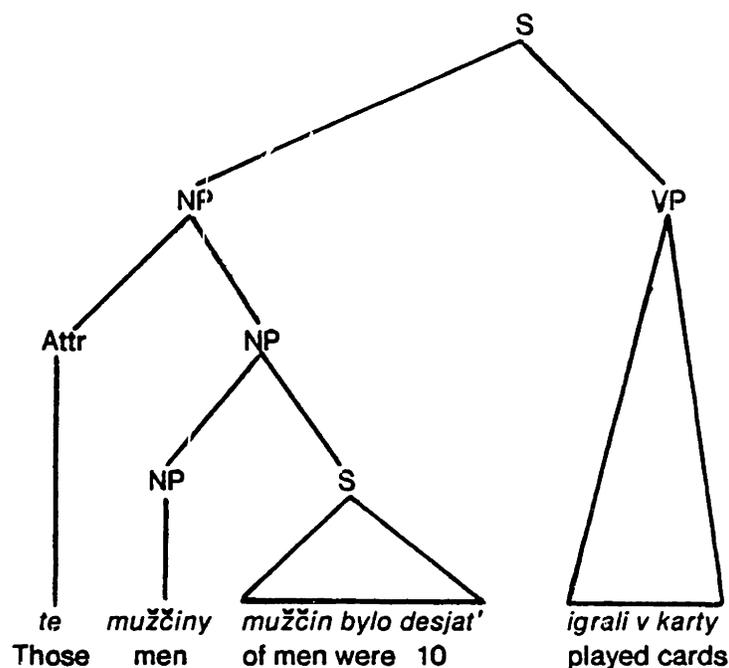
However, with the sentence meaning '*These 21 students came*' the verb does not agree with '21 student'(sg), but rather with 'these'(pl).

- (301)  
 Èti dvadcat' odin student prišli.  
 These(NOM,pl) twenty - 1 student(M,sg) came(pl)
- (302)  
 \*Èti dvadcat' odin student prišël.  
 These twenty - 1 student(M,sg) came(M,sg)
- (303)  
 \*Ètot dvadcat' odin student prišël.  
 This twenty - 1 student(M,sg) came(M,sg)

Crockett (1976:338) proposes that such pronouns occur in a configuration like that of *those ten men* in sentence (304):

- (304)  
 Te desjat' mužčîn igrali v karty.  
 Those(NOM,sg) 10(NOM) men(GEN,pl) played(pl) cards.

(305)



One possible analysis within the current framework would be that *te* is a pronoun (or more precisely, modifies a *PRO*), and it has another phrase as adjunct. Thus, in (304), *te* [*PRO*] is the subject of the sentence, [-Q], with which the verb *igrali* agrees, and *desjat' mužčin* is an adjunct of *te* [*PRO*], which (like any other adjunct (see Chapter 1)) agrees in case with its subject. Notice that although adjuncts agree with their subjects in case, they need not agree in number, as is shown by an example from Crockett (1976:144):

(306)

Dešěvoe[sg] syr'ë[sg] — otxody[pl] promyšlennosti —  
Cheap raw materials — industrial waste —

samo[sg] šlo v ruki  
came into (his) hands by themselves.

This allows the discrepancy in number found in (301).

This analysis of constructions with *te* is consistent with the intonation patterns of such phrases, where there may be a pause separating *te* from *desjat' mužčin*.

Since the subject of (307) is *te* [*PRO*] ([-Q]),<sup>60</sup> we would expect that extraposition would be ruled out:

(307)	Te	pjat'	čelovek	prišli.
	Those(NOM)	5	people(GEN,pl)	came(pl)
(308)	*Prišlo		te(x)	pjat' čelovek.
	(There) came(N,sg)		those(NOM/ACC/GEN)	5 people(GEN,pl)

And since subjects cannot be marked genitive unless extraposed, we also expect, and find, that (309) is bad:<sup>61</sup>

(309)	*Tex	pjat'	čelovek	prišli.
	Those(GEN)	5(NOM)	people(GEN)	came(pl)

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60. This being the unmarked value of the feature, and *te* is presumed to be semantically incompatible with any other.

61. Sentences ((307), (308) and (309) are from Babby (1980-a:fn. 3, Chapter 2), who uses them to argue that *pjat' mal'čikov* in (267) must be the subject. However, the current analysis has no problem explaining the unacceptability of (308) and (309).

## 2.5 DISAGREEMENT ABOUT NON-AGREEING PHRASES

It has been argued that non-agreeing numeral phrases (as in (267)) should be considered to be subjects, and that subject-verb agreement is optional, and correlates with casemarking<sup>62</sup> or definiteness<sup>63</sup> or concord (that is, agreement within an NP). Support for the current analysis is provided by syntactic evidence that these non-agreeing QP's are not subjects. In fact, there is evidence which parallels the evidence presented to support the claim that the genitive phrases in negative sentences are not subjects: agreement, participial clauses, reflexives, word order, and a constraint against the occurrence of these phrases with transitive verbs.

### 2.5.1 Agreement

Again, *if* our analysis of agreement is correct, the lack of subject-verb agreement indicates the lack of a subject. Thus, the failure of the verb in (267) to agree with *pjat' mal'čikov* would show that *pjat' mal'čikov* is not the subject.

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62. See Corbett (1979:65), e.g..

63. See Revzina and Revzin (1973:21).

### 2.5.2 Gerunds

Since adverbial participles require subject controllers, a sentence without an available subject controller would be ungrammatical. Thus, the ungrammaticality of (311) [contrasted with the grammaticality of (310) and (312)] suggests that the italicized phrase is not a subject:

(310)

*Pjat'*     *mal'čikov*                                     *ušlo.*  
5(NOM) boys(GEN)                                     left(N,sg).

(311)

?\**Končiv*             *rabotu,*             *pjat'*     *mal'čikov*     *ušlo.*  
Having-finished work(ACC),     5     boys(GEN) left(N,sg)

This is in contrast with the italicized phrase in (312):

(312)

*Končiv*             *rabotu,*             *pjat'*     *mal'čikov*     *ušli.*  
Having-finished work(ACC),     5     boys(GEN) left(pl)

Where the italicized phrase is acceptable as a controller (as in (312)), it is necessarily a subject, and the verb will obligatorily agree with it. In (311) the lack of agreement and the unacceptable control relation follow from the fact that *pjat' mal'čikov* is simply *not* a subject.

### 2.5.3 Reflexives

Non-agreeing numeral phrases make poor antecedents for reflexives. Compare:

(313)

<i>Pjat'</i>	<i>mal'čikov</i>	<i>smotreli</i>	<i>na</i>	<i>svoi</i>	<i>kartiny.</i>
5	boys(GEN)	looked(pl)	at	their[REFL]	paintings.

(314)

<i>*Pjat'</i>	<i>mal'čikov</i>	<i>smotrelo</i>	<i>na</i>	<i>svoi</i>	<i>kartiny.</i>
5	boys(GEN)	looked(N,sg)	at	their[REFL]	paintings.

The inability of *pjat' mal'čikov* to serve as a reflexive antecedent in (314) is sufficient to demonstrate that it is not a subject. (The fact that it is not a subject also explains why it does not trigger verbal agreement.)

Sentence (315), however, is perfectly acceptable, since the reflexive pronoun is not used.

(315)

<i>Pjat'</i>	<i>mal'čikov</i>	<i>smotrelo</i>	<i>na (ix)</i>	<i>kartiny.</i>
5	boys(GEN)	looked(N,sg)	at (their[ - REFL])	paintings.

### 2.5.4 Word Order

Again, as has been noticed by others,<sup>64</sup> the most natural word order for these

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64. OTHERS: Babby (1980-a), Pesetsky (1981-a), Revzina and Revzin (1973), Corbett (1979), etc..

sentences would have the non-agreeing numeral phrase be post-verbal, but the agreeing phrase pre-verbal.

(316)

Prišlo mnogo detej.  
 (There) came(N,sg) many children(GEN(pl))

(317)

Mnogo detej prišli.  
 Many children(GEN,pl) came(pl)

### 2.5.5 Transitivity

If this analysis of non-agreeing numeral phrases is correct, then we would also expect that such phrases could not be found with transitive verbs, for the same reason that (232) was excluded: the principle of function - argument biuniqueness requires a verb to have no more than one object. Indeed, this is a correct prediction for non-agreeing numeral phrases, as was observed by Pesetsky:

(318)

\*Pjat' čelovek čitalo knigu.  
 5 people(GEN) read(N,sg) book(ACC)

By the current analysis, these are the *same* observations as those in Section 2.2: the genitive phrases and "non-agreeing numeral phrases" are objects, resulting from application of extraposition.

### 2.5.6 Numeric quantifiers and agreement features

It has long been recognized that numerals above 4 have lost the inherent number and gender they once had.<sup>65</sup> Although *pjat'* was at one time a full-fledged feminine singular noun, and could occur in all cases followed by a genitive NP, it has now lost its nominal status completely in all but the nominative and accusative cases (patterning with the adjectival 2, 3, and 4 in the oblique cases). Babby (1982:17) gives the following example from Old Russian:

(319)

Ta	<i>pjat'</i>	[staryx	ženščin]	prišla.
NOM,f.,sg.	NOM,f.,sg.	[	GEN,pl.	]
That	five	[old	women ]	came

The numerals 2, 3, and 4, which were adjectives in Old Russian, changed in the reverse way. They became more nominal, but only in the nominative and accusative. Thus, the numerals 2, 3, and 4, and those 5 and above are, as it were, converging on a status which is intermediate between those they occupied in Old Russian: nominal nominative and accusative forms; but adjectival oblique forms.

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65. See Vinogradov (1947:291), for example, who also cites N.I. Greč (1834:100) as saying that the numerals 5 through 10 (and higher numerals ending in those) "rodov i čisel ne imejut." The same point has been made by many others.

In the process of becoming less nominal, *pjat'* seems to have lost the agreement features (feminine, singular) it once had. It now appears to be genderless and plural. Lacking gender specification, the gender of the NP may percolate up to the phrasal node.<sup>66</sup> So, for example,

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66. The ability of features to percolate up from the NP entails that the phrase will satisfy the same selectional restrictions as the NP would in isolation. This has led some people to claim that the NP is in fact the head. As we have already seen, though, the government relation which holds between *pjat'*, which bears the case assigned to the head, and the following NP (which is genitive) indicates the reverse.

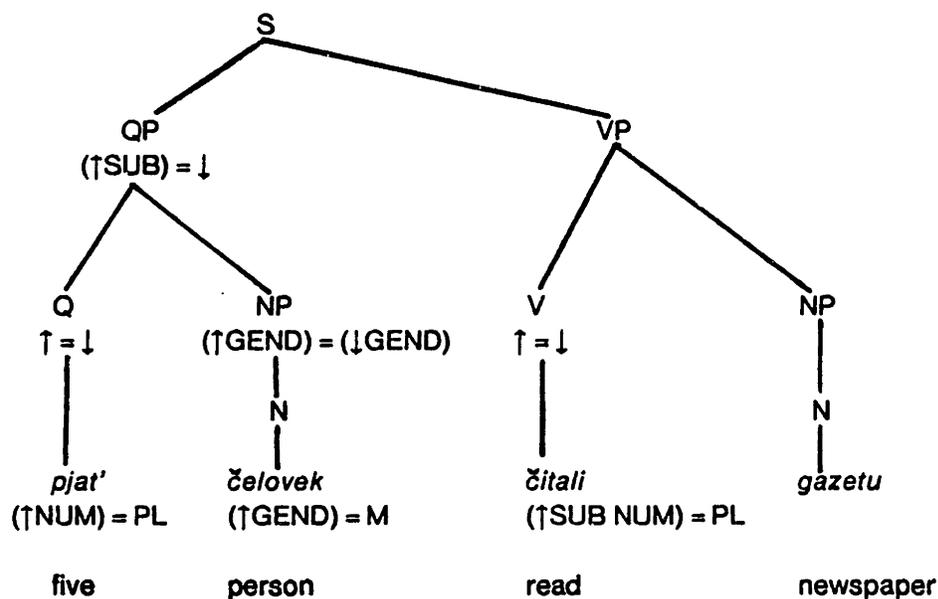
One might consider that *pjat'* has lost its number feature as well, which it receives from the following NP. There does not appear to be any good reason to assume this, however. Therefore, we choose the more unmarked option, that the plurality of the phrase is a consequence of the plurality of the head. It has been suggested that the 3rd person, neuter, singular form of the verb that may occur with phrases such as *pjat'* ... should be attributed to the unspecified features of the head *pjat'*. However, the current analysis does not require such an explanation for the neuter, singular verbal ending — which is a direct consequence of the absence of the subject once it has been extraposed. (This is an advantage of the present approach, since the agreement with an unspecified head *pjat'* runs into problems in excluding other 3rd person, sg, neuter modifiers:

(i) Sem' mal'čikov                      vesëlye [NOM,pl]. (= Cor,3b)  
     \*vesëloe [NOM, N, sg].

7 boys(GEN,pl) (are) cheerful

Therefore, we find no reason to claim that *pjat'* lacks number.)

(320)



In their transition to nominal status, the once-adjectival 2, 3, and 4 still retain some of their adjectival properties. The numeral '2', for example, still maintains a gender distinction between the feminine *dve* and the non-feminine *dva*.<sup>67</sup> The numerals 2, 3, and 4 also appear to be sensitive to animacy, unlike numerals greater than or equal to 5. That is, like almost all plural or non-feminine nouns and adjectives, the animate accusative merges with the genitive case form, while the inanimate accusative merges with the nominative. Consider:

---

67. For details of usage, see Crockett (1976:114-115).

'boy'		'table'	
<u>mal'čik</u>	NOM	stol	NOM
mal'čika	ACC	<u>stol</u>	ACC
mal'čika	GEN	stola	GEN

As mentioned in Chapter 1, this can be represented by lexical redundancy rules. In the appropriate declension classes, ACC will merge with NOM. [This is the case for non-feminine, inanimate nouns and adjectives, and numerals greater than 4]. In other declension classes [animate non-feminine and/or plural nouns and adjectives, and the numerals 2, 3, and 4], the ACC will merge with GEN.

Now, recall that the paradigm for the numerical quantifiers 2, 3, and 4 is defective, having no genitive form. The present analysis entails that it would also have no animate accusative form. This is the case: there is no form of '2' that will make the following sentence grammatical:

(321)  
 Ja videla [\_\_\_\_\_ mal'čika]<sub>OP</sub>  
 I(NOM) saw boys(GEN,sg)

although the following sentence is fine:

(322)  
 Ja videla [dva stola]<sub>QP</sub>.  
 I(NOM) saw 2(ACC) tables(GEN,sg)

However, the verb could take an animate NP as an object, as in

(323)  
 Ja videla mal'čikov.  
 I(NOM) saw boys(ANIMATE ACCUSATIVE = GENITIVE)

This NP can then take a modifier agreeing in case. Recall that the *adjectival* forms of 2, 3, and 4 contain a genitive (and therefore, an animate accusative) form:

(324)  
 Ja videla [dvux mal'čikov]<sub>NP</sub>.  
 I(NOM) saw 2(GEN) boys(GEN,pl)

[As Borrás and Christian (1971:391) point out, however, in spite of the prescriptive requirement that 2, 3, and 4 use the genitive for animate accusative, "departures from the norm (i.e. *Ja sosčital četyre soldata* [I(NOM) counted 4(ACC = NOM) soldiers(GEN,sg)],

etc.) are not uncommonly met with in colloquial speech." ]<sup>68</sup>

This makes an interesting prediction about extraposition. Since only QP may extrapose (in the absence of negation), only [*dva mal'čika*(GEN,sg)]<sub>QP</sub>, but not [*dvux*(GEN) *mal'čikov*(GEN,pl)]<sub>NP</sub>, would be acceptable as an extraposed subject (i.e. an object).

(325)

\**Dvux mal'čikov*            *prišlo*.  
2(GEN) boys(GEN,pl)    came(N,sg)

However, *dva*, preferably an inanimate form (although exceptions to this occur, as mentioned above), is poorly compatible with the accusative *mal'čika*. This explains why (326) is strongly preferred to (327):

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68. Numerals above 20 ending in 2, 3, or 4 are, however, viewed as sufficiently nominal to be more like 'pjat', and do not distinguish between animate and inanimate accusative forms. As Borrás and Christian (1971:391) point out, the correct form is:

(i) *Ja sosčital dvadcat' četyre soldata.*

I counted [24(ACC = NOM) soldiers(GEN,sg)]<sub>QP</sub>

However, here again there seems to be confusion, since (ii) is also encountered colloquially:

(ii) *Ja sosčital dvadcat' četyrëx soldat.*

I counted [24(ACC = GEN) soldiers(GEN, pl)]<sub>NP</sub>

- (326) Dva mal'čika prišli.  
2 boys(GEN,sg) came(pl)
- (327) ?? Dva mal'čika prišlo.  
2 boys(GEN,sg) came(sg)

We also find the predicted contrast between (328) and (329), in which the NP is inanimate.

- (328) ?? Prišlo dva mal'čika.  
Came(N,sg) 2 boys(GEN,sg)
- (329) Prošlo dve minuty.  
Passed(N,sg) 2(F) minutes(GEN,sg)

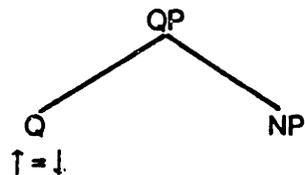
Sentences involving extraposed 2, 3, and 4, are much better when inanimates are involved. To my knowledge, this has not been clearly recognized in the literature. Although grammar books (e.g. Pul'kina and Zakhava-Nekrasova (nd.:473)) state that agreement is preferred with 2, 3, and 4 (unlike 5 and above), they do not make explicit the contexts where the non-agreeing form is perfectly acceptable; no less why such an animacy contrast should be found. In Russian, animacy only affects casemarking choices in object position. The sensitivity of extraposed numeral phrases involving 2, 3, and 4 to animacy is further indication that they are in fact objects.<sup>69</sup>

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69. The existence of extraposed QP phrases with *dva* and an animate noun does not contradict the current analysis, since this reflects confusion about the status of *dva* with respect to animacy (as is found in colloquial speech with clear direct objects as well, as in the Borrás and Christian examples cited two pages back and in the previous footnote). This confusion is consistent with the lack of stability of the numeral system in the course of evolution of the language.

Notice that when *dva* is functioning as the head, it occurs in the following configuration:

(330)



By the  $\uparrow = \downarrow$  equation (discussed in the Introduction), we are assured that, when the QP occurs in object position, the value of the object's animacy will necessarily be the same as that of *dva*'s animacy. If we assume that the object is assigned the value [+ ANIMATE] through a selectional requirement of the verb, (e.g. 'to kill': ( $\uparrow$ OBJ AN) = +), and that animacy is the marked value of the feature, it would be reasonable to think that in the *absence* of such a requirement for animacy, in a context where animate beings were not considered in their capacity as animate beings, but are objectivized somehow, that the inanimate accusative *dva* would be significantly more acceptable. Such is in fact the case, as is shown in Mel'čuk (1980), where a collection of very interesting data is presented. Consider, for example:

(331)

Vožd' možet imet' celyx četyre ženy, a rjadovoj voin — tol'ko dve.

(The) leader can have in all 4(INAN. ACC = NOM) wives(GEN,sg), but the ordinary soldier — only 2(INAN. ACC = NOM)

Another of Mel'čuk's examples, where animate beings are used as (inanimate) units of barter:

(332)

Zaplatil za ètu jurtu

tri ovcy /\*trëx ovec.

(He) paid for this hut

3(INAN. ACC = NOM) sheep(ACC,pl) /  
\*3(AN. ACC = GEN) sheep(GEN,pl)

Thus, since the NP is not the head, an inherent feature of animacy (of *žena* above, for example) will not be in conflict with the phrasal node, which is, presumably, unspecified for animacy.<sup>70</sup>

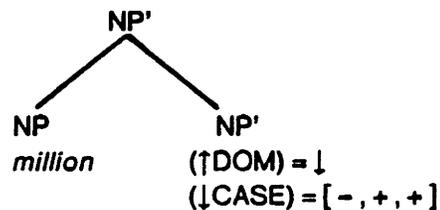
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70. See Mel'čuk for the data involving animacy. Although Mel'čuk does not account for the contrasts in terms of selectional requirements, it is believed that the current approach can explain the puzzling data he presents.

### 2.5.7 One million

There is another type of phrase expressing quantity which is found in Russian and deserves mention here. Unlike *pjat'*, which, although a noun, lacks complete specification of features, there exist in Russian words like *million* which are complete in this regard. *Million* is masculine, singular. It is, in fact, not a quantifier at all, although it does occur with the following NP in the genitive plural. Unlike true quantifiers, it may occur *in any case* followed by a genitive plural NP.<sup>71</sup> We propose that words such as *million* occur in the following configuration:

(333)



Unlike true numerals, *million* occurs with the form *ljudej* rather than *čelovek* in the genitive plural. Thus:

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71. It has a similar status to the French phrase *un million de*, which is more nominal than other French numerals: *cinq livres* (five books) vs. *un million de livres* (a million of books).

(334) a. ... pjat' čelovek ...

b. ... million ljudej ...

... 5/1,000,000 people(GEN,pl) ...

The case of *tysjača*, '1000', is somewhat problematic, since, although it was originally a non-quantifier like *million*, it is becoming increasingly felt as a numeral. When used as a noun, like *million*, it has a rather figurative meaning of 'a large number of' (as pointed out by Borrás and Christian (1971:392-393):

(335)

Škola tysjač'ju nitej soedinena s žizn'ju.

'The school is linked to life by a thousand(INS) threads(GEN,pl).

(from the press, cited by B. and C., p. 392)

However, there is a growing tendency to treat *tysjača* like a real numeral (equal to precisely 1,000). In such cases, *tysjača* is morphologically distinct, being reinterpreted as analogous to *pjat'*. Like other numbers, it may then only appear in the nominative and accusative as the head of the phrase, while appearing in the oblique agreeing form otherwise. Another example from Borrás and Christian (1971:392):

(336)

Ne govorja o tysjače rubljax, kotorye on byl dolžen ej.

Not to mention the 1,000(LOC) roubles(LOC) he owed her.

(from B. and C., p. 392)

Interestingly, by analogy with the instrumental form of *pjat'* [*pjat'ju*], there has appeared a second form for *tysjačej'* (the genitive of *tysjača*): *tysjač'ju*.<sup>72</sup> The numeral-like form is required in the use of *tysjača* as a numeral (that is, when the following NP is also in the instrumental). The numeral system in Russian appears to be reorganizing in general.

### 2.5.8 Conclusion

Therefore, we have seen that a simple rule of extraposition unifies two apparently different cases: that of quantifier phrases which do not exhibit agreement, and that of apparent genitive subjects of negative sentences. This rule then permits a unified analysis of genitive phrases (both objects and apparent subjects) in negative sentences.

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72. This was pointed out by Borrás and Christian.

## 2.6 SUMMARY

As we have seen, the term 'genitive of negation' is used to refer to the use of the genitive in two positions:

### CASE I

While affirmative sentences normally have accusative direct objects, the direct objects of negative sentences may be marked with the genitive case.

(337)

Ja	polučil	<i>pis'mo.</i>
I(NOM)	received(M,sg)	letter(ACC).

(338)

Ja	ne polučal	<i>pis'ma.</i>
I(NOM)	NEG received(M,sg)	letter(GEN)

### CASE II

The genitive is also found in negative sentences:

(A) in alternation with nominative subjects of passive sentences

(339)

Ni <i>odin</i>	<i>gorod</i>	ne byl	vzjat	Napoleonom.
not one(NOM)	city(NOM)	NEG was(M,sg)	taken(M,sg)	Napoleon(INS)

(340)

Ni <i>odnogo</i>	<i>goroda</i>	ne bylo	vzjato	Napoleonom.
Not one(GEN)	city(GEN)	NEG was(N,sg)	taken(N,sg)	Napoleon(INS)

( = Ch, 2.21-a,b).

and

(B) in alternation with nominative subjects of a certain class of non-agentive, intransitive verbs.

- (341)            *Griby*                    *zdes'*            *ne rastut.*  
 Mushrooms(NOM) here            NEG grow(pl)
- (342)            *Gribov*                    *zdes'*            *ne rastët.*  
 Mushrooms(GEN) here            NEG grow(3,sg)

( $\simeq$ B, 4-a,b)

As has already been mentioned, when the genitive appears to alternate with a subject, it does not induce subject - verb agreement, but rather the verb appears in the 3rd person, singular, neuter form.

Ideally, any explanation of these facts would unify the two cases. One line would be to take the alternation between NOM/GEN in subject position and ACC/GEN in object position as sufficient evidence for assuming that genitive subjects and objects exist in Russian, and to try to explain *why* subject and object positions should be so privileged.

The present analysis, however, makes the claim that II is in fact a special case of I. Case II is reduced to Case I when it is shown that, like the genitive NP's of Case I, the relevant NP's of Case II are in fact objects, and thus fall under Case I directly. This claim receives support from the facts of reflexivization, adverbial clauses, and agreement.

If it is correct that the genitive NP's in Case II are not subjects, and are marked with the genitive because they appear in object position,<sup>73</sup> then we find a striking parallel with

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73. Note that scrambling, an operation on phrase structure rules, has the automatic consequence that the case annotations are moved with the constituent to which they are attached. Thus scrambling rules do not affect casemarking.

the extraposition constructions in English and French (with *there* and *il* respectively). It is interesting that the processes of *there* insertion, *il* extraposition, and extraposition in Russian, all obey very similar restrictions:

- (1) They cannot apply to subjects of transitive verbs.
- (2) The subject involved must be in some sense indefinite.

The first restriction follows from the formulation of the rule of extraposition, and more specifically from the principle of function - argument biuniqueness. The criteria for satisfying the second restriction are somewhat different from language to language, but the general nature of the restriction is the same. In Russian, it was proposed that the feature Q (motivated for casemarking of direct objects) is the relevant determining factor.

## PART II: MORE ON THE GENITIVE OF NEGATION

In this part, we will consider the consequences of the present analysis in more detail. In particular, we will consider: (1) other types of negation in Russian, (2) genitive of negation found within embedded clauses, and (3) the relationship between the interpretation of genitive objects and the scope of negation. Then, in Chapters 3 and 4, we will go on to consider alternative approaches to the genitive of negation and, more generally, case, in Russian.

## 2.7 OTHER TYPES OF NEGATION

### 2.7.1 *Net*

The present analysis suggests two sources for the genitive marking found in negative sentences: the sentential negation will optionally contribute to the object's genitive casemarking, while the presence of a null quantifier requires that the object be genitive. This would predict that if both sources were present, the genitive marking would be obligatory (since the option of having an accusative object of a negative sentence is overridden by the quantifier's case requirement).

Given this, we can explain the contrast between the usual cases of sentential negation, and cases involving *net* ('there is no'), where only the genitive is acceptable.

(343)

Ja	ne	videl	<i>Mašu.</i>
I	NEG	saw	<i>Maša(ACC)</i>

(344)

Ja	ne	videl	<i>Maši.</i>
I	NEG	saw	<i>Maša(GEN)</i>

(345)

* <i>Ēto</i>	<i>net.</i>
This(ACC)	NEG
'There isn't (any of) this'	

(346)

<i>Ētogo</i>	<i>net.</i>
This(GEN)	NEG
'There isn't (any of) this'	

We need only assume that *net* subcategorizes for a null quantifier of its object. This is, moreover, compatible with the meaning of *net*, which contains some sort of implicit

(existential-like) quantification. (The semantics of this null quantifier is beyond the scope of this discussion; no claim is being made that this quantifier is *the* existential quantifier.)

The observation that these sentences involve existential quantification, and that this is apparently responsible for the genitive marking, is not new. Others have proposed similar explanations. For example, Dahl (1969) discusses the logical representation of these sentences, and concludes that "the genitive is used when there is a negated existential quantifier in the base structure." (See discussion in Chvany (1975:139)). Dahl, however, fails to extend his account to the genitive occurring in other examples of sentential negation. This next leap is taken by Pesetsky, who attempts to explain all instances of sentential negation genitive casemarking by the presence of a null quantifier. (His approach will be considered shortly.) At the other end of the spectrum are those who have analyzed all instances of genitive of negation as resulting from sentential negation. (See Chvany for an analysis along those lines.)

The present analysis can account for the generalizations captured by both approaches.

The assumption that these existential phrases involve null quantification is consistent with the previous observation that second genitive forms, which do not normally occur with the genitive of negation (but require a quantificational expression) are found with *net*.

- (347)  
 Est' čaj.  
 is tea(NOM)  
 'There is tea'
- (348)  
 \*Est' čaju.  
 is tea(GEN-2)  
 'There is some tea.'
- (349)  
 Net čaju.  
 isn't tea(GEN-2)

The preceding sentence is found in Jakobson (1935:62), as is the following example:

- (350)  
 Dolgo ne bylo snegu.  
 (For a) long time NEG was(N,sg) snow(GEN-2)  
 'There hasn't been snow for a long time.'

Null quantifiers are not permitted in subject position (as was mentioned already in footnote 9, and will be discussed further in Chapter 3), which explains the unacceptability of (348). However, with *net*, the argument functions as object, and therefore the null quantifier is acceptable (and in fact subcategorized for). The occurrence of the genitive<sub>2</sub> in (350) is correctly predicted by the current analysis.

This is not meant to imply that there is nothing idiosyncratic about *net*. With the existential *byt'*, extraposition occurs if and only if the predicate is negated. Thus the affirmative *est'* takes a subject, while the negative *net* takes an object, on the current analysis.

(351) Knigi est'.  
 Books(NOM) est'  
 'There are books'

(352) Net knig.  
 Net books(GEN)  
 'There are no books'

This is true of the existential *byt'* in all tenses, although *net* is reserved for the present tense. Thus:

(353) Sneg budet.  
 Snow(NOM) will-be(3,sg)  
 'There will be snow'

(354) Vremeni ne budet.  
 Time(GEN) NEG will-be(3,sg)  
 'There won't be time'

The verb *byt'* is exceptional in another respect as well. Although the above sentences show the negative form of *est'* as *net*, in non-existential uses the negative form is simply *ne* (*est'*). As is well known, there are several uses of the verb *byt'* (as copula, tense-marker, raising verb, and existential verb).<sup>74</sup> Chvany, in her study of the many types of *be* constructions, concludes that there are fundamentally two different types of verbs, which she distinguishes: "*be*-sentences with underlying  $\exists$ ," and "*be*-sentences without  $\exists$ ." That is, there appear to be two distinct lexical forms of *byt'*: an existential and

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74. See Chvany (1975) for discussion.

a non-existential form. Of these, only the existential form subcategorizes for a null quantifier and requires extraposition in the negative. Since the form *net* exists only for the present, how can we tell that there are necessarily two forms of *byt'* distinguished for the other tenses as well? Even where the forms of *byt'* are homophonous, the case marking and agreement still allow them to be distinguished. Compare:<sup>75</sup>

(355)

On tam byl.  
He(NOM) there was(M,sg)  
'He was there'

(356)

Ego tam ne bylo.  
He(GEN) there NEG was(N,sg)  
'He wasn't there'

(357)

On ne byl umnym.  
He(NOM) NEG was(M,sg) clever(INST)

(358)

\*Ego ne bylo umnym.  
He(GEN) NEG was(N,sg) clever(INST)

The existential *byt'* subcategorizes for a theme argument. (Chvany points out that this use of *byt'* normally requires a non-agentive argument.) It is in this case that extraposition is required in the negative, and blocked in the affirmative. However, the non-existential *byt'* may occur (in similar contexts) with an agentive argument. When *byt'* appears with this subcategorization, extraposition is not only not obligatory, it is not possible. As we have

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75. The impossibility of the genitive of negation with non-existential uses of *byt'* was observed by Chvany (1975).

already discussed, extraposition of agentive arguments is impossible, since the pairing of 'agent' to 'object' is ruled out. Thus, in affirmative sentences, either the agentive or non-agentive interpretation is allowed. When used in the agentive sense, *byt'* is often glossed as 'go'.<sup>76</sup> However, the conditions on extraposition (admittedly idiosyncratic) restrict the possible interpretation of negative sentences, and thereby disambiguate them. As seen in the following examples from Chvany, the extraposed (existential) version is necessarily non-agentive, while the non-extraposed one is obligatorily agentive:

(359)

(K sožaleniju) menja ne budet na vašem koncerte. (= C, 4.47-a)  
 (To (my) regret), I(GEN) NEG will-be at your concert.

(360)

\*Menja naročno ne budet na vašem koncerte. (= C, 4.47-b)  
 I(GEN) purposely NEG will-be at your concert.

Contrast:

(361)

?K sožaleniju ja ne budu na vašem koncerte. (= C, 4.48-b)  
 To (my) regret, I(NOM) NEG will-be at your concert.

(362)

Ja naročno ne budu na vašem koncerte. (= C, 4.47-b)  
 I(NOM) purposely NEG will-be at your concert.

The expression *naročno* ('purposely') is acceptable only with agentives, and these agentives are never extraposed.

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76. See discussion in Chvany (1975:157).

This explains the following contrast:

(363)

On ne byl v Kieve.

He(NOM) NEG was(M,sg) in Kiev.

(364)

Ego ne bylo v Kieve.

He(GEN) NEG was(N,sg) in Kiev.

As Chvany points out (in different terms), the existential reading is precluded in (363) since extraposition, which would have been required for that reading, has failed to occur. Thus it takes on the meaning of 'He did not go to Kiev' rather than that of (364): 'He was (physically) not in Kiev'.

Only the present, but not the past and future tenses, distinguishes forms for the two distinct *byt*'s. The non-existential form of the present tense is normally phonologically null, but on the equative reading (but not on the tense-marker one), it is possible to use the form *est'* for emphasis:

(365)

Lingvistika (*est'*) nauka.

(= Ch, 2.3)

Linguistics *est'* science.

'Linguistics is a science.'

(366)

Lingvistika ne (*est'*) nauka.

(= Ch, 2.3)

Linguistics NEG (*est'*) science

'Linguistics is not a science'

When the emphatic *est'* is chosen, though, it is still non-existential. Notice that *net* is impossible in a sentence like (366).

While the existential forms in the present tense are *est'* and *net*, the equative reading has a present tense form which is (normally) phonologically null.

(367)

On — v komnate.  
He(NOM) — in room(LOC)

(368)

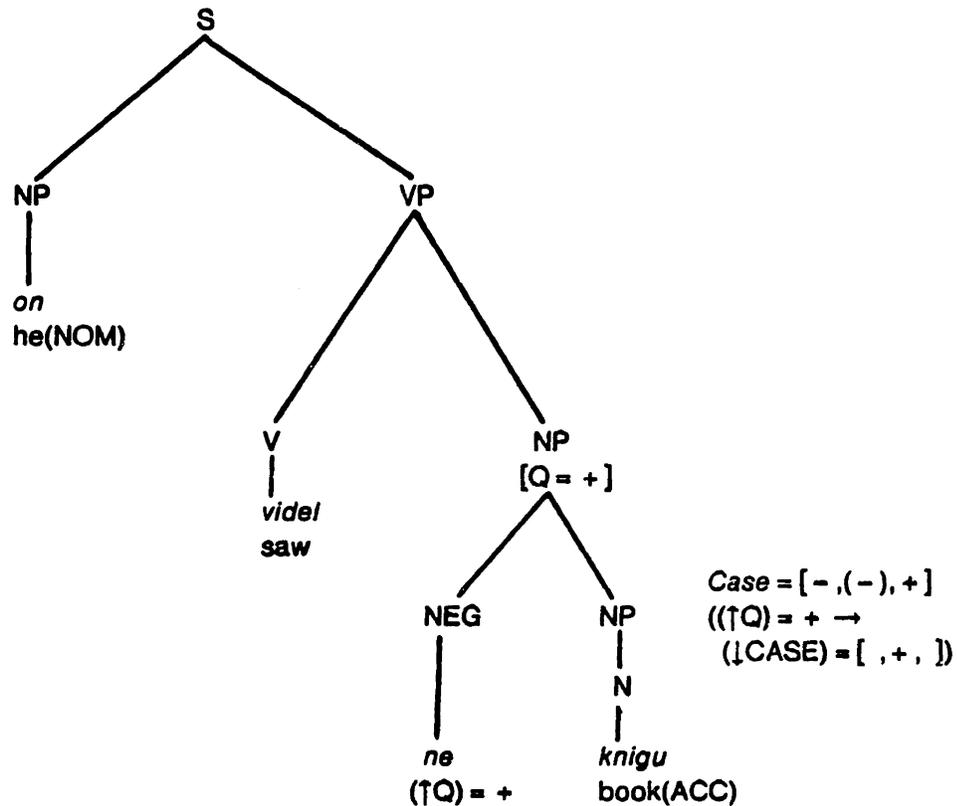
On            ne v komnate.  
He(NOM) NEG in room(LOC)

Thus we find two distinct lexical forms of the verb *byt'*. Furthermore, once such a distinction is established, the idiosyncratic behavior of *est'* follows as a consequence of a requirement that the existential form of *byt'* undergoes extraposition when and only when negated. [When (and only when) it has an object argument, this argument contains a null quantifier.] This lexical idiosyncrasy is compounded by the existence of a special negative present tense form for the existential *byt'*.

### 2.7.2 Constituent Negation

Thus far, we have discussed only sentential negation. In the PS expansion, *ne* is accompanied by an equation:  $(\uparrow Q) = +$ . This feature is promoted up to the VP, and therefore the object's mother constituent (the VP) was  $+Q$ . Suppose that the negation is internal to the object, as in (369):

(369)



Here, since the object is not the head of VP, its features will not be promoted upward. Therefore, the object's mother's  $Q = -$ , and the accusative case is, correctly, predicted for *knigu*. The principle of percolation of features to their heads ensures that only negation contained immediately under the VP will contribute the Q feature to the VP, and it is the VP — as the object's mother constituent — whose features are relevant to the object's casemarking.

The fact that the so-called genitive of negation is totally impossible with constituent negation has been observed by many people,<sup>77</sup> and fits in quite naturally with the current analysis.

## 2.8 LONG-DISTANCE PHENOMENA

"Voz'mëm, naprimer, sledujuščee predloženie: ja ne mogu vam pozvolit' načat' pisat' stixi, a už konečno ne stixov. Neužto èlektričeskaja sila otricateľ'noj časticy dolžna projti črez vsju ètu cel' glagolov i otozvat'sja v syščestvitel'nom? Ne dumaju."

— Puškin<sup>78</sup>

"Let us take, for instance, the following sentence:

*ja ne mogu vam pozvolit' načat' pisat' stixi* [acc.]

[*I cannot permit you to begin to write poetry*],

and surely not *stixov* [gen.]. Is the electrical force of the negative particle really to go through this whole chain of verbs and show up in the noun? I don't think so."

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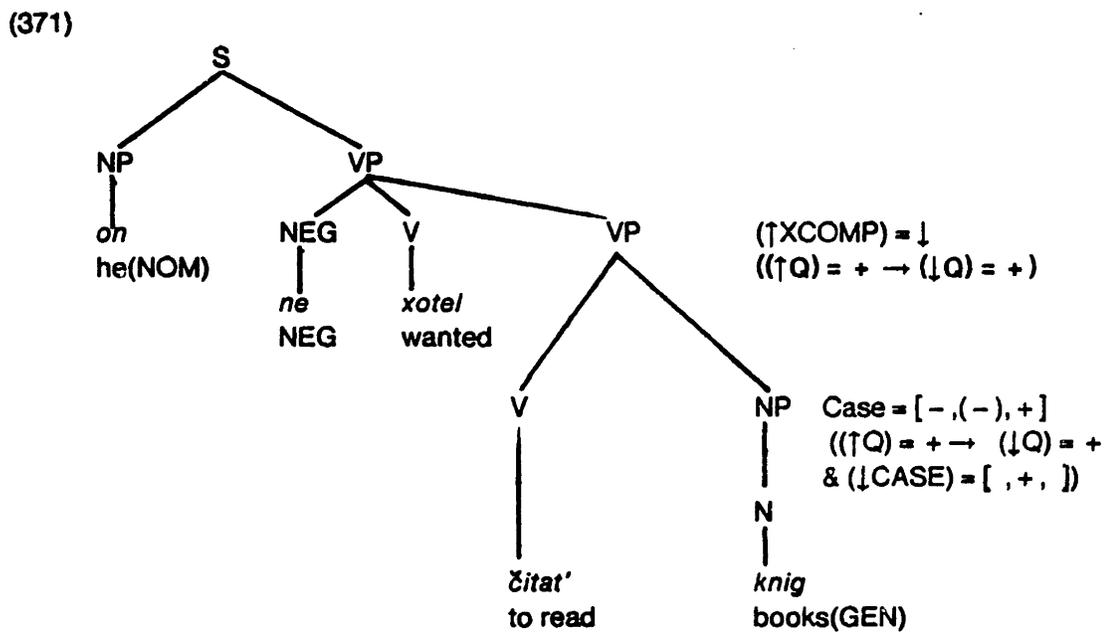
77. See Peškovskij (1956:367). Many others have discussed this observation (including Chvany (1975:156) and Babby (1980-a:105ff.)).

78. Cited by Chvany (1975:130), originally from *Polnoe sobranije sočinenij XI*, p. 147; translation Chvany's. Puškin's description captures the spirit of the present analysis, with talk of the electrical force of the negation going through (or not going through) other elements on its way down to the phrase it is to affect.

We find, however, that objects of infinitives which are embedded beneath negated verbs may appear in the genitive case.

(370)  
 On            ne    xotel      čitat'    knig.  
 He(NOM)    NEG wanted    to read    books(GEN)

This may be generated by allowing the Q feature of the matrix verb to be shared by complements. (See equation in boldface below.)



In fact, the equation in boldface may be extended to all major sentential constituents, except to closed complements (COMP's). The consequences of allowing the feature Q to be shared by the major sentential constituents will be discussed in the next section. The fact that it may not infiltrate into COMP's explains the contrast between (370) above and (372):

(372)

*Ja	ne	ugovorila	Natašu	čitat'	knig.
I(NOM)	(NEG)	persuaded	Nataša(ACC)	to read	books(GEN)

As argued in Chapter 1, Russian does not permit object control and thus, the embedded clause must be a COMP rather than a VCOMP. Thus the boldfaced equation in (371) will not apply.

This sentence provides strong support for the distinction between the partitive genitive (whose genitive marking results from the null Q) and the legitimate genitive of negation (whose casemarking results from the sentential negation within the proper syntactic domain). Consider (373):

(373)

Nataša	ne	čitala	knig.
Nataša(NOM)	NEG	read	books(GEN)

An analysis which suggested that the genitive of *knig* is due not to the presence of the negation, but rather to an implicit null Q (with the meaning 'any') would fail to explain why

(370) and (374) are acceptable, while (372) is not<sup>79</sup> :

(374)

Ja ugovorila Natašu ne čitat' knjig.  
 I(NOM) persuaded Natašu(ACC) NEG to read books(GEN)

Surely, no semantic reason exists precluding a sentence having the meaning of (375).

(375) I did not persuade Nataša to read any books.

Yet the genitive is unacceptable unless it is within the scope of sentential negation.

It has previously been suggested that the possibility of finding the genitive of negation in a lower clause than that of the negation itself, as in (370) above, was limited to

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79. At least for most speakers.

verbs of a small semantic class.<sup>80</sup>

However, it seems generally to be possible to find such embedded genitive of negation with all verbs of subject control. Since Russian has the very popular option of avoiding the ambiguity inherent in such sentences by using the constituent negation discussed in the previous section, such sentences may be a little bit awkward, but given an appropriate context (in which the lower NP is within the scope of negation), there is nothing wrong with the genitive casemarking on the object.

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80. See, for example, Timberlake(1975:128), who suggests that "the degree to which an infinitive behaves as an independent predicate depends in part on the semantic properties of the governing predicate; infinitives are more closely linked to modals and auxiliaries than to other governing verbs. The use of the genitive of negation differs accordingly." He finds a contrast between (i) and (ii):

(i) Ja ne umeju pisat' stixov.  
I NEG know-how to-write poetry(GEN)

(ii) ?Ja ne obeščaju pisat' stixov.  
I NEG promise to-write poetry(GEN)

However, it was argued in Chapter 1 that *obeščat'* differs from verbs like *umet'* in its control properties, not just its semantics, since it may (but need not) occur with subject control. Other examples provided by Timberlake may also be accounted for in terms of the difference between open and closed complements, for example the ungrammaticality of:

(iii) \*Ja ne mogy Vam pozvolit' načat' pisat' stixov.

I, NEG can [ [ ], permit you(DAT) [PRO begin to-write poetry(GEN)]<sub>COMP</sub> ]

[This is the example from Puškin, via Ravič.]

(376)

On ne načal čitat' *knigi*; on načal čitat' stat'ju.

He NEG started to-read *book*(GEN,sg); he started to-read article(ACC).

(377)

On ne staralsja najti *žurnala*; on staralsja najti knigu.

He NEG tried to-find newspaper(GEN,sg); he tried to-find book(ACC).

(378)

On ne priexal pokupat' *moloka*; on priexal pokupat' maslo.

He NEG came to-buy milk(GEN); he came to-buy butter(ACC).

These examples are in contrast to those involving COMP's, like (374) above or (379).<sup>81</sup>

(379)

\*On ne velel Ivanu čitat' knig.

He NEG made Ivan(DAT) read books(GEN)

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81. It should be noted that *ni*, the negative intensifying particle, can extend the range of scope. Although it is not sufficient to constitute negation by itself (it must cooccur with *ne*), it will be interpreted as being within the scope of the higher clause's negation, and may contribute the feature 'Q' to the embedded infinitival clause. That is, it allows (and often favors) the genitive object within a closed complement clause:

- (i) On ne velel Ivanu čitat' ni odnoj knigi.  
He NEG made Ivan(DAT) read not one(GEN) book(GEN)

The ability of *ni* to contribute the feature 'Q' itself explains the fact mentioned by Babby (1980-a:21) [and discussed by Popov (1978:16) and others], that even with objects of simple negative sentences, the presence of *ni* preceding the object strongly favors the genitive casemarking of the object.

## 2.9 SCOPE, INTERPRETATION, AND DISTRIBUTION OF [+Q]

The feature 'Q' serves to identify quantificational or negative scope. This will then permit proper interpretation of the quantifier, and therefore it is reasonable that each quantifier and corresponding 'Q' feature should be assigned a unique index. In the previous section, it was suggested that the feature '+Q' from sentential negation may spread freely within S, but may not descend into closed complement clauses. It was propagated by optional equations at the level of major sentential constituents of the form:

$$(380) \quad (\uparrow Q) = + \rightarrow (\downarrow Q) = +$$

which, in light of the indexing convention just mentioned, should now be modified to:

$$(381) \quad (\uparrow Q)_k = + \rightarrow (\downarrow Q)_k = +, \text{ for } k = \text{any index.}$$

For the rest of this discussion, however, we will omit the index.

Notice that since VP is the head of S, sentential negation will contribute the feature [+Q] to the VP, and thereby to S as well. It may then, optionally, spread to the subject. When this happens, however, the subject's casemarking remains unaffected, since subject casemarking, unlike that of objects, is not dependent on the feature [Q] (i.e. on scope relations). This is consistent with the interpretation of negative sentences. Consider the following.

(382)

Studenty            ne    pojavilis'.  
 Students(NOM)   NEG   appeared(pl)

*Studenty* is clearly the subject (as it is marked nominative and triggers verbal agreement), and therefore may be [+Q] or [-Q]. Accordingly, two readings are possible:

(383) a.

NEG                    [students appeared]  
                                   [+Q]

b.

students            NEG [appeared]  
   [-Q]

In (b), there is a definite reading, where it is predicated of (specific) students that they did not appear. In (a), *students* (being [+Q]) is included in the scope of negation. Logically, given the distributive nature of the negative operator, NEG [students appeared] is equivalent to:

(384) (NEG[students] appeared)    OR    (students NEG[appeared])

Although the interpretations of (a) subsume that of (b), only (a) is appropriate to express the situation in which no students arrived (the first disjunction in (384)).

Basically, the 'Q' feature allows the phrase to be analyzed as being within the scope of negation.

- (385) a. **studenty** = [+Q] **Studenty ne pojavilis'**.  
 b. **studenty** = [-Q] **Studenty ne pojavilis'**.

[Boldface indicates scope of negation]

In direct object position, however, casemarking distinguishes [+Q] from [-Q]

phrases:

(386)

Ja ne polučala pis'ma.  
 II NEG received letters(ACC)  
 [-Q]

Ja ne polučala pis'ma. OR  
 Ja ne polučala pis'ma.

*Pis'ma*, being [-Q], may not be included within the scope of negation.

(387)

Ja ne polučala pisem.  
 I NEG received letters(GEN)  
 [+Q]

Ja ne polučala pisem OR  
 Ja ne polučala pisem

*Pisem* is included within the scope of negation. Again, logically, the readings of (386) are included among the possible readings of (387), thus explaining the possibility of using (387) in a context where one is speaking about definitely determined letters (which were not received). Thus, the negative operator in sentences with [+Q] constituents will have broader scope, and thus these sentences will have a wider range of possible

interpretations than is found in sentences with corresponding [ - Q ] constituents.<sup>82</sup>

Under these assumptions, several interpretive conventions are conceivable. A representation might be considered well-formed on the condition that (a) unique argument(s) be marked as being within the scope of the operator. Alternatively, the scope might be wide, and the distributional nature of negation would entail that a negated proposition is equivalent to the union of the propositions containing a negated constituent. The current approach would be consistent with either type of representation.<sup>83</sup> (Such questions are beyond the scope of this analysis.)

According to the current proposal, then, the scope of negation may only affect object casemarking. This analysis differs from Babby's (1980-a:69) proposal:

In Russian, a NP in a negated sentence can be marked with the genitive case if and only if it is in the scope of negation.

although the general approach is the same:

the rule that marks a NP genitive in a negative sentence must be formulated so as to refer *directly* to the sentence's scope of negation.

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82. Pesetsky points out the difference between the interpretations of (386) and (387), but views the contrast in a different light. His view of the interpretation of these sentences will be discussed in Chapter 3.

83. Perhaps a gradual change from the latter type to the former might explain changes in usage of the genitive of negation.

The current approach permits the distinction between constituent structure and functional interpretation. Sentences which have accusative and genitive objects may share a common constituent structure, but differ only in the negative scope relations. Keil (1970) attempted to account for the scope distinctions strictly in terms of constituency: by structural differences between VP and V negation. Such differences in structure were argued against by Chvany (1975:266-267). The present analysis allows us to capture the scope relations without postulating unmotivated differences in structure.

#### *SCOPE AND THE OBJECT'S CASEMARKING*

It would now be useful to return to the criteria that have been proposed for determining the choice of the case of a direct object of a negative sentence, and see how these relate to the proposed analysis of genitive marking within the scope of negation. Timberlake provides a thorough listing of relevant factors, and these criteria fit into two categories, which he labels "participant hierarchies" and "event hierarchies." The event hierarchies have a direct relationship to the scope of negation, as Timberlake recognized. He himself points out that for these criteria the choice is dependent on the "scope or force of negation". The reader is referred to Timberlake's discussion for details. A few examples will be illustrative.

### [1] Aspect

As Timberlake points out, a genitive object is less likely to be found with a perfective verb than an imperfective verb.<sup>84</sup> When a perfective verb is negated, it is the completion of the action that is normally denied, not the particular object of the action.

(388)

Ja ne vypil čaj.  
I didn't drink-up[perf.] (the) tea(ACC).

(Another way to look at the casemarking of *čaj* in (388) is the following: what is being considered is *specified tea*, which either was or was not drunk up. With the current analysis, these two perspectives represent two sides of the same coin, as will become clearer in the discussion of "participant hierarchies".)

### [2] Complements

It has been observed by many people that negated verbs like *sčítat* 'consider' seldom take a genitive direct object.<sup>85</sup>

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84. See also Klenin (1978) for similar observations about the use of the partitive genitive.

85. See, for example: Ravič (1971:264), Academy Grammar (1980, vol. 2:417).

(389)

Ja ne sčitaju Annu/?\*Anny umnoj.  
 I NEG consider Anna(ACC/?\*GEN) clever

Such sentences are normally used to suggest that Anna is not clever, rather than suggesting that it is someone other than Anna who is clever. Timberlake points out that the choice of the accusative object is related to the scope of negation in those cases.

However, if the context would make the latter interpretation natural, many of my informants readily accept the genitive, as in:

(390)

On ne sčitaet *Anny* udivitel'noj; èto Zenju on sčitaet takoj xorošej studentkoj.

He NEG considers *Anna*(GEN) astonishing; it's *Zenja*(ACC) he considers such(INS) (a) good(INS) student(INS).

### [3] Lexical categories

It has been observed by many people that negated verbs which are semantically rather empty, such as *imet'* 'to have', take genitive objects.<sup>86</sup> Again, what is normally negated in such sentences is the thing which is had, rather than the relation which holds between the subject and object. Similar considerations enter into the preferential choice of a genitive object with verbs of knowledge, perception, and emotion, as is discussed by

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86. cf. Chvany (1975), Academy Grammar (1980, vol. 2:416), Ravič (1971).

Timberlake.<sup>87</sup>

The "participant hierarchies" have a less obvious, but just as important, relationship to the scope of negation. Consider the meaning of a sentence like:

(391) I didn't read the book.

It is more or less equivalent to:

(392)

For x = the (particular, specific) book, I didn't read x.

Thus, in *this* sense, 'the book' is not included in the scope of negation, since in the logical interpretation, it is *prior* to the negative operator. This variable-like analysis has been suggested by many people (including Chomsky (1981)) to represent the logic of proper nouns. If this approach were instead extended to definite nouns in general, then we would be able to generalize the previous result that [-Q] constituents may not be within the scope of negation to account for the interpretation of negative sentences with accusative objects. In such cases, the reading of (392) above would be required, since the accusative object may not be interpreted as being within the scope of negation. This

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87. "Transitive verbs of existence or possession imply a high degree of subordination of the object participant to the event; in a sense the object exists or does not exist only with respect to the narrated event. The subordination of the object to the verb means that the scope of negation includes the verb plus object as a whole, which makes this class of verbs an appropriate context for the genitive of negation." (1975:130)

notion could be formalized along the lines of Halvorsen's (1982) theory of semantic representation in LFG.

It is reasonable that the type of interpretation of (392) above would be favored:

- [1] with proper nouns (compared with common nouns)
- [2] with concrete nouns (compared to abstract ones)
- [3] with definite nouns (compared to indefinite)
- [4] with animate nouns (compared to inanimate)
- [5] with modified nouns (compared to unmodified)
- [6] with singular nouns (compared to plural)
- [7] with countable things (rather than mass things)
- [8] and with topicalized nouns (compared to non-topicalized)

This is basically Timberlake's "participant hierarchy", and as he points out, preferences [1] through [8] all involve the extent to which the noun is "individuated". However, criteria such as [2], [4], [5], [6], and [7] are really just statistical observations that modifiers are often used with definite nouns, that definite nouns often involve singular, countable, concrete, animate things. The generalization that is at the root of these observations is that definite, specified, individuated NP's may be interpreted as having scope over the negative operator, in the sense that their specification is prior to the negative operator. This allows the observations of the "event" hierarchies and the "participant" hierarchies to be unified, in that the factors relevant to determination of the object's casemarking relate to the the scope of negation.

## 2.10 A HYPOTHETICAL ALTERNATIVE

The rule of extraposition formulated in this chapter was stated in terms of grammatical functions, and, as a *lexical redundancy rule* it is intended to relate lexical entries. Abstract sources that give rise to real entries by means of such processes are excluded in principle.<sup>88</sup> So, for the class of verbs which undergo extraposition, the rule is intended to relate the following entries:

(393)            ccccc, V <SUB>

and

(394)            ccccc, V <OBJ>(SUB)  
                  (↑OBJ Q) =<sub>c</sub> +

Assuming that these are the correct forms for the lexical entries, the question still arises whether the redundancy rule might better be stated in the inverse way: whether perhaps it should be viewed as a rule which changes OBJ to SUB. The current approach would be compatible with either solution, and it is an empirical question as to which type of rule is appropriate. That is the question that will be discussed in this section.

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88. See discussion in the Introduction.

### 2.10.1 Lexical Redundancy Rules

The rule of Extraposition is one of a number of lexical processes that are productive in Russian. Others previously discussed include:<sup>89</sup>

#### [1] PASSIVIZATION

- (a) OBJ |→ SUB
- (b) SUB |→ OBL<sub>AGENT</sub> / ∅

#### [2] -SJA FORMATION

including, e.g. MIDDLE FORMATION

OBJ |→ SUB

For completeness, we repeat the extraposition rule.

#### [3] RUSSIAN EXTRAPOSITION

SUB |→ OBJ  
(OBJ Q) =<sub>c</sub> +

As the rules are stated, [3] must be able to apply to the output of [1] and [2]. This violates the '1-Advancement Exclusiveness Law' suggested by Perlmutter,<sup>90</sup> and the reader might wonder if the process would better be stated inversely. The '1-Advancement Exclusiveness Law' was proposed to account for (among other things) the failure of '2'

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89. See Bresnan (1982-b) for discussion of the passive; and Grimshaw (1982) for consideration of Middle Formation and other processes that relate reflexive and non-reflexive forms.

90. See Perlmutter and Postal (to appear).

arguments (patients/themes), or other arguments, to undergo passivization after being advanced to '1' arguments [= subjects]. See Perlmutter and Postal (1978) for details, and Rosen (to appear) and Marantz (1981) for discussion. For example, this law accounts for the failure of arguments (expressing "time" and "means") that have become subjects by "sporadic advancements to 1" to passivize. The following examples from Marantz (1981:167-168) illustrate (a) the presumed underlying grammatical relations, (b) the advancement of the underlined words to subject, and (c) the inability of these phrases to undergo passivization:

- (395) a. A kind-hearted person may buy this porcupine for ten dollars.  
 b. Ten dollars buys this porcupine.  
 c. \*This porcupine {is bought, may be bought} by ten dollars.

- (396) a. We found the country at the brink of economic disaster in 1979.  
 b. 1979 found the country on the brink of economic disaster.  
 c. \*The country was found on the brink of economic disaster by 1979.

In LFG, the '1AEX' may be accounted for in the following way. Let the 'initial 1' argument of Relational Grammar correspond to the argument labelled "AGENT" in LFG, the "doer" in the sense of Marantz (1981); the 'initial 2' argument corresponds to the "THEME" argument. The final level of grammatical relations of Relational Grammar is expressed by the grammatical functions 'SUB', 'OBJ', and the like. Thus, in LFG, passive forms (in the unmarked cases) associate a THEME argument to the function SUB, whereas that argument would otherwise be associated with the function OBJ. The AGENT argument is

mapped to an oblique-agent phrase.<sup>91</sup> As mentioned in Bresnan (1982-a), the oblique function is semantically restricted: it must be associated with a specific argument label (such as  $OBL_{AGENT}$ ,  $OBL_{GOAL}$ , etc.).

The passive rule appears to be a rule which changes grammatical relations, but actually it changes the grammatical functions associated with fixed arguments. A restriction limiting the change:

(397)  $SUB \mapsto OBL_{AGENT} / \emptyset$

to '1' arguments (doers) would have the same effect as the '1 Advancement Exclusiveness Law' for these cases.<sup>92</sup> But this is precisely the effect of the rule in (397). (The restriction is already incorporated in the designation ' $OBL_{AGENT}$ '.) This would also cover the impersonal passives in Dutch and Turkish discussed by Perlmutter (1978-a), where impersonal passives are permitted only where the corresponding active subject is agentive. Further research is required to see if the other cases that the '1 Advancement Exclusiveness Law' accounts for may also be handled in terms of logical arguments (as

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91. Marantz argues against a promotion analysis, whereby  $OBJ \mapsto SUB$ . However, in Chapter I, we presented evidence that supports the promotion analysis (which is assumed by LFG): the fact that passive and *-sja* subjects are subject to the same restrictions (stated in terms of grammatical functions) as the objects from which they are presumed to be derived.

92. Particularly in view of the proposal in Section 2.3 that agents may not be associated with objects. This eliminates the possibility of an agentive object being raised to subject and then passivized.

well as to consider the cases where the '1AEX' appears to fail (see, e.g. Ostler (1979)). For the present, however, it appears that the sentences in (395) and (396) do not invalidate the current proposal of an extraposition rule.

Still, there is a question as to whether rule [3], or its inverse [3'], is the better rule.

[3'] RUSSIAN OBJECT PREPOSING (?)

OBJ  $\uparrow$  → SUB

[3'] is precisely the rule proposed by Baker (1982) to account for the Italian facts discussed by Perlmutter (1978), Rosen (1981), and Burzio (1981). Baker argues that [3'] is preferable to its inverse: by dividing Passive up into two parts ((a) and (b) as shown in [1])), the first half of the Passivization rule may be called upon to derive the lexical form of (398) from (399):

(398) *arrivare* : 'to arrive<<sup>OBJ</sup><sub>THEME</sub>>(SUB)'

(399) *arrivare* : 'to arrive<<sup>SUB</sup><sub>THEME</sub>>'

He argues that this permits a less round-about derivation of sentences involving both passive and extraposition. He argues (basically) that, for Italian, this permits derivation I, which is preferable to derivation II:

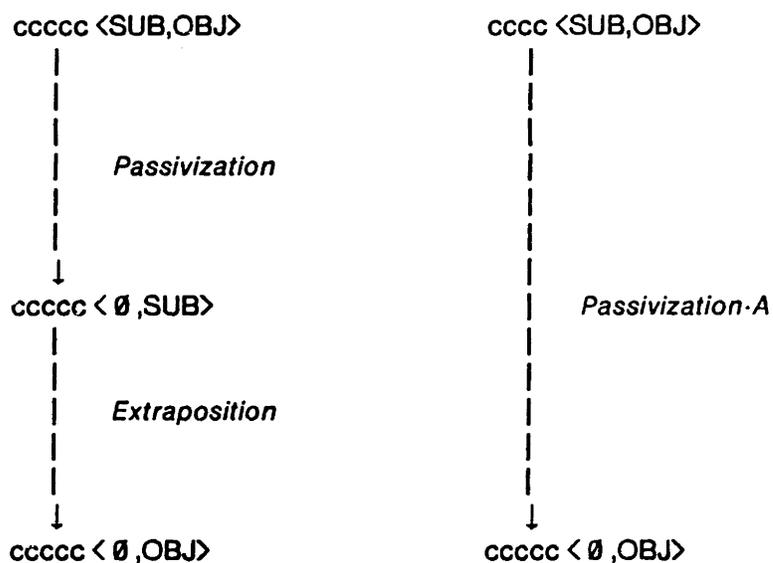
TABLE III LEXICAL ORGANIZATION — ITALIAN

## Extrapolation

## Object Preposing

## DERIVATION I

## DERIVATION II



As Baker points out, such a rule has some apparent advantages. This rule is needed independently for passive, and the passive rule could then be divided in two parts, the first of which would merge with [3'] into a single rule.

However, at least for Russian, this apparent simplification of the system creates other complications. First, if the two halves of the passive rule are made independent, several things must be explained:

Why can't part (b) [SUB] → OBL<sub>AGENT</sub> / ∅] apply independently of part (a) [OBJ] → SUB] ? Consider first the case of verbs like 'arrive' which would have the

following derivation:

$$\begin{array}{ccc} \text{arrive} \langle \text{OBJ} \rangle & \rightarrow & * \text{arrive} \langle \text{OBL}_{\text{AGENT}} / \emptyset \rangle \\ \text{THEME} & & \text{THEME} \end{array}$$

Since subjects that passivize are necessarily agentive (1-arguments), as just discussed, the application of part (b) is excluded on those grounds. However, this still does not explain the impossibility of the application of part (b) to agentive intransitives.

$$\begin{array}{ccc} \text{work} \langle \text{SUB} \rangle & \rightarrow & * \text{work} \langle \text{OBL}_{\text{AGENT}} / \emptyset \rangle \\ \text{AGENT} & & \text{AGENT} \end{array}$$

Yet, in English, French, and Russian, such lexical forms are impossible.<sup>93</sup> It appears, then, that the two parts of the passive rule are not independent, but, at best, could be collapsed as follows:

$$\begin{array}{l} \text{OBJ} \mid \rightarrow \text{SUB} \\ (\text{SUB} \mid \rightarrow \text{OBL}_{\text{AGENT}}) \end{array}$$


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93. There is one set of cases in Russian which *appears* to permit application of part (b) alone: cases involving non-agentive subjects that act on human beings. In such cases the non-agentive subject appears preferentially in the instrumental. Consider:

- (i) Molnjej ubilo čeloveka.  
Lightning(INST) killed(N,sg) person(ACC)

Although this example might appear, at first glance, to lend support to the factorization of passivization, in fact it would better be treated as an independent process of demotion of a non-agentive subject. Whereas passivization requires an agentive subject, this selects for a non-agentive subject, indicating that although the two processes have something in common, they are distinct.

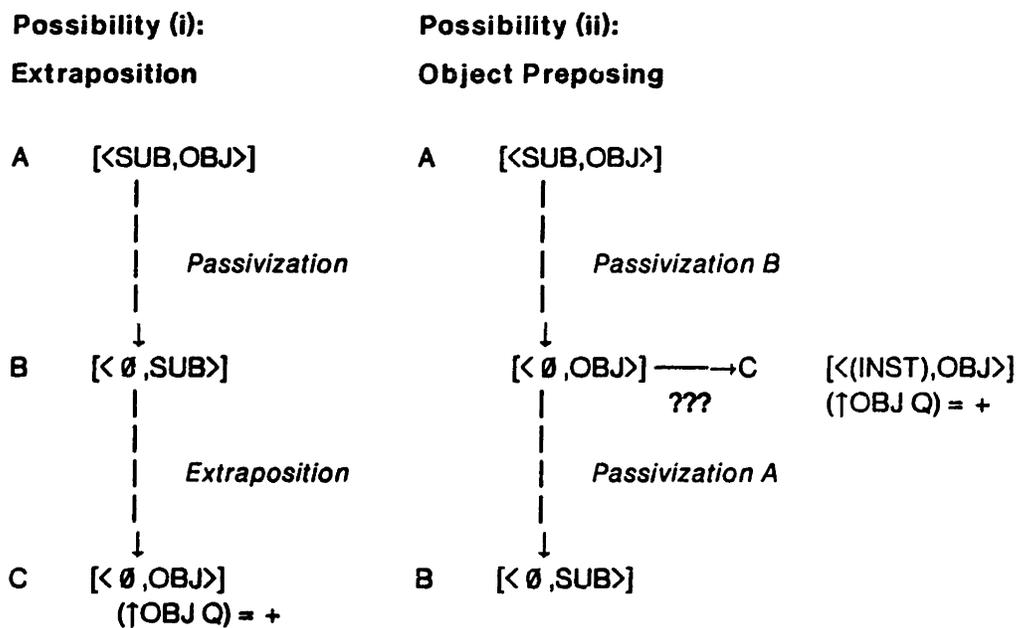
However, the reduction in the number of rules required is illusory. The extraposition rule cannot be entirely eliminated. Recall that the extraposition rule in [3] did not change SUB to OBJ indiscriminately: there was an additional, simply stated constraint:

$$(\uparrow \text{OBJ Q}) =_c +$$

No such condition would be required on a hypothetical Italian extraposition rule. This is a major difference between the two languages. Notice that the Extraposition rule for Russian is not as easily reversible as the one for Italian. Let's consider the possible relations between lexical forms of a verb like *vzjat'* 'to take', which occurs in sentences such as (400) below — (i) given a rule of extraposition, and (ii) given a rule of object preposing.

- (400) A.  
Ivan vzjal knigu.  
Ivan(NOM) took book(ACC)
- B.  
Gorod byl vzjat.  
(The) city(NOM) was(M,sg) taken(M,sg)
- C.  
Ne bylo vzjato ni odnogo goroda.  
(There) NEG was(N,sg) taken(N,sg) not 1(GEN) city(GEN)  
'There was not a single city taken'

TABLE IV LEXICAL ORGANIZATION — RUSSIAN



Notice that, unlike the Italian case shown in Table III, the effect of the postulated

Extrapolation is not merely to cancel out the the second half of Passivization. The end result contains a restriction, one which is puzzling if possibility II is the correct one.

(401)

\*Bylo vzjato gorod.  
(There) was(N,sg) taken(N,sg) city(ACC).

Therefore, if one chooses System II, first one must explain why the intermediary form,  $\langle \emptyset, \text{OBJ} \rangle$ , is unacceptable. Since lexical rules are required to relate only actually existing lexical items, this is a problem. Second, it is still necessary to formulate a rule (the analog of extraposition) that imposes the constraint on objects just in case they fall in this position of the derivation. Notice that ordinarily, no restriction is placed on the type of object that may occur with with a verb like *vzjat'* (see (400a)).

If [3'] is to be the desirable form of the redundancy rule, then it is necessary to formulate an equivalent constraint that would hold, in order to explain the following contrast:

(402) a.

\*Prišlo ego.  
Came(N,sg) him(ACC)

b.

On prišël.  
He(NOM) came(3,sg)

The only way to handle these two problems, given the current assumptions about the nature of lexical redundancy rules, would be to assume that there is some sort of convention whereby lexical forms that contain:



The difficulty in formulating an inverse extraposition rule stems from the asymmetry of the input and output of such a process. Consider the verbs involved, verbs such as 'to come'. With such verbs, the distribution of NP's is as follows:

TABLE V            DISTRIBUTION OF [+Q] PHRASES

<u>SUB</u>	<u>OBJ</u>
NP[+Q]	NP[+Q]
NP[-Q]	.....

It appears that, in Russian, a subset of possible subjects are eligible to be *extraposed* subjects (i.e. objects). Therefore the process is most naturally stated by placing a condition on the extraposition rule, rather than by saying that verbs of the relevant class start out with underlying objects, which — sometimes obligatorily (in the case of [-Q] constituents) and sometimes (otherwise) optionally — become subjects. Especially when the condition on the Extraposition rule is so simple.

The condition on the rule would be trivially simple if the distribution were instead:

TABLE VI            HYPOTHETICAL DISTRIBUTION OF [+Q] PHRASES

<u>SUB</u>	<u>OBJ</u>
.....	NP[+Q]
NP[-Q]	.....

However, as is clear in English as well, all types of phrases that can appear in "extraposed" position may also appear in subject position:

(403) There blanked a phrase.

(404) A phrase blanked.

The system that appears preferable for English, French, and Russian, is system I, which includes an Extraposition rule.<sup>94</sup> In these languages, subjects appear to have a special status.<sup>95</sup> A subject argument is required; and if lost in the course of lexical derivation, must be replaced by a dummy subject. Of the two variant lexical forms related by the extraposition rule, the one containing a subject is apparently primary: it is the less marked form, and is learned first during the course of language acquisition.

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94. Most analyses of these phenomena (until quite recently) assumed an Extraposition rule without question, perhaps because of the intuition that, at least for languages like English and French (and Russian), the extraposed form seems somewhat marked.

95. This would mean that a major difference between Italian and English involves the initial pairing of logical arguments to grammatical functions. In Italian, a single 'theme' argument may be associated with OBJ, while in Russian, a single argument would necessarily be a SUB. (There would be evidence available to the language learner to establish this difference, since, for example, the object as sole argument in Italian appears freely in object position.)

It is tempting to try to account for the similarities between languages like Italian and Russian in terms of a universal initial mapping of thematic relations to grammatical functions. There are problems with this approach, however, as is demonstrated by Rosen (1982). The failure of semantics alone to predict the mapping is shown in the lack of correspondence of the "ergative" class of verbs from one language to the next.

### 2.10.2 Speculation

If this view of Russian, and Baker's (via Burzio's) view of Italian, are correct, then this suggests one plausible type of language variation. If languages have the option of using SUB  $\rightarrow$  OBJ rules and OBJ  $\rightarrow$  SUB rules, as is very reasonable given the assumptions of LFG, then it would be perfectly natural that languages might pick and choose among the options, and might make different selections.

The similarities between languages like Italian and Russian with regard to "ergative"-like processes are rather striking (and are central to Pesetsky's work).<sup>96</sup> These similarities, however, need not follow from identical underlying lexical representations. They may be seen to follow from the fact that a similar set of lexical entries are found for the relevant verbs (related possibly by inverse processes). The restriction against agentive objects is sufficient to ensure further points of similarity. (Restrictions against agentive objects have been proposed by various people in various forms. See, for example Burzio and Pesetsky.) Moreover, some of the differences

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96. See Burzio for a discussion of this usage of "ergative" and of the phenomena it encompasses. There is much research into these issues going on at the present time. See, for example, Marantz, Perlmutter, Rosen, B. Levin.

Pesetsky noticed the similarities between the "ergative" verbs in Italian and the set of verbs in Russian which (more or less) correspond to those. Kurylowicz (1960) in his article "Ergativnost' i Stadijal'nost' v jazyke," also notices "ergative"-like phenomena in Russian, and in that sense prefigures some of the current work. (However, in spite of the parallelism between constructions involving passives, non-agentive intransitives, and *-sja* verbs on the one hand, and constructions in ergative languages on the other, he draws sharp distinctions.)

between the two languages might follow from the difference between object preposing and extraposition. One criterion to distinguish the processes might be the "indefiniteness" restriction associated with extraposition. This is a vast subject for further research.

Extraposition rules are often related to quantification, and are particularly useful in extending possibilities for scope relations, which ordinarily rely heavily on word order. This may motivate the indefiniteness [+Q] restriction which is found on such processes. Since, in configurational languages, scope is intimately related to surface word order, the rule of extraposition allows more flexibility with word order, perhaps in order to extend possibilities of expressing logical relations and distinguishing logical operators and their scope. However, in languages such as Russian, where the word order is relatively free, one might wonder why there should be an extraposition rule at all. As in other richly inflected languages, in Russian we find casemarking taking on some of the functions otherwise performed by word order; the genitive casemarking helps to reconstruct the scope relations. Thus, it is not surprising that extraposition, in extending the possibilities for expressing scope distinctions, should provide phrases to be marked with the genitive of negation.

### 3. AN ALTERNATIVE APPROACH

In Chapter 2, we have tried to account for several correlations in Russian. First, we provided a unified explanation for the genitive found with the direct objects of negated verbs, and for that found in alternation with certain nominative subjects. We suggested that these genitive pseudo-subjects had in fact been extraposed, and were thus casemarked as objects. We then showed that the same feature relevant to casemarking is also relevant to the rule of extraposition: that objects derived by Extraposition necessarily bear the feature [+Q]. This then explains why these genitive pseudo-subjects, like other extraposed quantificational phrases (such as non-agreeing numeral phrases) cease to act like subjects. The fact that both types of phrases are extraposed, and the nature of the extraposition rule itself, explain certain distributional restrictions common to both types of phrases.

### 3.1 PESETSKY'S ANALYSIS

Pesetsky (in prep.) has proposed a different set of correlations and explanations for these phenomena. He suggests first that the reason non-agreeing numeral phrases and genitive phrases under negation have similar distribution is that both are actually QP's. The genitive of negation is claimed always to result from a null quantifier. The distribution of these QP's is limited to direct case positions, since QP's are outside of the case system, by his analysis, and may not receive case. Only in direct case positions, where case

assignment is optional, can they fail to receive case (and thus be allowed).<sup>1</sup> Thus, whereas in our analysis, these different types of phrases share a feature, and when extraposed, have in common their non-subjecthood, according to Pesetsky, they are alike in that both are actual QP's, and therefore caseless constituents.

Since they are QP's, rather than NP's, and since verbs are assumed to subcategorize for NP's, the QP's must undergo Quantifier Raising (which according to Pesetsky leaves an NP trace) so that the subcategorization requirements of the verb may be met in Logical Form. This requires, though, a somewhat weakened version of the Projection Principle,<sup>2</sup> since subcategorization requirements need not be satisfied at every level of representation, but only in Logical Form.

By this account, all quantifier phrases are necessarily D-structure objects. This is because the application of quantifier raising that is *required* in order not to violate categorial selection is *prohibited* when the quantifier phrase is in subject position, since the trace left by the movement from subject position would not be properly governed (and thus would fail to satisfy the Empty Category Principle (ECP)). Thus, Pesetsky has a clever account of why the genitive of negation is restricted to object position.

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1. This explains then why we don't find the genitive of negation in non-direct positions.

2. The basic idea of the Projection Principle is formulated in Chomsky (1981:29) as follows:

"Representations at each syntactic level (i.e., LF, and D- and S- structure) are projected from the lexicon, in that they observe the subcategorization properties of lexical items."

Pesetsky also unites the distribution of "non-agreeing numeral phrases" and the genitive phrases of negation with that of phrases containing the distributive quantifier *po*.<sup>3</sup> The fact that all three of these types of phrases are D-structure objects allows Pesetsky to explain some properties they share (besides being found in object position). All may occur in alternation with nominative subjects of the following verbs:

#### Passives

#### Intransitives that take non-agentive subjects

The assumption that the  $\theta$ -role assigned directly by the verb (within the VP) is necessarily non-agentive, provides a nice explanation of the non-existence of agentive genitive phrases of negation, *po* phrases and non-agreeing numeral phrases.

The deep object hypothesis also explains why genitive phrases are *not* found in alternation with the subjects of adjectives and of transitive verbs (since adjectives<sup>4</sup> have no D-structure object, and transitive verbs can have but one).<sup>5</sup> Moreover, Pesetsky has evidence suggesting these phrases are D-structure objects: they behave like objects rather than subjects with respect to extraction. (See Pesetsky for details.)

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3. These phrases will be reconsidered in Chapter 4.

4. With a few exceptions discussed in Chapter 2.

5. By careful phrasing of conditions on  $\theta$ -role assignment, Pesetsky also comes up with an account of the impossibility of genitive phrases with predicate nominals. (See Pesetsky's "Attributive and Identificational Rule".)

Later, (using ECP and the Binding Theory) Pesetsky derives the fact that these D-structure objects may not become S-structure subjects. Notice that, by his analysis, the NP subject of the verb 'float' originates as a D-structure object, but must move into subject position by S-structure in order to receive case. However, a genitive D-object (QP) of 'float'<sup>6</sup> would be prevented from moving to subject position (since in subject position, the obligatory application of Quantifier Raising required for subcategorization is ruled out by binding theory and ECP).

### 3.2 COMPARISON OF APPROACHES

Although Pesetsky's analysis and the current one are (necessarily) similar in some respects, they also have some major points of disagreement. In the first part of this section, we will discuss how the two approaches differ. In the second part, we will consider to what extent the differences between the two analyses reflect different theoretical presuppositions.

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6. This would in all likelihood be within a negative sentence, although nothing in the analysis would explain why. This will be discussed shortly.

### 3.2.1 Predictions

Pesetsky's attempt to unify the analyses of genitive of negation and quantifier phrases such as *pjat' čelovek* '5 people' requires that the generalization that genitive of negation is limited to object position be extended to all quantifier phrases (including "non-agreeing numeral phrases" and phrases involving an overt quantifier like *po*). The attempt to unify the three cases through their QP constituency entails some dubious claims:

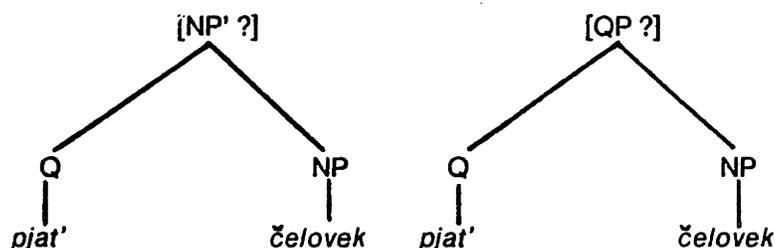
- (1) That non-agreeing numeral phrases are QP's, while agreeing numeral phrases are NP's.
- (2) That the "genitive of negation" is independent of negation.
- (3) That the genitive of negation involves a null quantifier.
- (4) That QP's occur only in object position.<sup>7</sup>

#### 3.2.1.1 Numeral Phrases

Let's first consider the evidence presented by Pesetsky in favor of the putative difference in the constituency of agreeing and non-agreeing numeral phrases. Notice that with numeral phrases (e.g. *pjat' čelovek*), the proposed agreeing form and non-agreeing form are indistinguishable:

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7. Unless subcategorized for, by the verb, elsewhere. (Since only subcategorization conflict necessitates Quantifier Raising; and the restriction of QP's to object position follows from the claim that Quantifier Raising is *admissible* only from object position.)



If it were the case that these phrases were identical in every respect, if they were both subjects, and yet the so-called "non-agreeing numeral phrase" failed to trigger agreement while the other did not, *then* it would appear to be reasonable to postulate that they must differ in structure, and to suggest that the "non-agreeing phrase" is a QP, while the "agreeing phrase" is an NP, and only NP's may trigger agreement. This is in fact what Pesetsky implies.

Superficially, the two types of numeral phrases are identical. Thus, we can tell them apart only when they correspond to nominative subjects. This is because the only difference between them that is visible is their differing behavior with respect to verbal agreement, and Russian verbs agree only with subjects.

However, since Pesetsky agrees that (1) the "agreeing numeral phrases" differ from the "non-agreeing numeral phrases" in that the former are subjects and the latter are objects; and (2) that in Russian verbs agree only with subjects; it becomes obvious that they do not even exhibit differing behavior with respect to verbal agreement. (At least not in any way that is testable, since they could only be distinguished in subject position, and they do not both appear in subject position.)

The supposed categorial difference may be invoked to justify the existence of ("non-agreeing") numeral phrases in object position, but this does not demonstrate that category is the relevant factor. There appears to be little independent evidence for such constituency,<sup>8</sup> and we see no reason to view "no-agreement" as an inherent property of numeral phrases that happen to occur in object position.<sup>9</sup>

### 3.2.1.2 The Genitive and Negation

In the preceding chapter, we argued that the "genitive of negation" is not inappropriately named, and that the existence of the genitive in negative sentences should not be viewed as independent of the sentential negation. First, we presented evidence that the partitive genitive construction (for which we proposed a QP analysis) has a different distribution than the genitive of negation. For example, the partitive construction may not be used with singular, count nouns, while the genitive of negation in no way distinguishes those nouns from others. In other Slavic languages, the genitive of negation and partitive constructions diverge even more sharply. Second, we considered the impossibility of sentences like (380), repeated below,

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8. Furthermore, as discussed in Section 2.4.1, the sometimes NP / sometimes QP analysis of *pjat' čelovek* leaves the case government of the supposed NP head (which appears obligatorily in the genitive case) unexplained, and complicates the account of numeral phrases.

9. Pesetsky suggests that the proposed constituency accounts for the semantic interpretation of these sentences. This will be discussed shortly.

(405)

\*On ne velet Ivanu [ čitat' knig]<sub>S</sub>.  
 He NEG made Ivan(DAT) read books(GEN)

where the genitive phrase is removed from the domain of negation. Therefore, it appears that the genitive is conditioned by the negative environment, a fact which goes against the Pesetsky analysis.

### 3.2.1.3 QP and Null Q

In Section 2.1 we argued that a null quantifier analysis is not very plausible for cases involving definite NP's and proper nouns. Moreover, the differing distribution of the partitive genitive and the genitive of negation creates a problem for a null quantifier analysis, too, since it appears that the existence of two *distinct* null quantifiers, with different distributions, would be required.

### 3.2.1.4 QP For Objects Only

Pesetsky's claim is that QP phrases may occur only in object position. We have seen that, for numeral phrases, Pesetsky's claim is true by stipulation. (Numeral phrases that occur in other positions are called NP's.) For genitive phrases, it is true by definition. (Genitive phrases may occur only in object position; thus if they are considered to be QP's, then the genitive QP's occur only in object position.) The real test of this claim should come from indisputable quantifiers. However, there is apparently only one true

quantifier in Russian, by this criterion. Pesetsky has a good deal of discussion about the distributive preposition *po*. He shows that it occurs in object position, and with the same class of verbs that accept the genitive of negation: passives, and intransitives of the proper type. Interestingly, *po* phrases are normally excluded as agentive subjects.<sup>10</sup> *po* phrases, like phrases involving similar quantificational prepositions such as *okolo* 'near(ly)', are excluded from oblique case positions, and it seems reasonable to assume that this is because prepositional phrases are not casemarked. However, *po* alone is preferably restricted to D-object position. There seems to be something about the distributive operator that makes it preferable to find it within the VP.<sup>11</sup> This appears to be a peculiarity, though, rather than the general case for quantifier phrases. Moreover, this

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10. With a few exceptions: these will be discussed in Chapter IV. The existence of sentences such as (i) [from Crockett (1976:353)], where *po* phrases appear as subjects, casts doubt on an account in which such sentences should be absolutely excluded.

(i) *Po dvadcat' čelovek priezžali s nim.*  
20 people came with him [each time].

(As discussed in Chapter 2, the verbal agreement demonstrates that *po dvadcat' čelovek* is the subject of the sentence.)

11. This is true in English as well. Compare:

(i) The mailman delivered a package a day.

(ii) ?A package a day was delivered.

(iii) (?)There was a package a day delivered.

(iv) (?)A package a day arrived.

(v) There arrived a package a day.

Even the famous 'apple a day' proverb involves an implicit object: [Eating] an apple a day keeps the doctor away.

post-verbal positioning of *po* appears to be more of a preference than an absolute requirement, as suggested in the next chapter, where there are examples from Babby indicating that it may appear in subject position.

A quantifier like *okolo* is perfectly acceptable as the subject of a transitive verb.

Consider:

(406) *Okolo dvadcati studentov smotreli televizor.*  
 About 20(GEN) students(GEN) watched(pl) television(ACC).

This would be ruled out, however, by Pesetsky's account, since the QP would have had to originate, and remain, in object position.

### 3.2.1.5 Other Predictions

There are two additional consequences of the Pesetsky analysis that seem questionable:

- (1) That Quantifier Raising produces the correct semantic interpretation.
- (2) That the genitive of negation must always correspond to a deep object.

## SEMANTIC INTERPRETATION

First, Pesetsky claims that the null Q analysis makes the right predictions for the readings allowed with and without the genitive of negation. He gives the following two examples, and the proposed readings:

(407)

Ja        ne    polučal        pis'ma.  
I(NOM) NEG received        letters(ACC)

READINGS:

(A)  $\neg$  I received the letters ('I didn't receive the letters')(B)  $\neg \exists x$ , x letters (I received x) ('I received no letters')

(408)

Ja        ne    polučal        pisem.  
I(NOM) NEG received        letters(GEN)

READING:

(B)  $\neg \exists x$ , x letters (I received x) ('I received no letters')

Although Pesetsky admits that the (B) reading in (407) is accessible only with difficulty, he also claims that the (A) reading is completely excluded for (408). Both the possibility of the (B) reading for (407) [other than incidentally] and the impossibility of the (A) reading for (408) are in opposition to discussions in the literature (see Section 2.1) which claim that (408) has a wider range of possible readings (either 'definite' or 'indefinite') than (407), which only has the 'definite' interpretation. (See discussion in Section 2.1.)

Moreover, the quantifier raising analysis apparently makes the wrong predictions about the interpretation of extraposed numeral phrases. In a sentence like:

(409)  
Eventually, there arrived five men.

one would expect, if QR applies, that the reading would be that the total number of people who came was 5. One would *not* expect a group reading, where [a group of five people] came (together). Yet, that is precisely what my English informants' preferences are for the interpretation of (409).<sup>12</sup>

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12. Pesetsky provides additional examples from Russian suggesting that the group reading is excluded with such non-agreeing numeral phrases in Russian. He suggests that verbs which require a group argument, such as *gather*, *disperse*, and *meet* exclude the non-agreeing numeral phrases. However, my informants accept such sentences:

- (i) Pjat' mal'čikov vstretilos' na mostu.  
5 men met(N,sg) on the bridge.  
'There met 5 men on the bridge.'
- (ii) Pjat' čelovek sobralos' na mostu.  
5 people(GEN) gathered(N,sg) on (the) bridge.  
'There gathered 5 men on the bridge'
- (iii)(?)Šest' mal'čikov razlučilos' na mostu.  
Six boys parted(N,sg) on (the) bridge.  
'There parted six boys on the bridge.'

These judgments tend to be the same in English; for example:

- (iv) There gathered five men in a smoke-filled room.



### 3.2.1.6 Conclusion

As ingenious as Pesetsky's analysis is, it requires unmotivated use of category and constituent structure as a diacritic marker to trigger a logical interpretive procedure, which, itself, lacks sufficient motivation. Postulating (obligatorily caseless) quantifier phrases allows case assignment to be used to account for the distribution of NP's and QP's. Quantifier raising is forced to apply by the assumption that verbs (normally) subcategorize for NP's, but that this subcategorization requirement need not be met at the level of D-structure. Thus, the QP object is forced to be raised by QR, leaving an NP-trace that will be acceptable. This requires, though, an elsewhere unmotivated assumption about the category of traces, and a serious weakening of the Projection Principle. This forced application of QR is necessary to predict the subject-object asymmetry with respect to the genitive of negation (and the occurrence of non-agreeing numeral phrases and *po* phrases). [This is because the ECP and binding theory allow only object QP's to take advantage of the QR escape hatch to redeem their categorial status so that they may satisfy selectional requirements.] However, when considered strictly as a rule of interpretation, Quantifier Raising for these cases looks even less convincing: the interpretation it produces does not conform to the logical readings of the relevant sentences.

### 3.2.2 Comparison of Theoretical Assumptions

For the reasons just mentioned, we believe that the LFG analysis we have proposed provides a more natural account of the distribution of genitive phrases of negation, quantifier phrases, and numeral phrases than the alternative formulated within the Government Binding framework. The question arises: to what extent are the two proposed solutions a product of the theories presupposed? That is, to what extent do the solutions grow out of the choice of theoretical framework.

Although it is clear that neither solution is dictated by choice of theory, certain theoretical differences lead to very different approaches to the problems involved. For example, the differing view of phrase structure and constituency, grammatical relations, and case has far-reaching consequences. Before addressing the specific analyses of Russian, we should consider a few of the differences in the representational assumptions of LFG and GB.

In GB, all three levels of syntactic representation — D-structure, S-structure, and

L(ogical) F(orm) have the same formal properties.<sup>13</sup> In GB, there is a set of principles governing the relations between the three levels, and each one is derived from the preceding level by the rule of "Move  $\alpha$ ". One of the guiding principles of the GB system is the Projection Principle, which holds that D-structure is the projection of lexical subcategorization frames, and that this projection must be maintained throughout the other levels of representation. (This invariance is claimed to facilitate the association of constituents to the logical arguments of lexical entries.) Grammatical relations are defined in terms of configuration (although for non-configurational languages, it is in

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13. LFG makes a greater formal distinction between the representation of form and meaning: c-structure and f-structure are autonomous, and are represented in very different ways. C-structure is assumed to vary greatly among languages, while the representation of f-structure is formulated in terms of (presumed) universal semantic interpretive conventions. This allows great simplification of the representation of c-structure, since information about constituency is determined independently of other principles that govern functional interpretation. Constituent representation is more constrained — it cannot be used to encode other types of syntactic or semantic information. Since there is only one level of constituent structure, this level must contain the information about precedence, dominance (and, therefore, also government) necessary as input both to the interpretive and phonological components (simultaneously). All phrase-structure-dependent processes must be related to a unique phrase structure representation.

terms of the configuration of the *model* rather than of the *language*).<sup>14</sup> 'Subject' is understood as [NP, S], the most prominent NP of S (that is, the NP that receives its thematic role from the VP), while object is [NP, VP], the most prominent NP in the VP (the NP that receives its thematic role from V). The thematic roles are assigned to these positions in D-structure. With active / passive variants, it is clear that the lexical argument structure and surface constituent order are no longer in exact correspondence. However, the assumption that "Move  $\alpha$ " leaves a trace allows the satisfaction of the Projection Principle, once the thematic role is assigned to the trace (or to the D-structure positions). [Viewed from the opposite perspective, the Projection Principle requires traces (and this is certainly not an undesirable result for the GB theory, since traces are independently desired within GB).] However, if we consider passive again, it is clear that something has to *force*  $\alpha$  to move; and that's where case comes in. To encode the change that occurs with passivization, the past participle is deprived of its case-assigning ability, and thus the non-case-marked D-object (assigned its theta-role there) will be forced to move to

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14. Consider, for example, Marantz's (1981:86) model, which does not differ significantly from the GB one in this respect:

"No matter what the surface structures of a language look like, the language will have s structures (...) like those described above. Though the theory makes claims about constituency in the syntactic analysis of sentences, it does not necessarily imply anything about constituency in the phrase structure of languages. Every language has s structure VPs, i.e., grammaticalizations of predicates, for example, but a language may lack phrase structure VPs. The surface structure of a sentence in a given language, we have assumed, is derived via Move  $\alpha$  from a deep structure generated by the phrase structure rules of the language, whatever they may be. (...) Whatever the rules, the structures produced by them and Move  $\alpha$  must be associated with s structures."

(S-structure) subject position to receive case.<sup>15</sup> The theta-role assignment to traces<sup>16</sup> permits the active object and passive subject to be assigned the same theta-role. Abstract case, in conjunction with conditions on the assignment of thematic roles,<sup>17</sup> is used to encode grammatical relations in such a way that they are not dependent on (surface) constituent structure.<sup>18</sup> Thus, case assignment (or lack thereof) will determine whether the D-object will be an S-object or an S-subject. Similarly, the alternation between object clitics and object full NP's in a language like French has been accounted for in terms of the clitic's absorption of the verb's objective case (cf. Aoun (1981), Borer (1981), and Jaeggli (1981)), which makes the verb incapable of sustaining an object NP (which requires case).<sup>19</sup> The central role of case in the distribution of grammatical relations has made case-absorption a familiar theme in Chomskyan analyses of

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15. As pointed out by Simpson (in prep.), the mechanisms ensuring passive movement within infinitival clauses are necessarily distinct, as in:

(i) I persuaded John [PRO to be examined by the doctor].

The PRO cannot be forced to move from D-object to S-subject position to receive case, since not only does PRO not require case, it cannot receive case under government. In this context, PRO is forced to move because it must be ungoverned.

16. Or, more precisely, to the chain containing the trace the the constituent with which it is coindexed.

17. The former will be most relevant to the discussion that follows.

18. See discussion in Marantz (1981) and Simpson (in prep.).

19. In LFG, this is accounted for by consistency — the predicate can have one object, either the clitic or the full NP, but not both. See Grimshaw's (1982) analysis.

phenomena which involve a change in grammatical relations. For example, since the relation of OBJ to SUB is expressed by means of movement, which is triggered by the lack of case assignment, case-absorption by reflexive clitics, such as the Italian *si*, is used to explain the fact that non-*si* objects and *s*-subjects correspond to the same thematic role. Chomsky (1981:271) suggests "that *si*, like passive morphology, can 'absorb' the objective Casemarking of a transitive verb (...). If this happens, then NP movement from object position is obligatory by virtue of the Case Filter..." Keyser and Roeper (1982), following a suggestion by Rizzi, suggest that similar constructions in English result from the presence of an invisible *si* that absorbs objective case.

Thus, case is invoked to account for the distribution of lexical NP's, since they must occur in positions to which case is assigned. These positions are used to define grammatical relations (such as subject and object). In LFG, relations between arguments and grammatical functions are expressed directly, by lexical relationships, not syntactic movement. An account in terms of movement, forced by case conditions, would be inconceivable in LFG, since there is a single level of phrase-structure representation.<sup>20</sup>

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20. Moreover, the Principle of Direct Syntactic Encoding prohibits syntactic rules from altering grammatical functions.

Now, in considering the description of the phenomena involved in Extraposition, it becomes obvious that grammatical relations are involved. In LFG, the account is in terms of lexical rules relating SUB and OBJ. In GB, however, this type of relationship must be expressed through syntactic movement. Moreover, such movement is often motivated by case distribution. What permits non-agreeing numeral phrases to remain in object position, while agreeing numeral phrases move to subject position? Within GB, the logical place to look for an answer to *this question* is in case assignment. If the agreeing phrase is forced to move, this is because it must receive case, and the object position of such verbs is not casemarked. But if the object position is not casemarked, why can the non-agreeing phrases remain? They must not need case. Therefore, an account such as Pesetsky's — that claims the non-agreeing phrase is different in category from the agreeing phrase — is required by the GB theory, in order to allow this case distinction.

However, the deeper question involved in a comparison of the two theories involves the question of the expression of grammatical relations. Should variation in grammatical function assignment be a function of case assignment? To begin to answer this question, it is necessary to consider the implications of the theory of case for other aspects of the linguistic representation. This is not an easy area to investigate, because the various subsystems are all intricately interrelated, and each is subject to modification in light of inconsistent predictions. However, given a GB analysis (almost necessarily) in terms of case, one can check to see if the conclusions to which the analysis is forced are otherwise motivated. To the extent that they are, this provides support for the theoretical presuppositions. To the extent that they are not, however, one is led to question the

relevance of case to the assignment of grammatical relations. Consider the conclusion that the (extraposed) objects under discussion are different in category, a conclusion indirectly required by an account of grammatical functions in terms of case. We have argued that not only is there no motivation (independent of theory-internal case assignment requirements) for distinguishing NP and QP categories for agreeing and non-agreeing phrases, but the assumption that they differ in category complicates the system of representation of numeral phrases. Such an analysis in terms of case assignment also creates the need for an additional explanation: as to why the QP must be prevented from moving to subject position. In Pesetsky's account, this involved the assumptions that subcategorization requirements are only met in LF, that QP's leave NP traces, and that QR can raise only object QP's but not subject QP's (for reasons related to ECP and the binding theory). However, this approach requires weakening one of the fundamental principles of the framework: the Projection Principle. So, even when viewed from the point of view of the GB theory, the consequences of this analysis are somewhat problematic.

It should be noted, though, that this whole discussion was based on the premise that "non-agreeing numeral phrases" and "agreeing numeral phrases" are inherently distinct — an assumption that we have argued is highly questionable. (It could be justified *only* in terms of the analysis that it permits; and as we have seen, this analysis itself is not without problems.)

Likewise, nothing in the GB theory forces an analysis of the genitive of negation in terms of QP's with null heads. The unification of numeral phrases, *po* phrases, and the genitive of negation is due to Pesetsky. We have suggested that the three groups do not form a natural class, by arguing that the genitive of negation does not involve a QP, but is produced by object case assignment. We have argued that ordinary QP's, including numeral phrases, may appear both as subject and object. If the LFG approach on this matter is correct, however, these conclusions could be incorporated into a GB account as well. Therefore, although Pesetsky's approach is surely in the spirit of the other GB accounts (with regard to explanations of the distribution of lexical NP's and of grammatical functions in terms of case assignment and movement), it is not, as a whole, forced by the theory.

As mentioned before, the use of case as an abstract intermediate is excluded in LFG. An analysis in terms of syntactic movement regulated by case assignment is incompatible with the fundamental representational assumptions of LFG. Thus a different type of account is required: one in terms of universal grammatical functions and features. Moreover, as we have shown, the distributional generalizations about Russian case are best stated in terms of real, visible, morphological case, given the LFG representational system.

In the LFG analysis, the use of the feature 'Q' can capture the similarity between different types of phrases, without assuming that phrases which share this feature must be structurally identical, and structurally distinct from those that do not, particularly in view of evidence that this is not the case. (As argued in Sections 2.4 and 2.10, the distribution of phrases does not appear to be as claimed by Pesetsky.) Pesetsky's use of subcategorization to distinguish between the distribution of NP and QP would also be incompatible with the LFG hypothesis that lexical forms subcategorize for (phrase-structure-independent) grammatical functions.<sup>21</sup> This finds support from recent work by Grimshaw (1979 and 1981). Within LFG, subcategorization could not distinguish between NP and QP, and subcategorization could not be invoked to explain their distinct distribution (if indeed their distribution were distinct; we have argued that it is not).

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21. This is not, though, an assumption necessary to GB. It is not even an assumption that is necessary to Pesetsky. Toward the end of Pesetsky (1981-a), it is proposed that s-selection (semantic selection) might be more appropriate than c-selection (categorial selection) in the analysis. He suggests that a semantic class like 'K' for "quantifier" might be relevant for s-selection (and would have the same effect of distinguishing NP's from QP's in subcategorization). Pesetsky considers that this view is trivially different from the version presented under the assumption of category selection. However, if semantic selection is adopted, then there is even less theory-internal evidence (and no theory-neutral evidence) in favor of the category difference he presupposes. In that case, Pesetsky essentially uses a feature 'Q' (= 'K'). [However, the current LFG analysis assumes that this feature is not relevant to subcategorization, which is stated in terms of grammatical functions — subject, object, etc. — which do not systematically distinguish between NP's and QP's or between [+Q] and [-Q] constituents.]

### 3.3 CONCLUSIONS

Pesetsky has an ingenious account of the distribution of what he considers to be QP's and NP's in Russian. QP's may occur only in object position, by his account, while NP's generated in object position of verbs that do not assign case to objects are forced to move to subject position to receive casemarking. After considering his analysis, however, we believe that the principles invoked to ensure the distribution of what we have termed [+Q] phrases require unmotivated claims about constituency, while reflecting an inaccurate distribution of these phrases, and entail certain conclusions about the genitive of negation and the interpretation of [+Q] phrases that appear to be false.

The analysis proposed in Chapter 2 permits a simple account of the facts, with a minimum of theoretical assumptions. First, we assume that the genitive replaces the accusative in object position in the appropriate [+Q] environment. Second, we assume the existence of a rule of extraposition (or an inverse process if that should turn out to be empirically correct).<sup>22</sup> This then permits us to explain the distribution of the genitive of negation, non-agreeing numeral phrases, and quantificational prepositional phrases, and the f-structure representation we have proposed correlates with the logical interpretation of these phrases.

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22. We also assumed a constraint against the association of agency with the object.

4. CONSEQUENCES FOR A THEORY OF RUSSIAN CASE

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In Chapter 2, syntactic evidence was presented which distinguished subjects from objects in Russian. It was shown that certain phrases that have previously been considered to be subjects are in fact objects. Such phrases include the genitive NP's in negative sentences which alternate with nominative subjects, as well as the so-called "non-agreeing numeral phrases."

There is syntactic evidence bearing on the status of these phrases which indicates that they are not subjects. It is believed that investigation of evidence of this type is logically prior to a theoretical account of the mechanisms which ensure their casemarking.

Some previous work on casemarking in Russian was based on incorrect assumptions about the status of these "pseudo-subjects" (i.e., genitives alternating with nominatives, and non-agreeing numeral phrases). The current analysis casts the results of this previous work into question, and, since the results bear on issues of general theoretical importance concerning the nature of casemarking in languages, we believe that these questions should be considered in some detail.

In part I of this chapter, we will consider the motivation for what we will call "the direct case principle" that direct case assignment differs from lexically governed case assignment in that the former is, in some sense, optional, while the latter is obligatory.<sup>1</sup> Then, in the second part, we will present an analysis of casemarking in Russian within the current framework.

#### PART I: THE DIRECT CASE PRINCIPLE

In his (1980-b) article, "The Syntax of Surface Case Marking," Babby argues for a syntactic distinction between *direct* case assignment (structural case assignment) and *governed* (or inherent) case assignment. The claim is that direct nominatives and accusatives are, at some stage in the derivation, lacking case. They will subsequently receive case by the (optional) assignment of direct case: nominative and accusative. The claim that nominative and accusative are assigned through entirely different mechanisms than other cases is a strong one, and the evidence which is proposed to support such mechanisms deserves careful consideration.

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1. This is recasting Babby's distinction in a way compatible with the present framework. He himself views casemarking somewhat differently, as will be obvious in the discussion that follows.

#### 4.1 THE DIRECT CASE CONDITION

Babby's first observation is that "only subject and direct object NP are normally genitivized under negation." (1980-b:1) Therefore, if case assignment is optional to subjects and objects (but obligatory to oblique positions), then the possibility of finding genitives only in subject and object position would be explained. He believes this account

provides a principled syntactic explanation for the constraints on GEN marking in negated sentences and for the Direct Case Condition in general: If a NP is already marked with an oblique Case, it cannot receive additional case marking. Since the NP's that emerge from the syntactic derivation of an affirmative sentence as NOM and ACC are caseless when the rule of GEN marking applies in negative sentences, there is nothing to prevent these NP's from being marked GEN if they meet the conditions (i.e., are indefinite, in the scope of negation, etc.).

Thus, one major argument for the special status of subject and object marking disappears. The similarity between objects and certain apparent subjects, namely that they may occur in the genitive, is illusory. As was shown in Chapter 2, the genitive of negation is restricted to object position.

Thus, *if* one wishes to accept Babby's analysis that genitive may only be assigned to positions in which structural case assignment is optional, optionality of case assignment is motivated *only* for object position in Russian. If nominative case assignment is also optional, then there is no principled explanation for the possibility of genitive assignment (within the scope of negation) to object position, but not to subject and oblique positions. Alternatively, one might think that the syntactic nature (that is, the optionality) of

casemarking is not the key to the distribution of the genitive of negation, but that the ACC/GEN alternation found only in object position is precisely that: an alternation unique to object position. In any event, there is no basis here for uniting nominative and accusative structural casemarking.

#### 4.1.1 Government vs. Concord

Babby then suggests that the generalization that numerals such as *pjat* '5' govern the genitive case on the following NP only in direct case positions may be explained if subject and object position are assumed to be caseless at the point in the derivation where GEN marking applies to the NP. Subsequently, the higher phrase and its numeral head may be marked by direct case. This would again suggest a case assignment mechanism for direct case positions that would differ from that of other positions. However, as mentioned in Section 2.4.1 and footnotes # 54 and 55 in Chapter 2, the generalization is not correct. The government-type numeral phrases are found in all nominative and accusative positions, direct or non-direct, and the distribution of these government-type phrases does not correspond to that of the genitive of negation, which is possible *only* in object position.

As discussed in Section 2.4.1, the distribution of the governed genitive NP's within QP's is determined by morphological case, not syntactic case. This is a distinction which Babby himself realizes is essential to understanding the nature of case.

Discussions of surface Case usually deal with either the morphological

aspects of Case (e.g. the principles determining the distribution of allomorphs) or with its semantic aspects. But the syntactic aspects of Case have been by and large neglected in the transformational literature. This article is accordingly devoted to the syntax of surface Case, more specifically, to the syntactic constraints on the rules that assign and distribute Case. One of our primary goals is to explain the familiar observation that the direct Cases (i.e. nominative (NOM) and accusative (ACC)) are syntactically different from the oblique ones (i.e. dative (DAT), genitive (GEN), locative(LOC), and instrumental(INST)).

#### 4.1.2 Distribution of Prepositional Phrases

So, what motivation remains for the Direct Case Principle? Babby claims that it accounts for the fact that quantificational prepositional phrases (including *okolo* (near) and *po* (the distributive quantifier)) appear only in subject and object position. Before posing the question of whether the distribution of quantificational PP's supports the Direct Case Principle as such, it would be useful to consider his analysis of these phrases.

First, Babby (1982:2ff.) convincingly demonstrates that such phrases appear in subject and object position, only.

#### [1] Agreement

Verbal agreement is found only with subjects (as discussed in Section 2.2.1), and such prepositional phrases may trigger agreement.

- (412) Na sobranii prisutstvovali okolo 400 predstavitelej ...  
 At (the) meeting were-present(PL) about 400(GEN) representatives(GEN).

( = B,6-a)

- (413) Otkazalis' vyjti na rabotu okolo 12 tysjač rabočix.  
 Refused(PL) (to) go to work about 12(GEN) thousand(GEN) workers(GEN).

( = B,6-b)

[2] Passivization

The ability of such phrases to passivize (even though there is no impersonal passive construction in Russian) is further support that they may be subjects and objects.

Babby's examples:

- (414) a. Otec dal detjam po gruše. (= B,7-a)  
 Father(NOM) gave children(DAT) per pear(DAT)

'(Their) father gave the children one pear each'

- b. Otcom dano detjam po gruše. (= B,7-a)  
 Father(INS) was given(N,sg) children(DAT) per pear

'One pear each was given to the children by (their) father'

(415) a.

Professora našego instituta      izdali      okolo sta učebnikov.

Professors(NOM) of our institute published(PL) about 100(GEN)  
textbooks(GEN)

'The professors of our institute published about 100 textbooks'

(= B,8-a)

b.

Professorami našego instituta      izdano  
Professors(INS) of our institute      was published(N,SG)

okolo sta učebnikov.      (= B,8-b)  
about 100(GEN) textbooks(GEN)

'About 100 textbooks have been published by the professors of our institute'

### [3] Conjunction

The ability of such prepositional phrases to conjoin with other subjects provides further support that the prepositional quantifier phrases may be subjects:

(416)

Vosem' krepostnyx      sten      i      okolo      desjatka  
8      fortified(GEN)      walls(GEN) and about      unit-of-ten

nebol'šix      fortov      zaščičajut      gorod. (from *Izvestija*, = B,10)  
small(GEN)      forts(GEN) defend(PL)      city(ACC)

'Eight fortified walls and about ten small forts defend the city'

Babby provides additional evidence (from gerund clauses), but this is sufficient to show that these phrases may, and do, occur both as subjects and objects.

However, the constituency he suggests for these phrases is implausible. Babby has a long discussion about phrases containing prepositions like *okolo* (discussed above). He proposes that they occur in the following configuration:

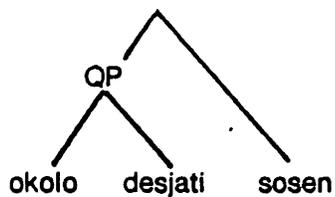
[[*okolo* [*pjati*]]<sub>QP</sub> *devušek*]<sub>NP</sub>

He suggests that the locational preposition *okolo* has a distinct meaning from that of the quantificational one because the two occur in different structures. Thus (from Babby (1982:10)) the ambiguity of the phrase *okolo desjati sosen* 'near 10 pines' is a structural one:

(417) (a) Locative Reading

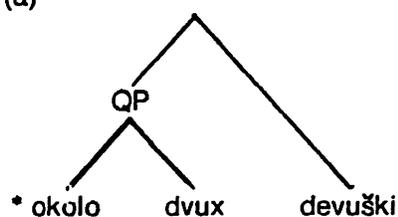


(b) Quantitative Reading

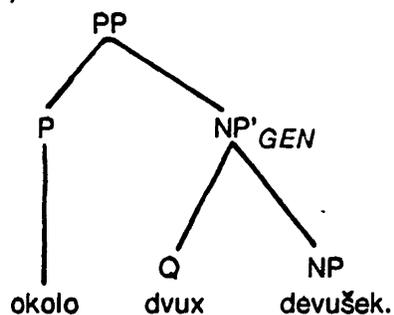


However, this putative difference in structure cannot be the cause of the difference in meaning; the concord vs. government of numeral phrases provides the key to discovering the structure that underlies the locative reading above. Although in *okolo pñati gruř* (about 5(GEN) pears(GEN,pl)), it is unclear whether the genitive of *gruř* is attributable to the numeral 5 or to the QP in (a) above as Babby suggests, the numbers 2, 3, and 4 allow resolution of the question. Consider:

(418) (a)



(b)



Here, the constituency becomes more visible. [The fact that the noun *devuřek* appears in the genitive plural, rather than the genitive singular, indicates that it is not governed by a quantificational head *dva*. The noun must itself be the head of the NP, as shown in (418)-b.] These phrases are quantificational PP's, like any other. The difference between

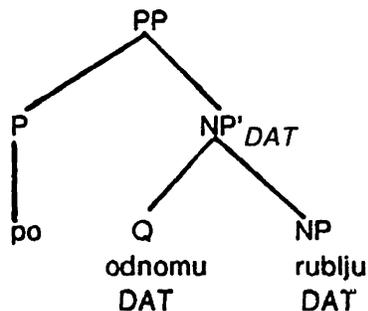
the locative and quantificational readings is that the latter is found with the quantificational *okolo*, and the former, with the non-quantificational one. Many prepositions have quantificational and non-quantificational uses. It is not unusual for prepositions to have a multitude of different meanings and uses which have nothing to do with the structure of the prepositional phrase in which they occur.<sup>2</sup>

The constituency of phrases involving *po* confirms the current analysis. Consider the following example from Babby:

(419) *po odnomu rublju*  
*po one(DAT) rouble(DAT)*

with the following structure:

(420)




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2. There are other well-known examples of the divergence between logical/semantic constituency and morphological/syntactic constituency. One such case is the famous example: "transformational grammarian," where [transformational grammar] is the occupation of the [transformational grammar]ian, and yet the word 'grammarian' is a lexical unit to which 'transformational' is compounded.

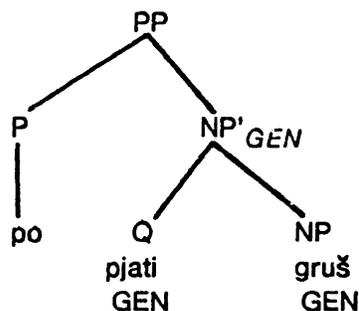
As Mel'čuk (1980) points out, with numerals above 4, *po* may occur with the genitive case.

This gives the predicted form:

(421) *po pjati gruš*  
*po* 5(GEN) pears(GEN)

with the structure:<sup>3</sup>

(422)



Thus, quantificational PP's may appear in subject or object position. As Babby points out, however, they may not occur in oblique case positions. In this case, unlike that of government-type numeral phrases, subject and object *positions* are privileged in that they may accept quantificational PP's while oblique positions may not. Morphological case is not the relevant factor, since these PP's may not occur where a lexically governed

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3. Babby drew very different conclusions about the constituency involved based on the assumption that *pjati* in *po pjati gruš* is in the dative, while *gruš* is genitive. See Mel'čuk for discussion of the cases governed by *po* (dative, accusative, and genitive). [Granted, it only governs the genitive case in a restricted set of contexts, but this represents an idiosyncrasy of the preposition *po*, (which, in any event, is being used with the accusative with increasing frequency).]

accusative is required. Compare previous examples:

(423) On smotrel na pjat' kartin  
He looked at 5(ACC) paintings(GEN,pl)

(424) \*On smotrel na okolo pjati kartin.  
He looked at near(ly) 5(GEN) paintings(GEN,pl)

So, the distribution of prepositional phrases does suggest a difference between structural and lexical case assignment, but not necessarily the one Babby proposes. In the following section, it will be shown that this difference follows in a natural way from the organization of the LFG model of case, without requiring the optionality of all structural case assignment in Russian.

## PART II: LFG AND THE THEORY OF CASE

### 4.2 STRUCTURAL VS. LEXICAL CASE ASSIGNMENT

One major difference between structural and lexical case assignment follows from the organization of the model. Structural case is assigned in the Phrase Structure expansions, and thus the assignment may be sensitive to constituency. In fact, for reasons that will be put forth in a moment, it appears that structural case may only be assigned to NP's in Russian. NP's which are subjects are assigned either nominative (in tensed clauses) or dative (in tenseless ones), while NP's which are objects are assigned either genitive (in the environment of a Q feature) or accusative (elsewhere). However, lexical case assignment is necessarily stated in terms of grammatical functions, because,

as Grimshaw (1979) and (1981) has argued, lexical items subcategorize only for functions. Therefore, the lexical case requirements are blind to constituency. A third type of case assignment appears reasonable, one which is stated as a redundancy rule on certain grammatical functions, such as XCOMP or OBJ2 in Russian (which appear in the instrumental and dative, respectively).

First, let us consider structural case assignment. Assuming that structural case may be assigned only to NP's provides an elegant account of two sets of facts. First, it provides the correct description of the distribution of adjectives. Following Babby (1973-a), we assume that the distinction between the long form and short form adjectives in Russian is one of case.

- (425) a. Ivan byl [vesel]<sub>AP</sub>  
Ivan was cheerful (temporarily)
- b. Ivan byl [vesëlyj [PRO<sub>NOM</sub> ]<sub>NP</sub>  
Ivan was (a) cheerful (person/one).

Short form adjectives are caseless.<sup>4</sup> Long form adjectives in direct case positions acquire case only by virtue of being contained within an NP (with a potentially PRO head). This correctly accounts for the semantics of the two types of adjectives, as well as for the

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4. For details, see Babby (1973-a). If this distinction is correct, then this supports the view that although nominative case is unmarked for all features, it is nonetheless a case, rather than the absence of one, as suggested by Andrews for Icelandic. (Andrews (1982-b) argues, on the basis of markedness, that the nominative, the citation form, lacks case entirely.)

limited distribution of the short form.<sup>5</sup> While the long form may occur within an NP (as in [vesělyj(NOM) čelovek(NOM)]<sub>NP</sub> 'cheerful person'), the short form is not possible [\*vesel čelovek(NOM)]. Since all lexical nouns must be casemarked (there are no short form nouns), case conflict would explain why a caseless short form could not occur within a casemarked NP. Likewise, adjuncts, which (as it was argued in Chapter 1) must agree in case with their antecedent, may not be short form adjectives.<sup>6</sup>

(426) \*?Ugrjum / Ugrjumyj , on plakal vsju noč'.  
Gloomy (?\*SF / LF(NOM)), he(NOM) cried all(ACC) night(ACC).

(427) \*?Vesel / Vesělyj, on igral v šaxmaty.  
Cheerful (?\*SF / LF(NOM)), he(NOM) played chess.

The second thing that is accounted for by this analysis is the casemarking of post-verbal time expressions. Although they are not objects, they receive the same structural case assignment as objects: accusative/genitive, depending on the context.

Thus:

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5. However, in non-direct positions, which are assigned case by redundancy rules stated in terms of grammatical functions, AP may receive case. This explains the possibility of finding either AP or NP instrumental complements, with the instrumental long form adjective having either the meaning normally associated with the short form AP or the nominative long form within an NP. The paradox discussed by Babby (related to the difference in meaning of the long form when in the nominative and the instrumental) may be explained in this way. Thus the semantic difference between non-casemarked AP and casemarked NP is neutralized in complement position where both NP and AP receive case.

6. Complements, however, may include short forms. This used to be quite normal in Russian, but this use of short form adjectives is apparently dying out.

(428) On ne spal odnu minutu.  
 He(NOM) NEG slept one(ACC) minute(ACC)

(429) On ne spal odnoj minuty.  
 He(NOM) NEG slept one(GEN) minute(GEN)

This account makes precisely the right predictions for the distribution of prepositional phrases. Since structural case is earmarked for NP's alone, if a PP occurred as a subject or object, it would not receive case. (We assume that only NP's and AP's are case-bearing, while PP's and VP's are outside the system of case.)<sup>7</sup> As we have just discussed, quantificational PP's may occur in these positions (as Babby demonstrated). Such caseless phrases, however, cannot satisfy quirky case requirements of individual lexical items. This is excluded by the theory of case within LFG. Consider a preposition such as *na* in its use as an accusative case assigner. If the preposition has a constraint:

$$(\uparrow\text{OBJ CASE}) =_c [- , - , + ]$$

this could not be satisfied by a prepositional phrase, since only [ + N ] constituents may bear case. Thus, the ungrammaticality of (424) follows directly.

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7. Pesetsky makes the same claim about QP's in general. By our analysis, though, this only applies to prepositional Q's, not to nominal or adjectival ones.

### 4.3 DIRECT CASE AND OPTIONALITY

Thus, the distribution of prepositional phrases follows from the system of representing case with the very minimal (and independently motivated) assumption that structural case is assigned only to NP's. There is no necessity for postulating general optionality. Within the current framework, the optionality of structural casemarking is required only to allow for lexical items to exceptionally require a particular case, other than the unmarked one, for their subject and object. The question arises: are there quirky subjects and objects in Russian? Although there are cases where lexical items impose case restrictions on their objects, there do not appear to be any instances of quirky case on subjects in Russian. The candidates for such quirky case requirements have included verbs that take dative experiencers. However, as discussed in Section 2.2, there is reason to believe that they are not true subjects. Lacking any necessity for making subject assignment optional in Russian, one has the choice of (a) making all structural case assignment optional, or (b) making only object case assignment optional. Both would correctly account for the casemarking of subjects. However, if (b) turns out to be the correct option, then we might have an explanation for the subject / object asymmetries that were observed in Section 2.1.1. The possibility of finding the partitive null Q only in object position would follow from the fact that when the Q is missing, the head of the phrase bears no case, and thus could not appear in a position which requires case. This would permit the null Q to appear in object position, where case assignment is optional, but not in subject position, where it is obligatory.

Furthermore, choosing option (b) would provide an explanation of why quirky case-marked objects may not passivize in Russian as they do in other languages (like Icelandic).<sup>8</sup> The obligatory case requirements of subject position and the lexical case requirements clash, while in object position, no such obligatory structural case assignment is found.

#### 4.4 CONCLUSION

In Chapter 2, it was demonstrated that the so-called genitive of negation is found only in object position. This is counter to previous assumptions about the status of the genitive phrases that alternate with nominative NP's, which have generally been considered to be subjects. This is particularly significant because the supposed existence of genitive subjects in Russian has served as a basis for much of the theoretical work on Russian case that has been done. In this chapter, we showed that the direct case

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8. A few examples involving apparent passive versions of quirky case object constructions have been proposed in the literature. For example,

- (i) *partija* rukovodima Leniny.  
 party(NOM) led(SF adj.) Lenin(INS)  
 'The party led by Lenin'

Such examples are, first, extremely few in number. Second, unlike Icelandic passive subjects with quirky case, the subject does not appear in case normally governed by the verb (in this case, ), but obligatorily in the nominative. Thus, this does not disconfirm the claim that nominative case is required for subjects. It suggests, on the contrary, that for these rare examples, the quirky case restriction has been relaxed to allow for a normal, nominative subject.

condition was invoked, to a large extent, to capture a generalization that was simply untrue. The remainder of the facts it was used to explain follow directly from the representation of case within the LFG framework.

## 5. SUMMARY

In this dissertation, I have made the following proposals to account for case assignment and agreement in Russian.

(1) That NP subjects are obligatorily assigned nominative in "tensed" clauses, and dative otherwise.

(2) That post-verbal NP's — including both objects and time expressions — optionally receive either accusative or genitive, depending on the context in which they occur.

(3) That adjuncts agree in case with their functional antecedent.

The case alternations in subject and object position may be accounted for in terms of the decomposition of case into features, as suggested by Jakobson. These conventions, in conjunction with a lexical rule of Extraposition (which bears a striking similarity to processes found in French and English), allow clarification of several phenomena that have appeared puzzling, including the casemarking of adjuncts and the distribution of genitive phrases under negation.

Although this is a simple system, it is incompatible with several theoretical assumptions that have previously been made about casemarking in languages, and in Russian in particular. First, the account of modifier casemarking requires that PRO bear case in Russian — either nominative or dative depending on the context in which it occurs (the same case being required for lexical NP's appearing in the same context). If this analysis is correct, then it provides evidence against an explanation of the distribution of lexical and non-lexical NP's in terms of casemarking or lack thereof, as has been suggested by Chomsky.

Second, Babby's "direct case condition" for Russian, which was based, to a large extent, on the ability of both subjects and objects to occur in the genitive case in negative sentences, was seen to lack solid foundation, since upon more careful examination, we saw that the NP's marked with genitive case were all objects. Other motivation for the "direct case condition" was also shown to be based on incorrect generalizations about the casemarking of numeral phrases.

Furthermore, I argued against an alternative (Government Binding) account of the genitive of negation, put forth by Pesetsky, according to which these genitive phrases are united with non-agreeing numeral phrases and considered to be QP's, distinguished from agreeing numeral phrases, which are NP's. The claim that QP's cannot bear case was then invoked to explain the distribution of these phrases. As discussed in Chapter 3, there are problems with this approach.

Since Russian is a language that has only begun to be explored within the context of generative grammar, it is important to examine carefully the results that are emerging from recent work, since these results themselves are being built upon. The direct case condition is a case in point, since other investigators, including Pesetsky, have assumed such a condition in constructing their own analyses. I have attempted to reconsider some of the assumptions on which recent work in Russian syntax has been based.

In addition, I have argued that several of the distinctions that are central to Lexical Functional Grammar find support from the facts of Russian. The distinction between complements and adjuncts, for which independent evidence exists in languages like English, finds dramatic confirmation from the casemarking facts in Russian. Complements bear the instrumental case, while adjuncts agree in case with their functional antecedent. Also, the distinction between grammatical and anaphoric control, and between open and closed complements, finds support not only from the agreement of modifiers, but also from the distribution of the genitive of negation.

Thus, as I hope to have shown, the Lexical Functional model allows a natural account of casemarking and agreement in Russian, and a simple analysis of data which might seem problematic. Conversely, the rich case system of Russian allows certain important syntactic distinctions to be observed from a new perspective.

## 6. LIST OF TABLES AND SAMPLE SENTENCE SOURCES

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TABLE III	Mini-lexicon # 1 _____	p. 91
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*Chapter 2*

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SAMPLE SENTENCE SOURCES

**B** = Babby  
**BBLST** = Barnetová, et. al.  
**Ch** = Chvany  
**Cho** = Chomsky  
**Co** = Comrie  
**Cr** = Crockett  
**G** = Grimshaw  
**K** = Klenin  
**P** = Pesetsky  
**S** = Simpson

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