

Slavica 50th Anniversary Reissue

Issues in Russian Morphosyntax

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From the Publisher

This book represents the eleventh in a series of reprints of notable titles published by Slavica and long out of print. We are restoring these titles to print and making them available as free downloads from our web site, slavica.indiana.edu, in honor of Slavica's fiftieth anniversary. Yes, we are officially middle-aged. Founded by four graduate students at Harvard in 1966, Slavica published its first book in 1968, *Studies Presented to Professor Roman Jakobson by His Students*. To celebrate Slavica's jubilee, we are releasing in .pdf format, no strings attached, scans of twelve older titles that have been requested over the years. Enjoy these books, tell your friends, and feel free to share with colleagues and students.

Issues in Russian Morphosyntax was the second of Slavica's three noteworthy collections of articles on Slavic syntax. It contains a number of meaty articles that I personally found important to the formation of my own morphosyntactic *mirovozrenie*. Even now, some twenty-one years later, in my syllabus for next spring's edition of my graduate course in Russian syntax I have included three articles from this volume. This course is organized by reading a series of "greatest hits", i.e., conceptually important articles in the history of Russian generative syntax. I leave it as an exercise for the reader to identify which three articles are among my greatest hits.

Slavica would like to express its sincere thanks to Michael Flier and Richard Brecht for graciously granting permission for this reprint. We welcome comments on this and other forthcoming titles to be released in this series.

George Fowler
Director, Slavica Publishers
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Issues in Russian Morphosyntax

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Issues in
Russian
Morphosyntax

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Michael S. Flier

Richard D. Brecht

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PREFACE

The ten papers which comprise *Issues in Russian Morphosyntax* represent a selection of the American linguistic contributions read at the Los Angeles and Washington, D. C., sessions of the Second Soviet-American Conference on the Russian Language (SACRL), held in September, 1981. Since a substantial number of the American papers were concerned with the interaction of grammatical categories and syntax broadly conceived, including derivation, sentential syntax and discourse analysis, the publication of a volume of papers devoted to current research in Russian morphosyntax was felt to be timely and appropriate.

The present volume and the international conference that stimulated its publication would not have been possible without the dedication and support of many individuals and institutions whose help we hereby gratefully acknowledge. The National Endowment for the Humanities, the American Council of Teachers of Russian and the Center for Russian and East European Studies at UCLA provided generous grants, which, together with funds from the International Research and Exchanges Board, and the American Association for the Advancement of Slavic Studies, permitted the National Steering Committee of SACRL (Richard D. Brecht, Dan Davidson, Michael S. Flier) to plan three sessions of the conference at the University of Chicago, the University of Maryland, and UCLA. We extend special thanks to the Center for Russian and East European Studies at UCLA (Bariša Krekić, Director) for subsidizing the publication of this volume through Slavica Publishers (Charles Gribble, Editor-in-Chief) and the UCLA East European Composition Center (Dean S. Worth, Director). We are also grateful to Randy Bowlus and Kathleen McDermott (UCLA) for providing camera-ready copy of the manuscript.

As editors we have confined our role to making minor stylistic emendations and regularizing punctuation, spelling, and the format of footnotes and references. We wish to take this opportunity to thank the individual authors, whose cooperation throughout the course of production has considerably facilitated our task.

Michael S. Flier

Richard D. Brecht

Los Angeles and College Park
November 1983

The Form and Function of Aspect in Russian

Richard D. Brecht

It has been understood for some time that the grammar of Slavic aspect (i.e., the explicit account of the scope and formal expression of this particular semantic domain) must include a correlation of this grammatical category with the type of situation to which the particular utterance containing the aspectual form refers;¹ see, for example, Avilova 1976 and Forsyth 1970. Investigators outside of Slavic have recognized the relevance of this correlation and have proposed formal taxonomies of situational types designed to interrelate with the aspectual system. Scarborough-Exarhos (1979:30ff.) divides these taxonomies into those which are linguistic (Bull 1960, Garey 1957, Kenny 1963, and Vendler 1967) and those which can be characterized as logical (Bennett and Partee 1978, Dowty 1972, 1977).² Since a detailed discussion of the issues involved in classifying situational types would lead far afield, we shall content ourselves here with a brief elaboration of the most widely known system, that of Vendler 1967.

Vendler divided situations into those which inherently involve a goal or natural end-point (it is convenient to use Garey's 1957 term "telic") and those which do not ("atelic"). This basic distinction is clearly describable by means of logical entailments. For example, in the following examples the atelic sentences in (1) are distinguished from the telic ones in (2) by virtue of the fact that the former logically entail the sentences in (3), while the latter do not entail their simple tense counterparts in (4).

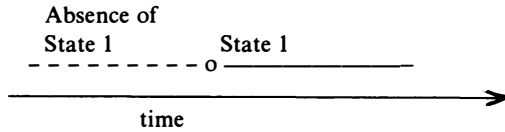
- (1) a. John was pushing a cart.
b. Tom was running in circles.
c. Mary was eating marshmallows.
- (2) a. John was drawing a picture.
b. Tom was opening the window.
c. Mary was running the last mile.
- (3) a. John pushed a cart.
b. Tom ran in circles.
c. Mary ate marshmallows.
- (4) a. John drew a picture.
b. Tom opened the window.
c. Mary ran the last mile.

As Vendler (1967:100) puts it:

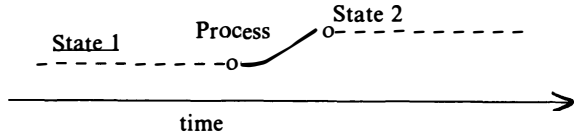
While running or pushing a cart has no set terminal point, running a mile and drawing a circle do have a 'climax', which has to be reached if the action is to be what it is claimed to be.

Further, the telic and atelic situations are each subdivided into "processes going on in time, that is, roughly, those which consist of successive phases following one another in time" (Vendler 1967:99) and those which lack these phases. For the atelic situations this characterization distinguishes "Activities" from "States," as it divides the telics into "Accomplishments" and "Achievements." (Because of the confusing nature of Vendler's terms "Accomplishment" and "Achievement," I shall replace the former with "Culmination.") Scarborough-Exarhos (1979:85) represents this four-way distinction graphically by means of the following schema:

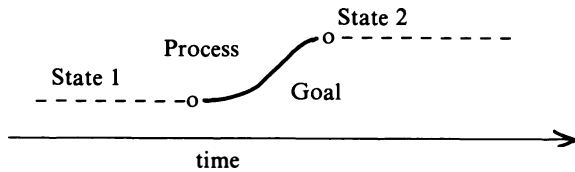
(5) STATES:



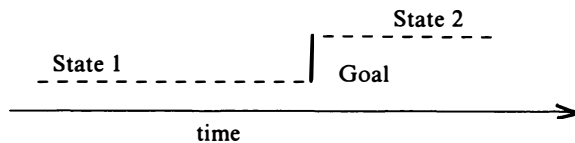
ACTIVITIES:



CULMINATIONS:



ACHIEVEMENTS:



States are nondynamic situations without natural conclusions; Activities are dynamic processes where any part "is of the same nature as the whole" (Vendler 1967:101). Culminations are goal-directed situations which are characterized by the presence of an activity preceding the end-point; they

therefore have intrinsic duration. Achievements, however, are telic situations consisting of instantaneous leaps from one state into another without any accompanying activity. The linguistic basis for this distinction in dynamism, according to Vendler, is the compatibility of the “progressive forms” in English with situations consisting of or involving activities (Activities and Culminations) as opposed to those without such a character (States and Achievements). Compare the acceptability of the progressive forms describing Activities and Culminations in (6) with the strangeness of this form when applied to States and Achievements in (7):

(6) **Activities**

Tom screamed/was screaming loudly.

Mary studied/was studying in Paris.

Culminations

Judy closed/was closing the door.

Ingrid returned/was returning.

(7) **States**

Kirsten hated/?was hating lemons.

That cost/?was costing five dollars.

Achievements

I lost/?was losing my keys.

Tom forgot/?was forgetting his coat.

While one might argue with the substance of this or any of the other proposed classifications of situational types, it is nevertheless clear that some such taxonomy of the inherent nature of the situation involved is vital to an understanding of the grammatical category of aspect. Evidence for this association can be readily adduced. For example, the first observation to be made with regard to Russian is the following: Verb phrases referring to telic situations are by nature perfective, while atelic States and Activities are most naturally represented by imperfective verb phrases. This follows from the basic definition of the perfective aspect in Russian as expressing the “Totality” or “Completeness” of the situation involved, while the imperfective makes “No-statement-of-completeness.”³

The correlation of telic situations with perfective aspect and atelics with imperfectives has very strong formal (derivational and syntactic) and semantic support in Russian. For example, it is well known that aspectual “partners” are formed in Russian in one of two ways: by prefixation or by derivational suffixation; cf. Townsend 1968 (114 ff.). To the best of my

knowledge, a rather startling fact concerning aspectual pairs has gone virtually unnoticed or at least unappreciated: as a rule, verbs normally expressing telic situations are prefixed and have imperfective partners containing the productive imperfectivizing suffix. On the contrary, verbs normally referring to atelic situations are simplex and are paired with perfectives formed by the addition of prefixes. This is entirely expected, once one understands the perfective as the base form for telics and the imperfective as the primary form for atelics. In the former instance it is the imperfective which is derived, while in the latter the perfective form is the less normal form. This correlation of form with situational type can be easily illustrated in Russian:

- (8) a. STATE: umet'/sumet' 'know how'
 xotet'/zaxotet' 'want'
 bojaťsja/pobojaťsja 'fear'
 čuvstvovat'/počuvstvovat' 'feel'
- b. ACTIVITY: dumat'/podumat' 'think'
 myt'/vymyt' 'wash'
 est'/s"est' 'eat'
 dejstvovat'/podejstvovat' 'act'
- c. CULMINATION: vypolnjat'/vypolnit' 'fulfill'
 dokazyvat'/dokazat' 'prove'
 rešat'/rešit' 'solve'
 otkryvat'/otkryt' 'open'
- d. ACHIEVEMENT: slučaťsja/slučitsja 'happen'
 priežat'/priechat' 'arrive'
 privykat'/privyknut' 'become accustomed'

To be sure, the derivational processes of prefixation and suffixation in Russian do not reflect the situational type ~ aspect correlation as straightforwardly as (8) seems to indicate. This is entirely expected, once it is understood that the verb itself is only one of the factors, albeit the primary one, which convey the situational type referred to by a given utterance. For example:

- (9) a. John read the newspaper in an hour.
 b. John read the newspaper for an hour.
- (10) a. Mary was eating the marshmallows.
 b. Mary was eating marshmallows.

The a-sentences in (9) and (10) represent Culminations, while the b-

sentences are Activities. In (9a) the Activity has a clear end-point: the newspaper is read more or less in its entirety. In (10a) a specific number of marshmallows is set as the goal of eating; as opposed to the situation in (10b), where the number of marshmallows is indefinite and irrelevant. In (9) and (10) it is the choice of preposition or definite vs. generic noun phrase which conveys the type of situation involved; the verb remains constant. To be sure, some verbs regularly refer to one or the other of Vendler's four types. However, many other verbs have a less specific lexical content and so can be used to express different situational types. The failure to fully appreciate this lack of a one-to-one correlation between verbs and situational types to some extent has vitiated otherwise sound attempts to relate aspect to the type of situation involved; cf. Forsyth 1970 and Avilova 1976. Whereas this lack of a one-to-one correlation between lexical verbs and situational types somewhat weakens the derivational morphology ~ aspect correlation cited above, it does not invalidate it. Many verbs refer to situations which are typically telic or atelic, and their use to refer to the opposite situational type is unusual and often requires extensive contextual support. For example, the verb *lose* in English refers typically to telic situations: *He lost his coat*. Recall the strangeness of sentences like *?He was losing his coat*. However, it is possible to have sentences like the following:

- (11) He was losing more and more of his powers of discrimination as time went on.

Here the verb refers to an Activity, as indicated by the extended context. (See below for more discussion of the shifting of situational types; see also Kučera 1983.)

Another piece of evidence for the formal correlation of telic situation ~ perfective aspect ~ imperfectivizing suffixation and atelic situation ~ imperfective aspect ~ perfectivizing prefixation is to be found in the *perfectiva tantum* and *imperfectiva tantum* verbs in Russian. Predictably, *perfectiva tantum* verbs must be those characteristically expressing telic situations, while *imperfectiva tantum* verbs are restricted to those normally signaling atelic situations:

- | | |
|----------------|---------------------|
| a. STATES: | imet' 'have' |
| | prinadležat' 'own' |
| | spat' 'sleep' |
| b. ACTIVITIES: | rabotat' 'work' |
| | tjanut' 'pull' |
| | pol'zovat'sja 'use' |

- (13) ACHIEVEMENTS: očnuťsja 'regain consciousness'
 očutiťsja 'find oneself'
 ruxnut' 'collapse'
 uliznut' 'slip away'

The verbs in (12) normally refer to States and Activities, inherently imperfective situations, and so the fact that they have no perfective counterparts is hardly surprising. By the same token, the absence of imperfective verbs referring to typically telic situations is equally reasonable.

These formal correlations of aspectual morphology with situational types in Russian argue very strongly for the direct association of perfective aspect with telic situations and imperfective aspect with atelics.⁴ However, of central interest is the claim made here that the basic function of aspect in Russian becomes immediately clear on the background of this general schema of situational types, aspects, and derivational processes.

Telicization

The facts in Russian clearly indicate that atelic States and Activities are essentially compatible only with the meaning of the imperfective aspect — however it is to be defined.⁵ It is equally obvious that these basic situations can be modified by the speaker, either by focusing on part of the situation or by changing the basic character of the situation itself. In either instance the result is the transformation of the situation from an atelic into a telic one. To illustrate, one can take the Activities of “eating” and “drinking” and make them into Achievements by focusing on the absolute final stage of the situation. In English this transformation is signaled linguistically by the addition of a postverbal particle, for example, *eat up*, *drink up*. In Russian the addition of specific verbal prefixes produces the same effect: *s'est* ‘eat up’, *vypit'* ‘drink up’. (The Activities “eat” and “drink” are expressed by the simplex verbs *est'* and *pit'*, respectively.) As the basic atelic situation is transformed by the addition of the prefix into a telic one, the aspect automatically changes from imperfective to perfective in accordance with the general compatibility of perfective aspect with telic situations and imperfective with atelic.

Let us now look more closely at this phenomenon of telicization. The atelic States and Activities are normally represented by simplex verbs, i.e., verbs without postverbal particles and without prefixes, in English and Russian, respectively. As noted, given the correlation between atelic situations and the imperfective aspect, it follows that most simplex verbs in Russian are imperfective. This fact is well established in the handbooks, even though the direct correlation of these imperfective simplex verbs with atelic situations has not been sufficiently appreciated:

“The great majority of simplex stems . . . belong to the imperfective aspect” (Townsend 1968:114). It is also an established fact of Russian that different lexical items can be made from these simplex verbs by the addition of various prefixes:

- | | |
|----------------------------|--|
| (14) <i>pisat'</i> ‘write’ | <i>perepisat'</i> ‘rewrite’
<i>zapisat'</i> ‘jot down’
<i>podpisat'</i> ‘sign’
<i>pripisat'</i> ‘ascribe’
<i>vypisat'</i> ‘copy out’ |
| <i>čitat'</i> ‘read’ | <i>perečitat'</i> ‘reread’
<i>začitat'</i> ‘read out’
<i>dočitat'</i> ‘read up to’
<i>vyčitat'</i> ‘find (in a book)’ |

Note that the prefixed verbs now represent different situations, specifically telic ones; ‘finding’, ‘rewriting’, ‘signing’, etc. all imply a goal or endpoint. This transformation of atelics into telics is regularly accomplished by prefixation in Russian, although specific suffixes may produce the same results.⁶ This prefixation, a strictly lexical process, is accompanied by an automatic shift in the aspect of the verb, the result of the aspectual marking conventions which assign perfective aspect to verbs referring to telic situations; see Brecht, forthcoming, Ch. 4.

Traditionally, this phenomenon of “lexical prefixation” is contrasted to a “sublexical” process, whose status in the language has been debated for years.⁷ I am now referring to the phenomenon known as “Mode of Action” (*Sposob dejstvija, Aktionsart*). Without becoming involved in the debate, one can simply state that the Modes of Action represent instances when the verb is intended to focus on one component of a situation, whether it be its inception, conclusion, intensification, a limited period of its duration, or the like. In this instance, in a manner similar to the case of lexical prefixation, one alters the nature of the situation from inherently atelic to telic by transforming an indefinite State or Activity into an Achievement or Culmination, e.g. ‘smoke’ → ‘begin to smoke’. The following list, taken from Townsend 1968 (119), illustrates sublexical prefixation:

- | | |
|----------------------------|---|
| (15) <i>kurit'</i> ‘smoke’ | <i>vykurit'</i> ‘finish smoking’
<i>dokurit'sja</i> ‘smoke to a climax’
<i>zakurit'</i> ‘begin to smoke, light up’
<i>zakurit'sja</i> ‘smoke too much’
<i>nakurit'sja</i> ‘smoke one’s fill’
<i>pokurit'</i> ‘smoke for a while’ |
|----------------------------|---|

The point here is that the addition of a prefix, lexical or sublexical, generally converts a basically atelic situation into a telic one; the crucial difference between lexical and sublexical prefixation appears then to depend on the character of the modification of the situation quite apart from telicization. Specifically, sublexical prefixation involves a semantic field which focuses on a component of the situation, whereas lexical prefixation creates a quite different situation entirely. The grammatical basis of the distinction, that is, the general resistance of sublexically derived prefixed verbs to form derived imperfectives, is the natural result of the difficulty of making a State or Activity out of a temporally limited, if not instantaneous, situation, which the prefixed verb normally represents. For example, *zakurit'* 'begin to smoke' naturally resists imperfectivization, signaling 'be in the process of beginning to smoke'. This is not a logical impossibility, but it simply is a statistically, if you will, unlikely situation that one would want to describe. Nevertheless, Bondarko and Bulanin (1967:144ff.) and Forsyth (1970:21ff.) have shown that some Mode of Action verbs do form derived imperfectives, but these normally represent "Repetition," the reasons for which we shall examine below in the section on atelicization.

To summarize, we have been discussing the process whereby the same verbal root may be used in utterances which have different values. (The value of an utterance is the sum total of the semantic and pragmatic information which it conveys; cf. Brecht forthcoming, Ch. 1. The lexical meaning of most simplex verbs signals a specific situation, part of whose semantic characterization is its atelic nature. In addition, a speaker may choose to convey a different situation, which consists of a State or Activity modified in such a way as to include a goal or end-point. In so doing, he may add a prefix whose lexical meaning conveys this information. However, this replacement of a verb whose lexical meaning includes the notion of Atelicity by one which now entails Telicity has grammatical consequences, which derive from the grammatical system as a whole. Specifically, the marking conventions (cf. Brecht, forthcoming) for the grammatical category of aspect will automatically mark the verb as perfective, unless the presence of the imperfectivizing suffix interferes. The latter process of atelicization will now be discussed.

Atelicization

The need to refer to telic situations consisting of States and Activities plus an end-point or goal motivates the derivational process of prefixation and the concomitant perfectivization of the verb. Obviously, though, not all forms of prefixed verbs in Russian appear in the perfective aspect. As a

matter of fact, the essence of the aspectual system involves atelicization — the process by which essentially telic situations are viewed atelically. Thus, in addition to the conceptual transformation of atelic situations into telics by means of prefixation, a basically lexical process, Russian has at its disposal the opposite shift of telics to atelics (i.e., Culminations and Achievements into Activities and States). In Russian this process of atelicization is accomplished primarily by adding to the verb a specific morpheme with the meaning of imperfective aspect — the aspect compatible with atelic situations. This process of “derived imperfectivization” is entirely productive in Russian and involves the suffixation of */-aj/*, often preceded by */-v-/* or */-i-v-/*. For example, the verb *ugovorit'* ‘persuade’ normally refers to a Culmination and so its basic form is inherently perfective. However, its imperfective counterpart is formed by means of the */-i-v-aj-/* suffix: *ugovarivat'* (for the sake of simplicity I am citing the infinitive forms here).

The process of atelicization is similar to telicization in that the speaker chooses to represent a situation which is inherently telic or atelic in its uncharacteristic form. But here the similarity of the processes ends. In telicization the situation is modified by the introduction of an end-point or goal to the State or Activity, and this is done by lexical means (prefixation). In atelicization the speaker’s attention is explicitly shifted from the inherently bounded nature of the situation to its Activity or State component. Thus, both sentences in (16) below are telic in the classic sense; both represent the same situation.

- (16) a. Kristine drew a circle.
b. Kristine was drawing a circle.

In (16b), however, the telic situation is presented with the focus on the process rather than the end-point. As Scarborough-Exarhos (1979:60) puts it:

The meaning of the progressive, then, and of Vendler’s distinction, may be taken loosely to be an aspectual focusing on the process entailed by the verb.

As indicated above, this shift to viewing a telic situation atelically is produced by adding to the value of the utterance the notion of No-statement-of-completion, the meaning of the imperfectivizing suffix. More significantly, this shift manifests the basic function of the grammatical category of aspect: to provide a general means of transforming one kind of situation into another without modifying the general nature of the situation in any other way. This is to be contrasted with the telicization process, where the perfective aspect is an automatic concomitant of the newly conceived, telic

situation.⁸ With atelicization, however, the situation remains constant, and the concentration on its atelic component is conveyed by the aspectual form.⁹

Semantic consequences

We shall now examine the semantic consequences of the formal modification of situational types by means of aspect. These remarks must be considered pretheoretical, since they are intended as a programmatic presentation of the amalgamation of aspectual meaning into the overall value of the utterance.

We have seen that telic situations can be conveyed by verbs normally referring to atelic ones simply by adding a specific prefix to the verb. The meaning of this prefix is directly responsible for the presence of such notions as Inception, Intensification, Conclusion, etc., which by their very presence in the value of the utterance transform the kind of situation being conveyed from atelic to telic. By contrast, the atelicization process is dependent on one derivational morpheme, which contributes only the notion of No-statement-of-completion, (to use the more commonly accepted definition of this aspectual morpheme) to the value of the utterance.¹⁰ However, there are a number of specific notions which are regularly associated with utterances containing imperfectivized verbs. I have in mind those notions figuring prominently in the handbooks: Process, Repetition, Conation. To this point the source of such notions has never been adequately specified, except by saying that they are dependent on, or compatible with, the meaning of the imperfectivizing suffix.¹¹ The assumption has been that the specific occurrence of one or the other of these notions is derived to a greater or lesser degree from the lexical meaning of the verb in combination with the imperfective aspect. To the extent that more than one of these notions have been associated with a particular verb, the generation of the specific notions has been left totally vague. It is my contention that such notions can be accounted for by careful analysis of the amalgamation of aspect meaning with the situational type involved. More specifically, I wish to outline the process by which the particular notions of Process, Repetition, and Conation arise as a result of the amalgamation of the meaning of the imperfective aspect with the telic situational types. I shall argue that the generation of these various aspectual notions is regular, even though none is expressed by a specific suffix. (Recall that the notions of Inception, Intensification, etc., on the contrary, are associated with individual prefixes in the telicization process.)

To illustrate, let us atelicize a Culmination and an Achievement in (17) by imperfectivizing the verbs, as in (18):

- (17) a. *Prepodavatelj terpelivo ob"jasnil mne to, čto ja ne ponjal v učebnike.*
 'The teacher patiently explained to me what I had not understood in the textbook.'
- b. *Viktor prišel i srazu že ušel.*
 'Viktor arrived and left immediately.'
- (18) a. *Prepodavatelj terpelivo ob"jasnjaj mne to, čto ja ne ponjal v učebnike.*
 'The teacher patiently was explaining to me what I had not understood in the textbook.'
- b. *Viktor prišodil i srazu že ušodil.*
 'Viktor used to arrive and then leave immediately.'

The atelicized Culmination in (18a) automatically acquires the notion of Process in contrast to the atelicized Achievement in (18b), with which the notion of Repetition is immediately associated. As noted above, this generation of the notion of Process with some verbs and Repetition with others has never been incorporated within the grammar, although there are some indications in the handbooks that their occurrence is not haphazard. The question is: How does one or the other of these notions regularly arise when the only observable change in the sentence is the addition of the imperfectivizing suffix?

As noted above, the addition of the imperfectivizing suffix results in the representation of an inherently telic situation by means of a verb whose aspectual meaning is basically incompatible with that type of situation. That is, this suffix forces the conjunction of the notion of Telicity, inherent in the lexical meaning of the verb and its complement, with the aspectual notion of No-statement-of-completion. This results in the grammaticalized atelicization of the situation, or, more precisely, the representation of the basically telic situation as atelic. The specific notions of Process or Repetition which then arise are a product of the new atelic nature of the verb and the type of telic situation originally involved, whether Culmination or Achievement. Imperfectivized Culminations normally result in Activities — whence the notion of Process — because an inherent part of the composition of a Culmination is an Activity; see (5) above.¹² Achievements, on the contrary, consist of instantaneous transitions from one State to another and thus have no Activity (Process) as part of their make-up. Therefore, imperfectivized Achievements most naturally produce the notion of Repetition in the value of the utterance by virtue of the fact that an instantaneous leap into a new state can only be interpreted atelically by analyzing the situation as a continuous State containing an indefinite number of leaps.

The assumption here is that a repeated situation is to be analyzed as constituting a State. This follows from a specification of an "habitual" as a "situation which is characteristic of an extended period of time, so extended in fact that the situation referred to is viewed not as an incidental property of the moment but, precisely, as a characteristic feature of a whole period" (Comrie 1976:28-9).¹³ Once Repetition is understood as a State, the formal and semantic structure of the aspectual system comes into bold relief:

(19)	<i>Imperfective</i>	→	<i>Perfective</i>
	A. Activities	→	B. Culminations
	C. States	→	D. Achievements

Formal expression: → = Lexical prefixation
 ← = Aspectual suffixation

Semantic notions: A → B ⇒ Individual notions associated with
 C → D ⇒ specific prefixes

A ← B ⇒ Process
 C ← D ⇒ Repetition

This schema is intended to summarize the dynamism of the system of situational types and the role of aspect in the process of telicization and atelicization.

This correlation of imperfectivized Achievements with States and Repetition can now explain such observations as the following in the handbooks:

Sredi glagolov nesoveršennogo vida est' takie, kotorye oboznačajut toľko povtorjajuščiesja dejstvija i ne moguť vyražat' dlitel'nost' dejstvij, naprimer, glagoly *prixodit'*, *slučat'sja*, *byvat'*, *zastavat'*. Ėti glagoly v forme nastojaščego vremeni ne moguť oboznačat' dejstvija, proisxodjaščego v moment reči, tak kak oni vyražajut toľko povtorjajuščiesja dejstvija. Naprimer:

Meždu nimi slučajutsja (byvajut) ssory.
V svobodnoe vremja on prixodit k nam v gosti.
Večerom ja zastaju ego doma.

Puľkina 1964:313

These sentences all represent atelicized Achievements, whose inherent nature rules out a Process interpretation. They therefore refer to repeated situations.

Returning briefly now to the Mode of Action prefixed perfectives, we can

now shed some light on a continuing debate which was sharpened by Isačenko (1960). In this provocative, if not always rigorous, treatment of the Russian verbal categories, Isačenko distinguishes lexical from Mode-of-Action prefixation by defining the latter as one which absolutely excludes derived imperfectivization. This, Isačenko claims, is what sets Mode of Action apart as a grammatical, as opposed to a lexical, phenomenon in Russian. This unequivocal position has been discredited by Bondarko and Bulanin (1967:12ff.) and Forsyth (1970:20ff.), who show that many prefixed perfective verbs, which by any account should be considered Mode-of-Action verbs, do in fact have suffixed derived imperfectives. Even a basic handbook like Puřkina 1964 (313) offers counterevidence to Isačenko's claim:

Nekotorye glagoly nesoveršennogo vida mogut vyražat' povtorjaemość načala dejstvija: *zabolevat', zakurivat', zamolkat', zapivat'*.
On vsegda zabolevaet posle kupan'ja, emu nel'zja kupat'sja.

The existence of these derived imperfectives and the clearly associated notion of Repetition is explainable in terms of the system proposed here. States and Activities, such as "being sick" or "singing," can be telicized into Achievements by the addition of prefixes which focus on severely restricted or instantaneous components of the situation as, for example, its inception. The newly constituted situation has no Activity component which can be focused on, and so atelicization/imperfectivization is generally not applicable. This is why Mode-of-Action verbs generally do not form derived imperfectives. However, like all Achievements, these Mode-of-Action perfective verbs may undergo atelicization/imperfectivization if and when Repetition is to be signaled, as the quotation from Puřkina 1964 makes clear. This accounts for the objections to Isačenko 1960 raised by Bondarko and Bulanin (1967) and Forsyth (1970). In the explanation proposed here, the imperfectivization of Mode-of-Action verbs is to be treated like that of any Achievement, the result being the provocation of the notion of Repetition:

Ešč glagoly nesoveršennogo vida, kotorye vsegda vyražajut povtorjaemość zakončennyx dejstvij: *pročitivat', vyučivat', vylečivat'* i dr.

Puřkina 1964:313

The debate about whether a particular prefixed verb is or is not a Mode-of-Action verb seems to me to be quite beside the point. The issue is whether the lexical contribution of the specific prefix on a verb alters the situation which it describes in such a way as to constitute an Achievement, as it clearly does in verbs like *pročitivat'//pročitat'* 'read through', *vyučivat'*

//*vyučit'* 'learn', and *vylečivat'*//*vylečit'* 'cure'. When this happens, derived imperfectives are limited to contexts involving Repetition, and so they are less likely to occur, if at all.

The preceding naturally accounts for certain previously unexplained formal facts about Russian aspect. Of equal importance, and even more to the point here, this approach demonstrates how the notions of Process and Repetition in the Sentence Meaning arise in a regular and predictable manner. Traditional inductive treatments of aspect have simply used these notions as the basis for a broad definition of the imperfective aspect, such as No-statement-of-completion. However, by proposing a semantic amalgamation of aspect meaning and situational type, I am making a much stronger, specific, claim about the function of aspect in Russian. Now the semantic notions so clearly associated with sentences containing specific aspectual forms are not just accommodated when they are observed. Rather, this deductive, albeit pretheoretical, approach confronts the question of *when a specific notion will occur and when it will not*. Added to the formal correlations, this approach to grammatical meaning represents a radical departure from the inductive, invariant-seeking, methods of traditional Prague School studies.

Finally, a word should be said as to why atelicization, with its formal marking of derived imperfectivization, is the grammaticalized, productive, aspectual process in Russian. By grammaticalized I mean that there exists a restricted semantic paradigm (perfective vs. imperfective) with a consistent formal manifestation which must be represented in every sentence in Russian; cf. Brecht, forthcoming. The ease with which this shift takes place is due to the general nature of telic and atelic situations, given that Activities and States constitute an inherent component of Culminations and Achievements, respectively. That is, in Culminations an Activity precedes the end-point or goal. Achievements consist of an instantaneous leap from one State into another. Atelicization is the most logical consequence of this hyponymous, as it were, relationship between telic and atelic situations, given that the shift from the more marked telic verb form to the less marked atelic one simply involves the elimination of the specific reference to the goal or end-point. Whereas this rationale for the productivity of atelicization is basically intuitive and therefore relevant for any and all languages, there is a specific fact of Russian which explains the logic of the grammaticalization of this phenomenon. It is well known that in Russian the perfective aspect is incompatible with reference to an action which is on-going in the present time. Since, as a result, only the imperfective can be used for present time reference, and since there is a need to represent telic

situations as on-going or at least relevant in the present, it follows that a language like Russian would have to have a productive process of imperfectivization, even if the result is the representation of telic situations as atelic.

Thus far we have looked at the atelicization — by means of the addition of the semantic feature of No-statement-of-completion — of Culminations to Activities and Achievements to States, but this is by no means the whole picture. It is possible for Culminations to atelicize into States with the associated notion of Repetition, just as atelicized Achievements may result in Activities. For example, the reader may have objected earlier that sentence (18a) above may be interpreted as referring to repeated actions in the appropriate context. This reading can be made explicit with the addition of the appropriate adverbial:

- (20) *Prepodavatelj vseгда terpelivo ob"jasnjaj mne to, što ja ne poznaj v učebnike.*
 'The teacher always used to explain patiently whatever I hadn't understood in the textbook.'

While the conversion of Culminations to States requires the appropriate context indicating repetition, Achievements demand even more explicit contextual support to atelicize into Activities. Note the following examples, taken from Rassudova 1977 (141):

- (21) *?Ja privykal k vašemu klimatu.*
 'I was in the process of adjusting to your climate.'
- (22) a. *Ja dolgo privykal k vašemu klimatu.*
 'I took a long time to adjust to the climate here.'
- b. *K vašemu klimatu ja privykal postepenno.*
 'The process of becoming accustomed to your climate was a gradual one.'

Rassudova comments that the foreign student may use (21) "intending to express action in progress but omitting all adverbial modifiers of that action. The utterance is incomplete, inadequate for conveying the intended meaning. Some contextual element is needed . . ." This need for contextual support arises from the fact that Achievements by definition do not have an inherent Activity component which can become the referent of the verb when atelicized. This dilemma, that is, the creation of an Activity in a situation where one is normally excluded, has its own quite regular semantic consequence. Note the following sentences and their translations, taken from Forsyth 1970 (72), which all contain the imperfective of a verb normally used to refer to Achievements:

- (23) a. Levin slušal i *pridumyval* i ne mog pridumať čo skazať.
 ‘Levin listened and tried to think of something to say, but couldn’t.’
- b. Poka on [Majakovskij] suščestvoval tvorčeski, ja četyre goda *privykal* k nemu i ne mog privyknuť.
 ‘For four years, while he still existed as an artist, I tried to get used to Majakovsky, but I couldn’t.’
- c. Kogda komandir ego polučil, on dolgo *vspominal*, kto takov podporučnik so strannoju familiej “Kiže”.
 ‘When the commanding officer received [the order], he tried for a long time to recall who was the second lieutenant with the strange surname “Kizhe.”’

In these sentences all the italicized verbs are atelicized (by derived imperfectivization) Achievements. However, in each instance the context unambiguously rules out Repetition as a possible interpretation. Rather, the Achievements are presented here as Activities; there is a clear focus on a process which is attached, unexpectedly if you will, to these situations. This conflict, I would claim, gives rise in Russian to the notion of Conation. Thus, in (23c) the phrase *dolgo vspominal* does not convey a process *per se*, but it refers to a long attempt to bring about the instantaneous transition into a new State. It is then properly translated as ‘tried for a long time to recall’.

The identification of the notion which arises from the forced conversion of an Achievement into an Activity is problematic, as the use of the terms “conation” or “inclination” in the handbooks indicates. This is even more obvious when one notes that the English translation of imperfectivized Achievements, in addition to the common ‘try to . . .’, employs lexical verbs different from those used to translate the perfective Achievements themselves. Note the following sentences and their English translations:

- (24) a. Ty budeš uznavat’ o programme?
 ‘Are you going to ask for some information about the program?’
- b. Staneš božšim čelovekom, perestaneš uznavat’ neboš’.
 ‘When you grow up, you’ll just stop asking.’

Compare this with the following:

- (25) a. My uznali raspisanie èkzamenov.
 ‘We found out/ascertained the exam schedule.’

The following pair of sentences further illustrates this:

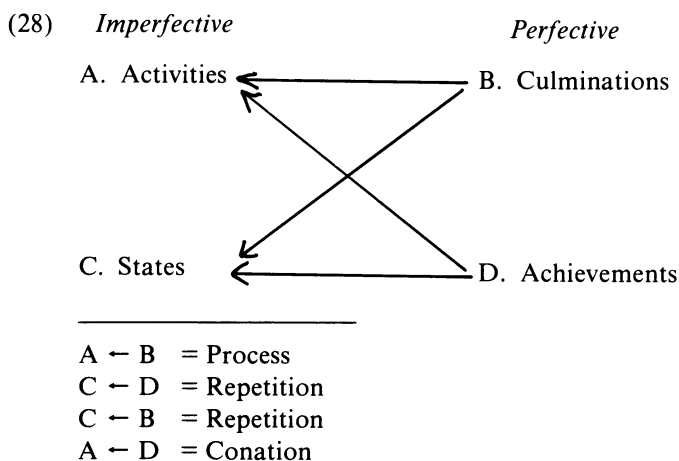
- (26) Ja dolgo ugovarival ego postupiť v aspiranturu.
 ‘I spent a long time persuading him to go to graduate school.’

vs.

- (27) Ja ugovoril ego postupit' v aspiranturu.
'I convinced him to go to graduate school.'

These examples, together with those in (23), demonstrate that this transformation by derived imperfectivization of an inherent Achievement into an Activity essentially imposes onto the situation a process before the leap into the new state. The exact semantic consequences of this imposition vary with the situation, although there does seem to be justification for the notion of Conation. Details aside, facts such as these must be recorded somewhere in the grammar. If the presence of a notion is not pragmatic, i.e., is not dependent upon the particular circumstances or speaker involved, then it meets a reasonable criterion for inclusion in the Sentence Meaning and so must be accounted for by the semantic amalgamation rules. In this particular case, these amalgamation rules would generate the notion of Conation when a normal Achievement is atelicized as an Activity, that is, when the Stative, i.e., Repetition, meaning is ruled out by the context.

We have now seen instances of the grammatical category of aspect acting by the formal means of derived imperfectivization to change Achievements and Culminations into Activities and States, respectively. Thus, we may expand our schema displaying the consequences of suffixed imperfectivization into the following:



The use of the grammatical category of aspect to shift situational types is not restricted to the instances summarized in (19) and (28). More specifically, the shift of situational types can be within atelic situations or within telic ones. Note first the following observation in Puřkina 1964 (313):

Est' glagoly nesovershennogo vida, vyražajuščie dlitel'nye dejstviya (*čitat', pisat', guljat', igrat', zanimat'sja* i dr.), kotorye sami po sebe povtorjaemost' ne vyražajut. Dlja vyraženiya povtorjaemosti s ètimi glagolami upotrebljajutsja obstojatel'stvennye slova. Naprimer:

*My každyj večer guljali v parke.
Po utram ja čitaju gazety.*

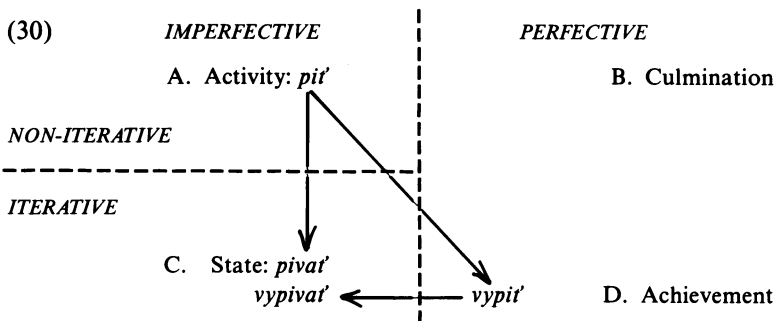
This observation may be put into the terms we are using here in the following manner. Verbs which normally represent Activity situations, with the appropriate adverbial support, may be interpreted as States. Like the imperfectivized telics in (18), the only way Activities can acquire the stative meaning is by the imposition of a broader time frame with a periodic repetition of the entire situation. In order for this reading of Repetition to emerge, the context must suppress the Process notion, normally by the addition of frequency adverbials.

This transition of Activities to States is even more striking when it, like the telic → atelic shifts, is grammaticalized by derivational morphology. In Russian this is accomplished by the now archaic process of "derived iterativity," which adds the suffix /(+ i (-v (-aj+)))/ to imperfective simplex verbs in order to express habitual actions in the past: *est'* 'eat' → *edat'*, *pit'* 'drink' → *pivat'*, *govorit'* 'talk' → *govarivat'*, *xodit'* 'walk' → *xaživat'*, *sidet'* 'sit' → *siživat'*, *čitat'* 'read' → *čityvat'*, *pet'* 'sing' → *pevat'*, *nosit'* 'carry' → *našivat'*, *begat'* 'run' → *begivat'*. Note the following examples, taken from Forsyth 1970 (169) and Vinogradov 1972 (433):

- (29) a. Ty, Veronika, často zdes' siživala — tut i ostaneš'sja.
(Rozov: *Večno živye*)
'You have often sat in this seat in the past, Veronika, so you can just stay in it.'
- b. [Ippolit Matveevič] podnjalsja vo veš' svoj prekrasnyj rost, po privyčke vykativ grud' (v svoe vremja on našival korset).
(Ilf and Petrov: *Dvenadcat' stučev*)
'Ippolit Matveevich drew himself up to his full majestic height, and out of habit stuck out his chest (in his day he had worn corsets).'
- c. V molodosti on otlčno peval. (Turgenev: *Postojalyj*)
'In his youth he had been an outstanding singer.'
- d. I Nataša tem bystryj begom, kotorym ona begivala v gorelki, pobežala po zale, v prednjuju. (L. Tolstoj: *Vojna i mir*)
'And Natasha, with the same stride she had used in playing catch, headed for the front hall.'

In these sentences Activities have been turned into States (with their associated notion of Repetition) by a formal aspectual process, much the same as the imperfectivizing suffixation of the contemporary language. The only difference is that this is taking place *within* the atelic class of situations.¹⁴

With this understanding of the function of aspect with regard to situational structure, the traditionally much disputed question of “aspectual pairs” becomes trivial. Of paramount concern is the interrelation of grammatical aspect with situational type and *not with the lexical verbs themselves*; cf. Mourelatos 1981 (196), Avilova 1976 (20) and Forsyth 1970 (46ff.). Clearly, individual verbs can enter into various relationships. Consider the verb *pit'* ‘drink’. This verb, like most simplex verbs in Russian, normally refers to an atelic situation, in this case an Activity. This Activity can be telicized into an Achievement by adding the prefix *vy-*: *vypit'* ‘drink up’. The derived Achievement in turn may be atelicized into a State, thereby acquiring the notion of Repetition: *vypivat'* ‘custom of drinking up’. Furthermore, the simple stem signaling an Activity may shift directly to a State by means of the archaic process of derived iterativity: *pivat'* ‘used to drink’. This can be schematized as follows:



Given what we have observed thus far about the interrelation of aspect and situational types, we might expect some shifting to take place between the telic categories as well. As a matter of fact, there is evidence for such shifts, which has significant repercussions for the problematic area of Russian aspect and tense known in the handbooks as *konstatacija fakta* ‘Statement of Fact’ (SoF). This term refers to the use of the imperfective aspect in Russian to refer to a unique and complete event, when the meaning of the perfective aspect might seem to be more appropriate. In this construction the imperfective form is used “to identify the type of action . . . , naming it without reference to the question of its ‘perfectivity’ or otherwise” (Forsyth 1970:82). Some typical examples of this usage are cited by Forsyth (1970:82ff.):

- (31) a. Počemu zdes' tak pyl'no? Ty *ubiral* segodnja komnatu?
 'Why is it so dusty here? Have you cleaned the room today?'
 b. —Nado bylo zajavit' togda ž—, skazal on.
 —Ja *zajavljal*.
 "“You ought to have reported it right away,” he said.
 “I did report it.””
 c. Tebe kto slovo *daval*, maljavka!
 'Who said that you might speak, small fry!'
 d. —Kto u vas gruporg?— *sprašival* Roslavlev.
 —Vasilenku *vybiral*i. Ili èto v tom godu byl Vasilenko? Ne pripomnju.
 "“Who is your group organizer?” asked Roslavlev.
 “Vasilenko was elected. Or was it last year we had Vasilenko? I can't recall.””

The italicized verbs in these examples are all imperfective, even though the actions to which they refer are all single and complete and therefore, presumably, compatible with the meaning of the perfective aspect.

It is not my intention here to provide an explanation of the Statement-of-Fact construction in Russian, for it is one of the most difficult and important problems in Russian grammar — particularly since it serves as the basis for the positing of the imperfective/perfective distinction as one of “subordinative markedness” (A vs. No-Statement-of-A). However, this usage does provide some interesting data for the shifting of situational types in Russian. For example, two observations must be made immediately concerning the examples in (31). First, all the sentences involve atelicized Culminations. Second, the semantic notion of Process, which normally arises when Culminations are atelicized, is not associated with these sentences. The latter fact significantly complicates the relatively straightforward account of the generation of semantic notions by atelicization given above. Obviously, the atelicization of Culminations can result in various notions, depending on the context. We have already seen that Repetition is possible, although Process is the most natural. The examples in (31) demonstrate that Statement of Fact, however this is to be defined in terms of semantic notions, must also be accommodated here. (Annulment is another possibility, when the given situation involves “two-way” or annulable actions: *Vanja uže otkryval okno* ‘Johnny already opened (and closed) the window’ vs. *Vanja uže otkryl okno* ‘Johnny has already opened the window’.) All of these notions arise in the appropriate contexts when the meaning of the imperfective morpheme is added to a sentence which refers to a Culmination. The explanation for this broad range of notions has tradi-

tionally depended on the invariant definition of the imperfective aspect in Russian as No-statement-of-completion, which definition is compatible with contexts demanding any and all possible interpretations. By using the imperfective instead of the perfective form in Statement-of-Fact constructions, the speaker may be stressing that the situation is not complete or he may just choose not to stress that the situation is complete. The former interpretation is required in contexts referring to atelicized situations involving Process, State, Repetition. The latter interpretation permits the speaker to present a telic situation, a Culmination in this case, in a context completely compatible with its telicity, either by means of the expected perfective verb or by its atelicized/imperfectivized counterpart. In the latter instance the existence of the goal or end-point is obvious from the whole situation, and the apparently conflicting representation of the situation as atelic produces the deemphasis of this end-point. The result is the Statement-of-Fact reading, focusing on the past existence of a situation rather than on its telic or atelic character.¹⁵

The first observation noted above is that the examples in (31) are all Culminations. The following examples indicate very clearly that atelicized Achievements can never be compatible with the Statement-of-Fact interpretation:

- (32) a. Ty ego uznaval?
 'Did you used to recognize him?'
 b. Ty ego uznal?
 'Did you recognize him?'
- (33) a. Čto slučalos?
 'What used to happen?'
 b. Čto slučilos?
 'What happened?'
- (34) a. Otec ustaval?
 'Did father used to get tired?'
 b. Otec ustal?
 'Has father got tired?'

The a-examples in (32)–(34) are simply not interpretable as Statement of Fact, as the glosses indicate. Rather, they obligatorily carry the notion of Repetition, which is the normal result of atelicized Achievements.

On this background I would like to discuss a small set of data involving Statement of Fact, which were raised by Rassudova (1977:142):

- (35) Za zavtrakom on vypival čašku kofe.
 'At breakfast he used to drink a cup of coffee.'

- (36) a. *Ja uže priginal tabletku aspirina.
 'I already took an aspirin tablet.'
 b. Ja uže priginal aspirin, no golova vse ešče bolit.
 'I have already taken aspirin, but I still have a headache.'

Rassudova states that (35) cannot be interpreted as an instance of Statement of Fact; it can only refer to an habitual action. This, she asserts, is due to the limited nature of the direct object, although no explanation for this somewhat curious fact is offered. In the terms used here, one simply understands that the situation of *vypivat' čajku kofe* 'drink up a cup of coffee' is an Achievement, which has been atelicized into a State with the accompanying notion of Repetition. This explains the habitual meaning as well as the lack of Statement-of-Fact reading, given that Achievements regularly atelicize to States only — as discussed above.

Example (36) reveals even more about the conversion of one type of situation into another. Previously we examined instances of the shift of atelics to telics (by means of prefixation), telics to atelics (by suffixation), and Activities to States (also by suffixation). In addition to these derivational processes, we saw that the presence of appropriate adverbials could support the interpretation of an Activity as a State (with the associated notion of Repetition).¹⁶ Now, the judgements of acceptability for the examples in (36), I would argue, are explainable in terms of a conversion of a Culmination into an Achievement by lexical means. For these examples Rassudova notes that only (36b) has the Statement-of-Fact interpretation of a discrete event, whereas (36a) must, like (35), be interpreted as an habitual occurrence. The difference between (36a) and (36b) is limited to the nature of the direct object. But how can the limited quantity of the direct object remove the notion of a single, discrete action, as it does in (36a)? It seems reasonable to assume that in (36a), as in (37), the smaller the quantity of the direct object, the more likely it is that the process involved in consuming it will be shorter and less perceptible. The effect of this abbreviation of the process before a natural end-point is reached and a new state is entered into is simply the transition of a Culmination into an Achievement. Once the situation involved is considered an Achievement, the overriding interpretation of its imperfectivized verb phrase is Repetition, and so the Statement-of-Fact notion of a discrete action is ruled out. Example (36b), on the contrary, represents an atelicized Culmination with the regular Statement-of-Fact reading in the appropriate context.

The fact that the shift of situational type can depend on the specification of the direct object is not surprising, as we saw in (17) (repeated here as (37)):

other substantial way — which is the general function of the grammatical category of aspect in language.

Note, finally, that I have said very little about the invariant meaning of the aspects, other than to note that the perfective is naturally compatible with telic situations and the imperfective with atelic ones. Whether one accepts Jakobson's (1957/1971:137) definition of the perfective as "absolute completion," or Maslov's (1959:309) one of "indivisible totality" (*nedelimoe celoe*), or Galton's (1976:11) one of "succession," or any of the myriad of proposed general meanings, the essential task is to incorporate in as rigorous a fashion as possible the proposed meaning into the semantic amalgamation rules which produce the Sentence Meaning. Which one of these meanings is taken as basic (most likely they can be derived one from the other) will then depend on factors such as the semantic amalgamation rules themselves or the inventory of semantic primitives required in other parts of the grammar. In any instance, as I have stressed in a number of previous papers, we must shift the traditional focus of aspectual studies in Slavic from the induction of Sentence Meaning notions associated with the aspect forms in Russian. However, contrary to some recent work being done in this vein, language acquisition considerations still argue strongly for the relevance of the principle of "formal determinism" and the general constraint known as "invariance" — albeit in a much more comprehensive framework.

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NOTES

1. The present paper is a part of larger study on the specification of the temporal domain in language (Brecht, forthcoming). It is a slightly expanded version of the paper presented at the Lake Arrowhead session of the Second Soviet-American Conference on the Russian Language.

2. See Mourelatos 1981 for a comparison of Vendler 1967 and Kenny 1963.

3. There are, of course, as many proposals concerning the meaning of the aspects as there are investigators working on the problem. See, for example, Tedeschi and Zaenen 1981. Forsyth 1970 and Avilova 1976 offer brief surveys for Russian, while Galton 1976 does the same for Slavic. I have accepted Maslov's (1959:309) notion of Totality for two reasons: First, subtleties aside, this is the most frequently espoused notion for the perfective aspect in Russian. Second, I believe that the competing proposals are ultimately compatible, once the semantic amalgamation rules for aspect are developed for each analysis. This is in accord with the argument that the total concentration on invariant meaning at the expense of amalgamation rules is misplaced. (Cf. Brecht, forthcoming and Timberlake 1982.)

4. This raises the question of the status of markedness with regard to aspect and situational types. Restated, one can say that the imperfective is unmarked when referring to atelic

situations, but marked with regard to telic ones. On the contrary, the perfective aspect is marked when referring to atelic situations and unmarked for telics. This is, of course, an entirely different approach to markedness from that of the standard Prague School enunciated by Jakobson in many of his studies; see, for example, Jakobson 1932/1971, 1957/1971. It is similar to the approach made by Chomsky and Halle (1968) for phonology. Cf. Brecht, forthcoming for a discussion of this problem.

5. I will assume the "subordinative" definition of No-statement-of-totality; see footnote 4.

6. For example, the addition of the semelfactive */-nu-/* suffix to a simplex stem results in a perfective Achievement; cf. Townsend 1968:104-5.

7. Cf. Bondarko and Bulanin 1967, Forsyth 1970, Isačenko 1960, and Townsend 1968 for surveys of the issues involved.

8. As noted above, the "markedness convention rules" presumably will automatically assign the imperfective aspect to simplex verbs referring to atelic situations and the perfective to prefixed verbs signaling telic ones; cf. Brecht, forthcoming, Ch. 4.

9. This understanding of the function of aspect in language is implicit in such works as Cochrane 1977, Mourelatos 1981, and Scarborough-Exarhos 1979.

10. I am referring to the imperfectivizing suffix */-aj-/,* whether or not it is preceded by */-v-/* or */-i-v-/.*

11. The array of such notions normally constitutes the data base from which the semantic common denominator is abstracted and posited as the invariant meaning of the imperfective aspect.

12. I shall use the traditional term "Process" to identify the semantic notion equivalent to Vendler's concept of "Activity". Ultimately, finer distinctions will be necessary.

13. The treatment of "habit" as a State as been proposed by Kucera 1981 and Scarborough-Exarhos (1979:62ff.). The general nature of the discussion here is exemplified by my ignoring the distinction between "iterativity" and "habit". Cf. Scarborough-Exarhos 1979 (64, fn. 3).

14. This process of derived iterativity is more involved than this discussion has indicated, for it apparently applies to some States as well: *znat'* 'know' → *znavat'*, *slyšat'* 'hear' → *slyxat'*, *videt'* 'see' → *vidat'*. Given the peripheral status of the entire phenomenon, the apparent complexity of the data is not surprising. For further discussion see Forsyth 1970 (28, 166ff.) and the references cited there.

15. This constitutes a very casual explanation of the Statement-of-fact usage. Many important issues are relevant here. For example, what are the contextual factors which permit or require this deemphasis of the end-point of the situation? This important problem cannot be treated adequately in a programmatic study of this kind.

16. Such shifts in English have been discussed by Scarborough-Exarhos 1979. For example:

- (i) They were reaching the top.
- (ii) They were loving it more and more.

Example (i) refers to an Achievement, which by means of the progressive aspect is transformed into a Culmination. Sentence (ii) represents a shift of a State to an Activity.

17. The interrelationship of aspect and quantified objects or of aspect and voice in general has not gone unnoticed. Cf. Merrill and Timberlake (this volume), as well as Paillard 1979.

18. See Chomsky and Ronat 1977, Katz 1980, and Jackendoff 1981 for a recent debate on the kinds of issues involved in determining the semantic vs. pragmatic status of the notions associated with an utterance.

19. Russian has a suffix which automatically converts atelics into Achievements. This so-called "semelfactive" */-nu-/* suffix expresses an "action as instantaneous or single in occurrence, without repetition or continuation" (Townsend 1968:104).

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The Temporal Schemata of Russian Predicates

Alan Timberlake

1. Introduction

It is generally recognized that predicates can have different configurations in time, and that morphological aspect in large part reflects these different configurations. In English, the progressive signals that a process goes on at (or over) some period of time (Jespersen 1924/65:278); in Russian, the perfective involves placing a boundary on the time over which the predicate holds (Jakobson 1932/71:6). That part of aspect that has to do with the configuration of predicates in time can be termed CONFIGURATIONAL ASPECT.

At the same time, it is also clear that aspect is constrained by semantic properties of predicates, which can for the sake of convenience be termed LEXICAL ASPECT. The progressive in English is ordinarily not used with inherently stative predicates; the perfective in Russian requires that the predicate have an "inherent limit."

A major goal of aspectology is to characterize the lexical aspectual constraints on configurational aspect. This goal is often approached through the formulation of a typology of predicates, such as that of Vendler (1967), in terms of which the lexical constraints on aspect can be stated. Although initially attractive, such typologies tend to be taken as primitive, a fact which leads to problems at both the descriptive and the theoretical levels.

At the descriptive level, individual lexical verbs regularly combine senses that belong to different classes of the typology, and the verbs of a given class may not always have a uniform behavior with respect to configurational aspect. On the theoretical level, a typology itself does not provide a motivation for the interaction of lexical and configurational aspect. As long as the classes of the typology are taken as discrete (and this in fact is usually the case with the Vendlerian typology in particular), the interaction can only be stipulated. To motivate it, one must formulate a descriptive model in which lexical aspect and configurational aspect are expressed in terms of the same basic notions.

One way of approaching this goal is to decompose both lexical and configurational aspect into the same primitives. Given that configurational aspect obviously involves time, the natural way to do this is to define lexical aspect in terms of time as well. This amounts to investigating what Vendler termed "the time schemata presupposed by various verbs" (1967:98).

The present study is an investigation along these lines. The approach taken below decomposes lexical predicates into temporal schemata by building into a predicate all of its possible histories. This involves setting up arbitrary covers of time and defining functions that relate these arbitrary intervals of time to abstract situations. Lexical aspect can be described in terms of these functions. Given that a condition for the perfective in Russian is that the predicate have an inherent limit, the main task below is to define the notion of inherent limit in temporal terms. This involves looking at possible future histories of a predicate that could develop out of some privileged interval of time. In brief, the task is to define Dowty's (1979) notion of "inertia worlds" in terms of Vendler's notion of "temporal schemata."

2. *Contextual Configurations*

It is traditional to observe that the perfective and imperfective in Russian have a number of recognizably distinct uses, or functions, which are termed contextual variants. Lexical constraints on aspect are to some extent sensitive to the contextual variants of aspect (rather than simply to the general categories of perfective and imperfective), and for this reason it will be useful to develop a typology of the major contextual variants. These could be defined in more than one way, and in the literature the classification of contextual variants often includes a variety of lexical, configurational, and discourse properties (Haltorf 1967, 1968; Bondarko 1971). In order to localize the specifically lexical contribution, I will limit the discussion here to those contextual variants that are defined by different relations between predicates and time periods selected by the speaker in narration, and refer to these as contextual configurations. To make this sense of contextual variants more precise, it is useful to distinguish, following Reichenbach (1947), between the *EVENT TIME* — the period of time that the predicate occurs over, or that the speaker imagines or expects that the predicate might occur over — and the *NARRATIVE TIME* — the period of time from which the speaker evaluates the aspectual character of the event. (I prefer the term narrative time to Reichenbach's reference time.) Contextual configurations are then different relations of event time and narrative time. If we adopt the operating assumption that time is to be represented in terms of intervals (rather than moments, or a combination of moments and intervals), we can anticipate the discussion below and assert that two configurations will be of primary interest: those in which the narrative time includes the event time (a configuration that is traditionally termed "external perspective"), and those in which the narrative time is properly included in the event time (traditionally, "internal perspective").

The basic contextual configuration of the perfective, which may be termed AORIST, is that in which a predicate has an inherent limit that is actually reached on the narrative interval. This is in effect to say that the narrative time includes both the event time (it is an actual temporal limit) and the inherent limit (it is a limit on the potential realizations of the predicate). Examples of the aorist perfective configuration, chosen to anticipate corresponding examples of imperfective configurations below, include the following:

- 1) Nastuplenie načalos'. Vozdux i zemlja *sodrognulis*^P ot artpodgotovki. Proreveli "katjuši".
'The attack began. The earth and air began to shake^P from artillery fire. The mine throwers roared.'
- 2) My *zakopali*^P mogilu. Poslyšalis' vystrely.
'We covered over^P the grave. Then we heard rifle shots.'
- 3) Petrov načal prosit' pomoč' emu probrat'sja v Sevastopol', a Ivan Stepanovič ego *otgovoril*^P.
'Petrov began asking him to help get him into Sevastopol, but Ivan Stepanovič dissuaded^P him.'
- 4) My pereexali v Patku, a general Zabelin *ostalsja*^P v Zamole.
'We moved to Patka, but General Zabelin remained^P in Zamol.'
- 5) Mina vzorvalas', kogda ona *okazalas'*^P na menšej glubine.
'The mine exploded when it turned out^P to be at a lesser depth.'

Of these examples, (1–3) can reasonably be viewed as perfectives of process predicates (or senses of predicates), and (4–5) as perfectives of statives.

The two configurations of the imperfective that are important for the discussion below are the progressive and the durative. In both configurations the predicate is construed as a process (see below for states) that occurs or might occur over some interval of time without reaching the inherent limit that is necessary for a perfective. The difference between the two configurations lies in the relationship between the event time and the narrative time. In the progressive the narrative time falls within the event time; the speaker assumes that the process does or could go on beyond the selected narrative time. Examples of the progressive imperfective in Russian include:

- 6) Ja *dopisyval*^I "Romantikov," kogda odnaždy večerom ko mne vošel xudoj junošja i nazvalsja vypuskajuščim buduščej gazety "Morjak".
'I was finishing writing^I "The Romantics", when once in the evening a thin youth dropped in on me and identified himself as the publisher of the new newspaper "The Sailor".' (Paustovskij)

- 7) Kogda my *zakapyvali*^I mogilu, poslyšalis' vintovočnye vystrely.
'When we were covering over^I the grave, we heard rifle shots.'
(Isakovskij)

The narrative time typically, or perhaps necessarily, coincides with that of another event, so the progressive has the narrative function of back-grounding.

In the durative configuration the narrative time includes the event time; the occurrence of the process is limited to the interval of narration, although it does not reach an inherent limit. Examples of the durative imperfective:

- 8) Kak toľko vidimost' ulučšilas', nastuplenie načalos'. Šest'desjat minut vozdux i zemlja *sodragalis*^I ot artpodgotovki. Proreveli "katjuši".
'As soon as the visibility improved, the attack began. For sixty minutes the air and earth shook^I from artillery fire. The mine throwers roared.' (Birjukov).
- 9) Ja dolgo *dopisyval*^I "Romantikov", i v vosem' časov pošel v kafe.
'I finished writing^I "The Romantics" for a long time, and then around eight went to the cafe.'
- 10) My dolgo *zakapyvali*^I mogilu. Poslyšalis' vystrely.
'For a long time we covered over^I the grave. Then we heard rifle shots.'

Because the narrative interval includes the event interval in both the aorist perfective and the durative imperfective, the durative has a narrative function similar to that of an aorist perfective. As in the examples above, it can signal an advance of narrative time and thereby indicate sequentiality of events.

The hallmark of the durative configuration is of course an explicit durative adverbial phrase, but it is possible to consider as subcases of the durative examples in which there is no such durative phrase, such as the finite predicates in (11) and the infinitive in (12):

- 11) Prišel admiral I. S. Isakov. Petrov načal prosit' pomoč' emu probrat'sja v osaždennyj Sevastopol'. Ivan Stepanovič ego *otgovarival*^I. Petrov *nastaival*^I. Neskoľko dnej spustja on probralsja v Sevastopol'.
'Admiral I. S. Isakov arrived. Petrov began asking him to help get him into Sevastopol, which was occupied. Ivan Stepanovič dissuaded^I him. Petrov insisted^I. Several days later he made it to Sevastopol.' (Ėrenburg)
- 12) *Dejstvovat*^I prišloš' samostojatel'no, na svoj risk, rukovodstvujaš' klassovym čuťem.
'It became necessary to act^I independently, at my own risk, guided by class consciousness.' (Botin)

In (11) the processes of dissuading and insisting go on for some period of time, and together they are sequentialized between two aorist perfective events. In (12) the obligation is that there must be a period of time over which the process of acting occurs (Fielder 1983).

In many such cases the imperfective has a conative sense. This is true, for example, of *otgovarival* in (11), which might be glossed 'tried to dissuade' or 'kept on trying to dissuade'. Inclusion of such examples under the durative contextual configuration amounts to the claim that the conative sense of the imperfective is not a distinct contextual configuration in the sense intended here, to characterize a relationship between predicate and time. It seems that for certain verbs (a class that is in need of precise definition) the process named by the imperfective is the attempt or intention to reach a goal (Maslov 1948), rather than some partial form of the process that, cumulatively, could be expected to lead to a certain goal. Consistent with this interpretation, imperfectives with a conative sense can be used in all of the contextual configurations cited here. In addition to the implicit durative cited above, the conative sense appears in the explicit durative in (13), the progressive in (14) (both from Fielder 1983:267), and the perfect of a durative in (15):

- 13) On celý mesiac *ugovarival*¹ Rybnikova priznať sebja pereodetym japonskim samuraem.
'For a whole month he persuaded (= tried to persuade)¹ Rybnikov to acknowledge that he was a Japanese samurai in disguise.'
- 14) Kak-to v Pariže za obedom vy *ugovarivali*¹ menja ostaťsja v Pariže.
'Once in Paris over dinner you were persuading (= trying to persuade)¹ me to stay in Paris.'
- 15) Uspokojtes', ja tol'ko čto *uznaval*¹.
'Calm down, I have just been finding out (= trying to find out)¹.'

A further use that might qualify as a distinct configuration is one that could be termed continuative, which implies that a process occurs over a continuous series of intervals with increasing degrees of manifestation of the process; this usage is illustrated by:

- 16) Čem bol'še ona *vsmativalas'*¹, tem sil'nee *stanovilos'*¹ ubeždenie, čto èto ona, i nikto drugoj. Ona *uznavala*¹ sebja ne srazu i vse s bol'šim izumleniem.
'The more she looked¹, the stronger the conviction became¹ that it was her and no one else. She recognized¹ herself only slowly and with ever more astonishment.' (Proskurin)

- 17) Minonoscy obošli vokrug transporta i stali po oboim ego bortam. Naprjaženie *narastalo*¹ s každoj sekundoj. My sobralis' na palube v ožidanii samogo xudšego.
 'The mine carriers came around the transport ship and took up positions on both sides. Tension mounted (= was mounting?)¹ with each second. We gathered on the deck in anticipation of the worst.'
 (Botin)

The implication of a series of intervals poses some challenge for analysis, but in terms of the typology of relations between predicates and time, it seems likely that the continuative use can be viewed as a specialized case of the durative, as in (16), and possibly the progressive, as in (17).

The discussion of contextual configurations of the imperfective to this point has been in effect limited to processes, but a distinction analogous to progressive vs. durative is available for predicates naming pure states, such as imperfective *ostavaťsja* 'remain'. This state can either hold over an event interval that includes the narrative interval, in a relationship analogous to the progressive of processes ((18)), or over an event interval that falls within the narrative interval, in what is essentially a durative configuration ((19)):

- 18) Poka my pereezžali v Patku, general Zabelin *ostavalsja*¹ v Zamole.
 'While we were moving to Patka, General Zabelin remained¹ in Zamol.' (Birjukov)
- 19) Načalis' peregovory. Vladimirova vozvraščalas' v teatr, opjať pri-xodila v Zimnij dvorec, i tak mnogo raz. V tečenje nekotorigo vremeni položenie *ostavalos*¹ bez peremen.
 'Negotiations began. Vladimirova returned to the theater, came back to the Winter Palace, and so on many times. For a period of time the situation remained¹ without change.' (Flakserman)

Thus, the two basic configurations of the imperfective — progressive (narrative time included in event time) vs. durative (narrative time includes event time) — are available to both state and process predicates.

Although there is of course no morphological expression of a perfect category in Russian, there is some evidence for distinguishing perfect vs. nonperfect configurations. The perfect configuration is in principle available to both perfective and imperfective events (and perhaps more generally, to any contextual configuration), but it is more natural with a perfective. The difference between perfect and nonperfect configurations is presumably one of perspective on the event (as suggested by Reichenbach (1947) and elaborated by Brecht (1983) for Russian), perhaps something like de-

tached vs. immediate narrative perspective. In any case, this distinction interacts little if at all with lexical aspectual properties, and will not figure in the discussion below.

Additional contextual configurations are created by two quantifying operations, iteration and singularization. Singularization (Forsyth 1970) presents an implicitly multiple situation in terms of a single, representative subevent. If the subevent by itself satisfies the criteria for the perfective, the singularized predicate will in fact be perfective. (If the subevent does not qualify as perfective, it is conceivable that singularization applies to a multiple set of imperfective subevents, vacuously yielding an imperfective.) The singularized configuration of the perfective is best known in nonpast examples, but is also occurs in infinitive constructions with iterated matrix predicates that normally impose iterativity (hence imperfective) on the infinitive complement (Fielder 1983:250). Compare multiple (20) with singularized (21):

- 20) Tex, kto ne umel sladiť s objazannost'ju, zastavljali tut že *proiznosit'*^I reči.
'Those who could not cope with this obligation were forced to deliver^I speeches then and there.'
- 21) Togo, kto ne umel sladiť s objazannost'ju, zastavljali tut že *proiznesti*^P reč.
'Whoever could not cope with this obligation was forced to deliver^P a speech then and there.'

Iteration, or multiple quantification of subevents, is expressed by the imperfective, except, of course, for limited quantifiers (*neskol'ko raz* 'some times', *dvaždy* 'twice'), for which there is variation. In principle, any aspectual configuration (progressive, durative, perfect) can be quantified iteratively, but in practice the case that makes iterative imperfectives recognizably distinct from other imperfective contextual variants is iteration of subevents that, individually, would qualify as aorist perfective. Iteratives of aorist subevents carry over properties of the perfective. Some of these properties are the following.

First, aorist perfectives and their iteratives can occur with predicate nominals either in the nominative (in a pure stative reading) or in the instrumental (in a reading of change of state), as in (22) and (23):

- 22) On vernulsja^P uspokoennyj^{Nom} / uspokoennym^{Instr}.
'He returned^P calm^{Nom} / having become calm^{Instr}.'
- 23) On každyj den' vozvraščalsja^I uspokoennyj^{Nom} / uspokoennym^{Instr}.
'He returned^I every day calm^{Nom} / having become calm^{Instr}.'

- 24) Obsuždenie moej p'esy prošlo prekrasno. Ja vozvraščalas' domoj uspokoennaja^{Nom} / ?uspokoennoj^{Instr}.
 'The discussion of my play had gone beautifully. I was returning^I home calm^{Nom} / ?having become calm^{Instr}.'
- 25) Ona dolgo vozvraščalas' domoj uspokoennaja^{Nom} / ?uspokoennoj^{Instr}.
 'For a long time she was returning^I home calm^{Nom} / ?having become calm^{Instr}.'

With a progressive ((24)) or durative ((25)) configuration, only the nominative (in the pure state reading) occurs naturally (Nichols 1981, Timberlake 1982).

Second, quantifiers that measure cumulatively the number of entities affected in an event occur naturally with aorist perfectives ((26)) and their iteratives ((27)), but not with progressive ((28)) or durative ((29)) configurations of the imperfective (Merrill 1983):

- 26) V ètu noč ostavšajasja v živyx gorstka bojcov *otbila*^P desjať kontratak gitlerovcev.
 'That night the handful of warriors who remained alive repelled^P ten counterattacks from the Hitlerites.'
- 27) Každuju noč ostavšajasja v živyx gorstka bojcov *otbivala*^I desjať kontratak gitlerovcev.
 'Each night the handful of warriors who remained alive repelled^I ten counterattacks from the Hitlerites.'
- 28) *Kogda pribyl general Zabelin, ostavšajasja v živyx gorstka bojcov *otbivala*^I desjať kontratak gitlerovcev.
 ('When General Zabelin arrived, the handful of warriors who remained alive were repelling^I ten counterattacks of the Hitlerites.')
- 29) ?Ostavšajasja v živyx gorstka bojcov do utra *otbivala*^I desjať kontratak gitlerovcev.
 ('The handful of warriors who remained alive until morning kept on repelling^I ten counterattacks from the Hitlerites.')

(Sentences (28) and (29) are acceptable only if the quantifier is given the noncumulative reading of ten simultaneous counterattacks.)

At this point it is appropriate to summarize the discussion of contextual configurations in order to state what is to be expected of a theory of lexical aspect. The configuration of the perfect applies to other configurations (durative imperfective or aorist perfective), and is quite likely insensitive to lexical properties. Similarly, singularization and iteration are quantifying operations that apply to subevents that by themselves have well-defined

aspectual configurations, and they seem to have little if any interaction with lexical aspect. This leaves the distinction between aorist perfective and the durative imperfective and progressive imperfective. In the aorist perfective configuration the event time is included in the narrative time, and the predicate reaches its inherent limit on the narrative interval. In the durative the event time is likewise contained in the narrative interval, while in the progressive the event interval includes the narrative interval. In both, however, the predicate is construed as a process or state that does not reach an inherent limit, and they appear to have identical interaction with lexical aspect. A theory of lexical aspect should allow us to characterize in a motivated fashion which predicates can be aorist perfective and which can occur in the durative and progressive configurations of the imperfective.

More generally, the discussion of contextual configurations above did not produce a typology, if that term is taken to mean a set of discrete types. It suggested rather that there are a limited number of operations that can potentially apply to one another. This line of investigation leads away from typology or featural analysis in the direction of analysis in terms of operators or configurations (parallel to Maslov 1973). The same direction of movement will occur in the discussion of the lexical typology of aspect in the next two sections.

3. *The Vendlerian Lexical Typology*

To state the interaction of lexical and grammatical aspect, it will be helpful to look at a possible typology of lexical aspect. The most widely cited lexical typology is that of Vendler (1967), which, as is well-known, is composed of four classes: *states*, such as 'love', 'know', 'be tall', which last uniformly for a period of time but are not processes going on in time; *activities*, such as 'run', 'write', 'work', 'push a cart', which consist of successive phases that last for a period of time; *accomplishments*, such as 'run a mile', 'draw a circle', 'push the cart over the cliff', which "proceed toward a terminus which is logically necessary to their being what they are" (p. 101); and *achievements*, such as 'reach the top', 'spot the place', 'find the treasure', which "can be predicated only for single moments of time" (p. 102). Vendler notes two distributional properties of these predicate classes: states and achievements do not ordinarily form the progressive aspect in English; and states and activities but not accomplishments and achievements can cooccur with durative adverbs in English.

Other typologies are possible. Vendler's typology is evidently an expansion of an Aristotelian classification of non-states into *energiiai* (roughly processes or activities) and *kinesis* (including both accomplishment and

achievement) predicates (see, for example, Taylor 1977 and Dowty 1979). Carlson (1981) expands the typology to six classes by adding one class intermediate between states and activities and another between accomplishments and achievements. Kučera's (1983) semantic model of Slavic aspect is hierarchically structured; it branches first to a tripartite distinction of state, activity, and event, with further divisions in each class (the distinction between accomplishment and achievement falls under event). Kučera's model, however, seems to be more than a strictly lexical typology, and should perhaps be included here only with some caution. A typology roughly comparable to Vendler's has been developed independently by Forsyth (1970, on the basis of Maslov 1948).

The Vendlerian classification can be used to stipulate answers to the two questions posed above concerning the interaction of lexical and grammatical aspect. States (if expressed by verbs) and activities (expressed by simplex — that is, unprefixed — verbs) are classified as imperfective. Only accomplishments and achievements can be perfective. This correlation is, of course, essentially equivalent to the more traditional requirement that a predicate can be perfective only if it has an inherent limit, or terminus (to return to Vendler's term), provided this notion is defined in a sufficiently broad fashion.

The second question concerns which predicates can be used in a progressive or durative configuration. States, activities, and accomplishments can all be used as durative imperfectives, as shown by examples given earlier. Activities and accomplishments can be used as progressive imperfectives, in the sense of a process ongoing over the narrative interval. States can be used in an analogous way — that is, they can be asserted to hold over an interval that includes the narrative interval. Examples were given above. Achievements, in contrast, cannot be used in either the durative ((30–31)) or progressive ((32–33)) imperfective configurations:

- 30) *On dolgo *prixodil*^I domoj.
(‘He arrived^I home for a long time.’)
- 31) *Mina dolgo *okazyvalas*^I na menšej glubine.
(‘The mine for a long time was turning out^I to be at a lesser depth.’)
- 32) *Ja vstretil počta’ona na lestnice, kak raz kogda on *prinosil*^I mne piš’mo.
(‘I met the postman on the stairs just as he was bringing^I me a letter.’) (from Maslov 1948)
- 33) *Mina vzorvalas’, kak raz kogda ona *okazyvalas*^I na menšej glubine.

(‘The mine exploded just as it was turning out¹ to be at a lesser depth.’)

The fact that certain predicates — in effect, the class of achievements — could not be used in the progressive or durative imperfective was observed by Maslov (1948). As has also been observed, however, achievements can be used in the durative or progressive configurations when they are iterated. In (34), for example, an achievement is iterated and is construed as a state that holds over the narrative interval (the equivalent of the progressive for statives), and in (35) an iterated achievement is evidently treated as a process that changes over the narrative time:

- 34) Texnika *okazyvalas'*¹ bessil'noj na bezdorož'e.
‘The equipment turned out¹ to be ineffectual in areas without roads.’
- 35) Texnika *okazyvalas'*¹ vse bessil'nee.
‘The equipment turned out¹ to be ever more ineffectual.’

Similarly, negation apparently turns any predicate, including an achievement, into a stative that can be expressed as durative (Forsyth 1970, Merrill 1983):

- 36) On dolgo *ne naxodil*¹ ključ.
‘For a long time he did not find¹ the key.’
- 37) Severnaja buxta dolgo *ne okazyvalas'*¹ na linii fronta.
‘The north harbor for a long time did not turn out¹ to be on the front lines.’

Examples like these are problematic for every approach to lexical aspect, but they can be handled by either of two options: enter every verb whose primary sense is that of an achievement in the achievement class and (under iteration or negation) in the stative class, or allow iteration and negation to be operators that, in effect, create new predicates that are specifically stative. I prefer the second option, on the grounds that these are general phenomena that are not specific to individual lexical items.

The fact that predicates appear to change classes in the typology under iteration and negation is indicative of a more general problem with the Vendlerian typology. To mention one example, pointed out by Vendler (1967:118–26), the verb *see* has a stative sense (‘be in the state of visual perception’), an achievement sense (‘to arrive in the state of visual perception’), and an accomplishment sense (as in Vendler’s example *I saw Carmen last night on TV*); to these could be added an activity sense (‘to carry on a relationship with’). Thus, a given verb can belong to more than one class

— in this case, to all four classes. Conversely, the members of a given class in the typology do not necessarily have the same behavior. For example, *see*, *understand*, and *recognize* combine both stative and achievement (= inception of state) senses, but *spot* and *reach* do not; but unlike the former group, the latter allows a progressive in narrative situations when the achievement is imminent. Thus, the behavior of achievements (and by extension, of other classes) is not uniform with respect to configurational aspect.

Problems of this kind with the Vendlerian typology are well-known, and it is not clear that there is an easy solution to them in any framework. I suspect they will remain problems as long as the typology is treated as a fixed set of discrete types, as seems to be the practice in later work derived from Vendler. There is a chance that the problems will be defused, if not solved, by setting aside the typology as such, and attempting to examine the temporal schemata that lie behind the lexical classes. The next two sections are devoted to that.

4. *Aspectual Types as Partial Histories*

The fact that a given predicate can combine senses that belong to different classes of the typology suggests that these classes are not discrete types but rather different views of the same thing. To develop this observation, let us assume that there is a maximal possible history for any event, such that predicates (or senses of predicates) select out partial histories of the maximal history. That history would begin with a state (in an informal sense, a null state). The stative phase would yield to a process that goes on for some period of time, potentially reaching a culmination (or terminus, to use Vendler's term). After that a new state results.

In effect, the maximal history for an event is what, as a lexical predicate type, would be an accomplishment with a resulting state. There is in fact considerable evidence that accomplishment predicates often, or perhaps regularly, contain some notion of a resulting state. For example, perfectives of accomplishments can cooccur with time phrases that indicate the interval of time over which the resulting state will (or can be expected to) hold: *izmenit'sja na vsju žizn'* 'to change for one's whole life', *ujti na dva časa* 'to leave for two hours'. In addition, for some predicates the perfective is used for a single event that reaches its inherent limit only if the resulting state does in fact continue to hold for a period of time after the process ends; if the state is subsequently "annulled," the imperfective is used. For these reasons, it is natural to assume that accomplishments not only reach a terminus but also result in a new state. An accomplishment, then, is a predicate that includes the maximal history.

A stative predicate is one that can refer only to a state phase of the history. Given the maximal history above, this could in principle be either the initial or the final state. If it makes a difference, the state phase is presumably the final one, given that there are aspectual pairs in Russian of which the perfective refers to the inception of the state referred to by the imperfective (compare, for example, stative imperfective *ostavat'sja* 'to remain' in (18, 19) vs. perfective inception of state *ostat'sja* 'to begin to remain' in (4)). Similarly, a pure activity is a predicate that refers only to the process phase of the history, without attention to a possible terminus.

The concept of an achievement is the most problematic. Achievement predicates are at least in some cases inceptions of states (as suggested by Dowty 1979:68). For example, perfectives of achievements can, like accomplishments, cooccur with a time phrase indicating the duration of the resulting state: *ostat'sja na vsju žizn'* 'to begin to remain for one's whole life', *prijeti na dva časa* 'to arrive for two hours'. There are, however, good reasons for *not* equating achievements and inceptions of states. One reason, noted above, is that accomplishments also lead to new states, which is to say that the inception of a state is not limited to achievements. Another is that the inception of a state fails to be an achievement if it is construed as occurring by degrees (Dowty 1979). Thus, stative adjectives can be combined with the independent predicate *stat' / stanovit'sja* 'to become', the imperfective of which can be used in a progressive ((38)) or durative ((39)) configuration:

- 38) Ubeždenie, čto èto ona, *stanovilos'*¹ togda siŋnee.
'The conviction that it was her was becoming¹ stronger then.'
- 39) Ubeždenie, čto èto ona, dolgo *stanovilos'*¹ siŋnee.
'The conviction that it was her became¹ stronger for a long time.'

More strikingly, the imperfective of some ordinarily pristine achievements like *uznat'* 'to come to learn, to recognize' can be used in a process sense if the inception of the state occurs by degrees, as in (16) *ona uznavala¹ sebja vse s boľšim izumleniem* 'she recognized¹ herself with ever more astonishment'. For these two reasons, the class of achievements is not strictly coextensive with the class of inceptions of states.

At the same time, these two observations suggest an analysis of achievements. If accomplishments, like achievements, lead to resulting states, achievements presumably involve a terminus, in the sense of a definitive shift from one phase to another. And if a potential achievement predicate becomes an accomplishment when it is broken down into subphases (over which the inception of state happens by degrees), then a true achievement is evidently an accomplishment without subphases. That is, in an achievement

the process phase of the maximal history is foreshortened to a single interval, the terminus itself, over which the change of state is construed as occurring necessarily in one quantum leap. This characterization, of course, expresses that same intuition as the observation that achievements are "momentaneous," but it expresses more clearly the similarity between achievements and accomplishments. Moreover, it can be extended naturally to account for a class of Russian perfective predicates that seem otherwise to be intermediate between achievements and accomplishments. Perfectives such as *prožit'* 'to live through a subjectively extended period', *počitat'* 'to read for a subjectively short period of time' (Flier 1983) or *nadelat'* 'to make a large quantity', *nasolit'* 'to salt up, preserve a large quantity' (Russell 1983) clearly involve a process phase with positive duration, yet they do not form imperfectives in the durative or progressive configurations. If an achievement is defined not as a predicate whose process phase is momentaneous, but as one whose process phase is indivisible, these otherwise problematic perfectives can be naturally viewed as achievements.

To go further with this model, it is necessary to turn our attention to the more narrow problem of characterizing an individual predicate. In this characterization the crucial concepts that need definition are those that were invoked to construct the ideal maximal history, namely state and process and terminus (the last in an extended sense).

5. *Temporal Schemata.*

To characterize predicates in terms of temporal schemata, I begin by assuming that a predicate relates time and situations (Dahl and Karlsson 1976, Carlson 1981). Both of these notions will be taken as primitives, but something more can be said about each.

Given time as a primitive, there are a number of open questions about what properties it might be assumed to have. There is a strong tendency to invest time with the properties of real numbers, but I would prefer to stay away from this metaphor, and attempt to treat time in more abstract terms, at least as a long term goal. For now I will assume, first, that time is divided into intervals and only into intervals. Although it is common practice to segment time into both points and intervals (for example, the notion of "momentaneous" predicates requires points), it seems to me inappropriate to make use of this distinction. Second, various operations on intervals can be assumed axiomatically or defined; the choice of which operations to assume and which to define is an interesting one which, however, is not central to the discussion of temporal schemata (for discussion, see Kamp 1979). It will be useful to have available, whether as axiomatic or

derived, the following operations: strict anteriority, partial anteriority, identity, inclusion, union, and intersection.

In trying to define a predicate, we need to consider an arbitrary set of intervals ordered by the weak relation of anteriority that, in effect, covers a large interval of time. This will allow for overlapping intervals. It is convenient to assume further that we restrict our attention to continuous blocks of time without intervening gaps, an assumption that *requires* overlapping intervals. (This is probably equivalent to assuming that all intervals are topologically open — that is, do not contain end points. An alternative would be to assume that all intervals are closed — contain end points — and define a strict partition of time without overlapping except at the end points. It is not clear what consequences attach to the choice between assumptions.)

Given a set of such partially ordered intervals, it is possible to define functions from time into possible situations. That is, for each interval in the cover there is a corresponding situation.

The notion of situation will necessarily be a highly unconstrained one, including everything under the sun. A situation is simply a state of the world. Although this notion is unconstrained, the important property of situations is the relatively simple question of whether or not they are identical over time, and it is this property that defines lexical aspect. It should be noted that if time is composed of intervals and predicates map time into situations, then situations must also be construed as intervals. Further, since time intervals overlap, it is probably appropriate to assume that situations (as the values of functions) must overlap as well.

The notion of a function from time to situations can be represented graphically as in Fig. 1. The arbitrary cover of weakly anterior time intervals is shown by parentheses on the bottom, horizontal one-dimensional line, situational intervals on the upper, two-dimensional line; each time interval has a corresponding situational interval. The vertical axis for situations depicts identity of situations (as in the stative functions 1a, 1b) as opposed to change in situations (as in the process functions 1c, 1d) over time.

Up to this point we have characterized individual functions from time to situations, or what may be called PREDICATE FUNCTIONS, that map overlapping intervals of time into overlapping situation intervals. A given predicate (or aspectual sense of a predicate) obviously can be used to describe not just a single, unique relation between time and situations, but many possible such relations: the fineness of the temporal intervals can be different (Fig. 1a vs. 1b, or Fig. 1c vs. 1d); the rate of change in situations can be different (Fig. 1c vs. 1d); and so on. A predicate can be understood to be the set (presumably infinite) of all such individual predicate functions.

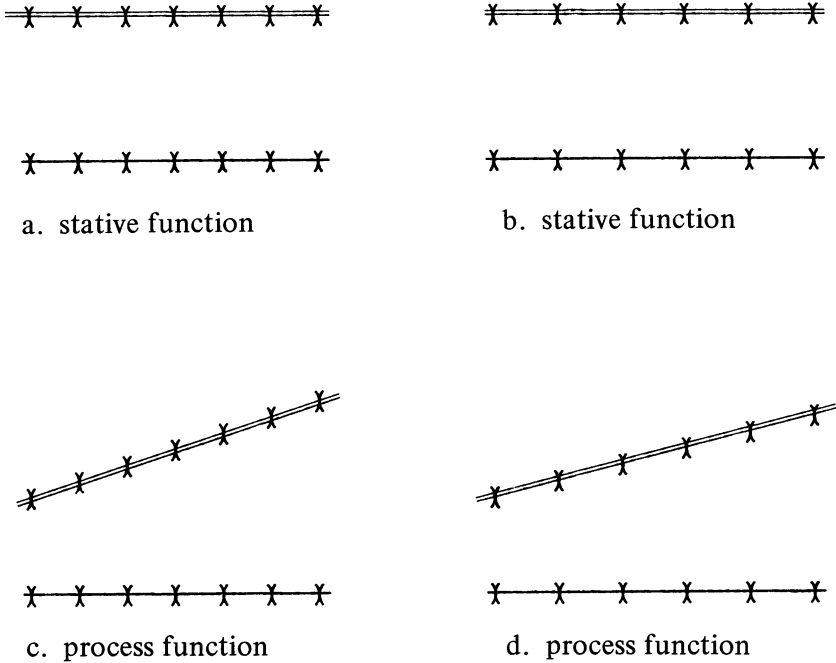


Fig. 1. State and Process Functions

Given this notion of predicate functions, we can now proceed to characterize the notions of state and process. If one assumes the correctness of the intuition that states do not change over time, while processes do, then a predicate function is stative if it assigns uniform values in situations over time. A stative phase is a stative subfunction, defined as the function over a subset of the time cover, and a stative predicate is one for which all predicate functions are stative. A process predicate function is one that assigns situation values that are not uniform over time. A process phase and a process predicate (= activity) can be defined in the obvious way. For predicates that have both a stative and a process sense, the stative sense is the subset of predicate functions that are stative, and the process sense the set of functions that are processes. In Fig. 1, a stative predicate might contain functions such as 1a and 1b, and a process predicate might contain functions such as 1c and 1d.

The intuition on which this definition is based could easily be questioned, since it is not clear that such processes as sitting, reading, and the like necessarily involve change in the situation over time. The general form

of the response to this reasonable objection is to define the notion of situation in a broad enough way to allow a distinction of change vs. uniformity in situation. One might include in the notion of situation the mental state of the participants. Perhaps the most promising (but also the least constrained) possibility is to include in the notion of situation some modalization to possible situation, on the grounds that the distinction between states and processes sometimes involves permanent as opposed to temporary situations — that is, immutable vs. mutable situations. Although the question of how to characterize the distinction between state and process needs further thought, it will probably be possible to maintain a definition in terms of change in situation, if situation is construed in a sufficiently abstract way.

In the discussion of a maximal history for events presented above, the notion of terminus turned out to be crucial to achievements as well as to accomplishments. (I use Vendler's term terminus because it is admirably vague; the competing term telos is often assigned an interpretation that is too narrow to be useful here.) In defining terminus, it is useful to keep in mind what it will be used for. Taking a cue from Vendler's use of terminus in the characterization of accomplishments, we can say that the terminus is that which must be reached in order for a predicate to be perfective in a given narrative context (compare in this respect Merrill's (1983) definition of the perfective as "realized telicity"). Crucially, it must be possible to distinguish the terminus (or what is traditionally termed the "inherent limit") from an actual temporal limit. That is, it must be possible to distinguish the case where the terminus is reached — the configuration of the aorist perfective — from the case where the process merely stops — the durative imperfective. These considerations suggest approaching a definition of terminus in stages: first, by characterizing what it means for a process to reach an actual temporal limit; second, by characterizing what it means for the terminus to be reached in a given context; and third, from this by defining the notion of terminus in general.

The idea of reaching an actual temporal limit can be characterized in terms of the concepts of state and process developed above. When a process stops on some period of time, the situation after that period becomes static, or uniform. To develop this intuition, let us assume that narrating an event consists of selecting a particular predicate function f_n of a predicate φ and identifying one of the intervals as the narrative time t_n , at which the value of f_n is s_n (here n is mnemonic for narrative). Then to see if the ordered pair (t_n, s_n) is an actual temporal limit, we look at values of f_n at distinct arbitrary times t, t' strictly later than t_n . There are three cases to consider:

a) If the values of f_n at t and t' are not identical for all t and t' , f_n is evidently a process that continues to change after t_n . This possibility, the progressive of a process, is illustrated by Fig. 2a.

b) If the values of f_n at t and t' are identical with each other, and are also identical to the value of f_n at t_n , f_n is evidently a state that holds uniformly over t_n . This configuration, the equivalent of the progressive for states, is illustrated by Fig. 3a.

c) If the values of f_n at any t and t' after t_n are identical with each other but not with the value of f_n on t_n , then the configuration is a process that stops at t_n : (t_n, s_n) is an actual temporal limit. This configuration, which could be that of the aorist perfective or the durative imperfective, is shown in Fig. 4a, 5a, and 6a.

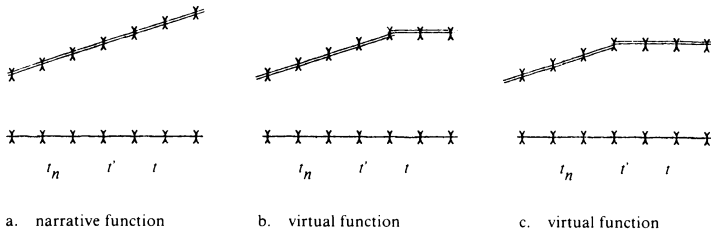


Fig. 2: Progressive Imperfective, Process

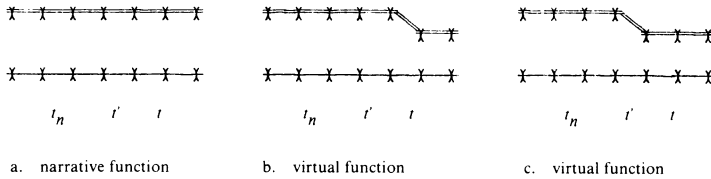


Fig. 3: Progressive Imperfective, Stative

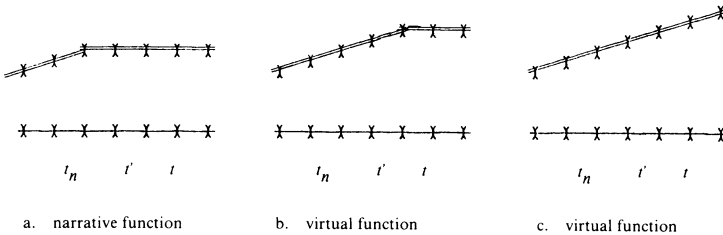


Fig. 4: Durative Imperfective, Process

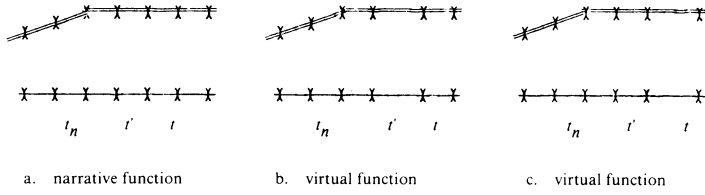


Fig. 5: Aorist Perfective, Accomplishment

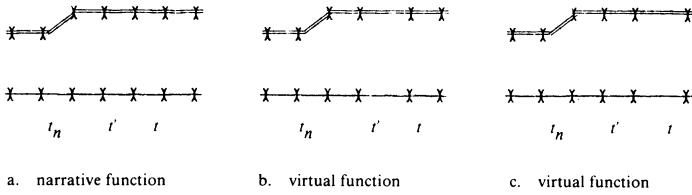


Fig. 6: Aorist Perfective, Achievement

These considerations are summarized in the definition of actual limit in (40). (Here ‘>’ is weak posteriority and ‘>>’ strong posteriority.)

- 40) Given a predicate function f_n of a predicate φ , a narrative time t_n , and a situation s_n such that $f_n(t_n) = s_n$, (t_n, s_n) is an actual limit for f_n if and only if $\forall t, t'$ such that $t > t' >> t_n, f_n(t) = f_n(t') \neq f_n(t_n)$.

From this definition we can go on to define terminus. The intuition to be expressed is that the process does not merely stop accidentally at t_n , but that in some sense the process stops definitively. Determining this involves looking not only at the particular predicate function f_n that is narrated, but at all possible predicate functions that are consistent with the situation at t_n — that is, those that assign s_n at t_n . These can be termed virtual predicate functions of φ relative to (t_n, s_n) . (This amounts to a translation of Dowty’s (1979) “inertia worlds” into predicate functions.)

To consider what functions might be among these, we partition the time line into three macroperiods: the period before t_n , t_n itself, and the period after t_n . Before t_n the restrictions on virtual functions are unclear. One might suppose that in order to yield a situation s_n at t_n , the predicate functions might have had to be identical up to t_n , but this assumption is

not crucial. Over t_n itself, we probably want to include not only functions that assign s_n to t_n in one fell swoop, but also those that map finer partitions of t_n into subintervals of s_n , but again, this is not crucial. After t_n is the period of interest. One could imagine various functions that would assign s_n at t_n but differ after t_n . One might continue at the same rate of change, one might decrease, one might increase, one might reach an actual limit at t_n , yet another might continue for a while but reach an actual limit later.

Let us look at the individual configurations:

a) In the progressive configuration of a process (Fig. 2), there is no limit even in the narrated function f_n , so the terminus is not reached. Other possible functions (Fig. 2b, 2c) are not relevant.

b) Similarly, in the corresponding configuration for statives (Fig. 3), there is no actual limit and hence no terminus, regardless of other possible functions (Fig. 3b, 3c).

c) In the configuration of a durative imperfective, the narrated function f_n reaches a limit at t_n (Fig. 4a). But there are other possible extensions of (t_n, s_n) that do not stop at t_n . The process could have continued at the same rate and stopped shortly after t_n (Fig. 4b), or it could have continued for a long time after t_n before stopping (Fig. 4c), and so on. If so, the terminus has not been reached.

d) In the configuration of the aorist perfective of an accomplishment (Fig. 5), f_n and all possible extensions from (t_n, s_n) yield uniform values after t_n . Functions differ trivially by the fineness of intervals (compare Fig. 5a, 5b, 5c). In particular, distinct functions like those of Fig. 4b, 4c are not included among the virtual functions for an aorist perfective.

e) In the aorist perfective of an achievement (Fig. 6), f_n and the virtual functions are likewise uniform after t_n . Further, the process portion of f_n is necessarily confined to t_n .

Virtual functions provide the distinction we want. We can say that (t_n, s_n) is the terminus if every function that develops out of (t_n, s_n) becomes uniform after t_n . In addition, we must guarantee that something actually happens on t_n ; otherwise, we would be dealing with a state that extends over t_n into the future. That can be done by requiring s_n to be different from the situations after t_n that are assigned as values by the virtual functions. The definition of terminus is (41):

- 41) Given a predicate function t_n , and a situation s_n such that $f_n(t_n) = s_n$, (t_n, s_n) is a terminus for f_n if and only if $\forall f \in \varphi$ such that $f(t_n) = s_n$, $\forall t, t'$ such that $t > t' \gg t_n$, $f(t) = f(t') \neq f(t_n)$.

The definition of terminus in (41) is, in effect, a definition of the aorist perfective configuration.

From this definition of terminus with respect to a given predicate function, time, and situation, we can define the notion of terminus in general, and correspondingly, the notion of terminal (that is, telic) predicate. We still, however, restrict the definition to a proper subset of the possible predicate functions. A pair of time and situation is a terminus for a subset of predicate functions if and only if the value of any function from this subset is uniform after that time. Finally, a terminal predicate is one for which every finite proper subset of predicate functions in fact has a terminus. As promised, this definition is intended to make it possible to determine whether a given narrative time is in fact a terminus.

To return to the questions posed for a theory of lexical aspect, we can attempt to motivate the two generalizations derived earlier concerning the interaction of lexical and configurational aspect. Given the way terminus and terminal predicate were defined, it is obvious that only accomplishments and achievements are terminal, and only they can be perfective.

The second generalization — that achievement predicates cannot be used in the progressive or durative configurations of the imperfective — depends on an explicit analysis of these configurations in terms of predicate functions. The progressive can be analyzed minimally as an inclusion relation between two levels of time (Reichenbach 1947, Bennett and Partee 1972, Dowty 1979). Specifically, the narrative time is included in a cover of intervals over which there is continual change in the narrated function f_n . If so, an achievement cannot form a progressive because its change is by definition contained in a single interval.

The durative is more elusive. As implied by the diagrams in Fig. 4, a durative configuration is one in which the narrative time is an actual limit but not a terminus. If so, the definition of terminus in (41) must fail to be satisfied in either of two ways, and under either the predicate cannot be an achievement. One, there are times t, t' after t_n for which $f(t) \neq f(t') \neq f(t_n)$, for some virtual function f . That is, there is evidently change over three distinct intervals, so the predicate is not an achievement. Two, for every t after t_n and every f that is an extension of (t_n, s_n) , $f(t) = f(t_n)$. That is, there is no change at all, so the predicate must be a state rather than an achievement.

With this we end the discussion of temporal schemata.

6. Conclusion.

The discussion above suggested that predicates can be decomposed into temporal schemata, specifically sets of functions from arbitrary intervals of

time into situations. The use of a predicate in a given narrative event (at a given time, representing a certain situation) can be understood as the selection of one of the possible predicate functions. The notion of terminus is crucial to a definition of the lexical classes of accomplishment and achievement, and to the definition of the aspectual configuration of the aorist perfective. This notion can be defined in modalized temporal terms, as a time interval and situation after which all predicate functions that are consistent with that time and situation become uniform. This strategy for defining terminus derives from Dowty's attempt to resolve the "imperfective paradox" by invoking "inertia worlds." In Dowty's approach predicates are evaluated for truth value holistically over relatively large intervals (for an accomplishment, over the whole interval on which it would be completed). As a result, aspectual properties like telicity are in effect built into the predicate. The approach here differs in that it decomposes predicates into temporal histories, so that aspectual properties are defined over relatively local intervals of time.

This view of predicates can conceivably do the work of the Vendlerian classification, and allow us to formulate in explicit terms the interaction between lexical and configurational aspect. The types of the Vendlerian classification can be viewed as partial histories of the maximal history consisting of state, process, terminus, and state phases. In particular, an accomplishment is the maximal history; an achievement is an accomplishment with an indivisible process phase, which is then necessarily the terminus. Aspectual configurations, such as aorist perfective, durative imperfective, and progressive imperfective, can be defined as relationships between the particular predicate function selected by the speaker and possible predicate functions consistent with that. Given such definitions, the interaction of lexical and configurational aspect falls out naturally.

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Universal Quantification and Aspect in Russian*

Peter Merrill

1. Two Problems

It is a commonplace of Russian aspectology that repeated actions tend to be presented in the imperfective. A corollary of this general rule is that adverbs like *vsegda* ‘always’ and *obyčno* ‘usually’ require that the imperfective be used.¹ This much is relatively uncontroversial. It is not always clear, however, when to consider a given action “repeated,” and therefore whether to use the imperfective. The need for a maximally precise conception of repeatedness is particularly acute when the universal quantifiers *každyj* ‘each’ and *vse* ‘all’ are involved.² Such quantifiers frequently indicate repetition of an action over members of a set, yet do not necessarily require the use of the imperfective. This paper intends to provide a framework which will allow the notion of repeatedness to be made more precise.

There are, in fact, two related problems to be discussed. The nature of the first of these problems is formulated very clearly in Forsyth (1970:154), although he does not view his statement as constituting a problem.

In the present chapter the term ‘multiple action’ is used rather than ‘repeated action’, because the same linguistic means are used to express not only the performance of the same action on several occasions by the same subject, e.g. *On každyj den’ pisal¹ ej pišmo* [‘He wrote¹ her a letter every day’], but also the performance on one or more occasions of similar actions involving different subjects or objects [e.g. *On pisal¹ ej pišma* ‘He wrote/was writing¹ her letters’ —PM].

Forsyth here equates multiplicity of arguments with multiplicity of temporal occasions. I will argue, contrary to Forsyth, that it is essential *not* to conflate the two types of multiplicity as he does by his use of the term “multiple action,”³ and that the problem is best viewed in terms of the level at which the multiplicity is specified.

The second problem has to do with the functioning of aspect once such levels have been specified. Forsyth defines a perfective verb as one which “expresses the action as a total event summed up with reference to a single specific juncture” (p. 8). While this definition is probably correct, it is open to a large number of possible interpretations. In particular, this definition is inadequate when applied to non-singular events (that is, events which are multiple in either of the senses discussed above). In such cases, there is potential conflict between the multiplicity and “single specific juncture.”

In the continuation of the first question above, Forsyth describes the way he thinks aspect should interact with multiplicity which is introduced by the subject or object.

Once again the imperfective verb derives its nuance of multiplicity from the implied contrast with the meaning of the perfective verb. In the first three examples above the perfective could have been used to give a different, aggregate view of the action summing all the objects into a single group: *vse deti peremerli*^P [all the children died^P]; *vsex proverili*^P [tested^P all (of them)] . . . (p. 157)

The “summing” phrases which Forsyth proposes, replace in his examples, respectively, *detej . . . odin za drugoj umirali*^I ‘children . . . died^I one after another’ and *každogo proverjali*^I ‘tested^I each (one)’. The implicit claim here is that the way in which the subject or object is presented, individually or as a “single group,” determines aspect choice. This is certainly a reasonable assumption, and one that bears examination.

Let us begin with a brief look at the semantics of *každyj* ‘each’ and *vse* ‘all’, two of the quantifying adjectives in question above. These two adjectives represent natural language manifestations of the so-called universal quantifier. This quantifier is used to indicate that a given predication is true for every member of a given set. Vendler (1967) describes the difference in sense between English ‘all’ and ‘every, each’ as *collective* and *distributive*, respectively. An analysis of the four universally quantifying adjectives in Russian by Ponomareff (1978) argues that *každyj* and *vse* differ from one another in that the former is marked for the feature [individuated] while the latter is unmarked (we will not be concerned here with the other two such quantifiers, *vsjakij* ‘any, every sort of’ and *ljuboj* ‘any’). This difference has to do with the “instructions” that the two adjectives give regarding the way the NP’s they modify are to be checked regarding the claim of universality. *Každyj* demands that verification be carried out over the members of the set one by one. *Vse* is indifferent on this score and allows — and often, due to its opposition with *každyj*, demands — that the set defined by the NP be treated as a unit in the verification process. Compare the following two sentences:

- 1) Razbiraj^I *každyj* svoe — i naverx. (Vorob’ev)
‘Everybody sort out^I his own (stuff) — and on deck.’
- 2) Čtoby odnim udarom rešit^P *vse* problemy. (Marčik)
‘In order to solve^P all the problems with one stroke.’

In (1) the individuation of *každyj* is made explicit by its correlation with *svoe* ‘(one’s) own’. In (2) the solving of all (*vse*) the problems is done with a single action.

Given the difference between *každyj* and *vse*, one might reasonably expect to find the correlations between the distribution of these quantifiers and aspect choice to which Forsyth alludes. The individuation in the verifying instructions for *každyj* suggests iterativity; hence we might expect it to cooccur relatively more frequently with the imperfective than does *vse*, which is totalizing. Let us call this the correlation hypothesis. A stronger version of the correlation hypothesis would claim that *každyj* should occur more frequently with the imperfective than with the perfective, and that *vse* would occur more frequently with the perfective than with the imperfective. The weaker hypothesis seems to be correct. Examination of approximately fifty occurrences of each of these adjectives showed that *každyj* and the imperfective do cooccur more frequently than do *vse* and imperfective. There is, however, no apparent positive correlation between *vse* and the perfective.

Such evidence offers support for Forsyth's description of the perfective as totalizing. It seems as well to offer support for the implicit claim he makes in the quote above that one can force a change in aspect by changing the way the quantified NP is presented. A careful examination of the data, however, leads to a more significant discovery which is otherwise obscured by the correlation hypothesis, and which contradicts the assumption Forsyth makes on the basis of such a hypothesis and an inexplicit statement of the level at which aspect operates. This examination will be the task of section 3.

The two problems outlined above have in common that they bear on the delineation of semantic levels, or the scope of aspect. These problems intersect in an interesting way when we examine universal quantification and its interaction with aspect. The body of this paper is devoted to an examination of data aimed at resolving these problems (or, more modestly, at a more insightful statement of the problems). In what follows, I will begin with an outline of a framework in which the discussion of the semantics of aspect can be made more explicit than is traditionally the case in structuralist treatments of aspect. Section 3 will treat the second problem raised above; namely what, precisely, is the relationship between aspect and the NP's which are arguments of the verb in question? In section 4, I will turn to the discussion of the first problem raised, regarding how we want to treat what Forsyth calls "multiple actions." The data from these two sections allow the formulation of a more precise description of how aspect and various types of multiplicity interact.

2. *A framework for aspectual semantics*

The morphological opposition of aspect in Russian is used to encode

narrative and objective semantics in a rather complex fashion. In order to fully describe the interaction of aspect with other syntactic and semantic phenomena, it will be necessary to begin, at least, with a conception of aspect that allows us to distinguish between the various uses of both aspects. These uses are not necessarily discrete, but it is helpful to distinguish certain cardinal points in the continuum and, for the nonce, treat them as semantic features. This allows, indeed forces, us to be more explicit in any discussion of "contextual variation" of aspect than does the invariant-meaning approach of such well-known treatments of aspect as Isačenko 1962 and Forsyth 1970. At least the following three semantic features are necessary to a discussion of aspect: [progressive], [iterative] and [closed]. These semantic features are mapped onto the morphological opposition in a straightforward enough manner: progressivity and unbounded iteration appear as imperfectives, closed events are presented as perfectives.

More important for the purposes of this paper is the notion of semantic levels, which allows us to speak of the scope of lexical and grammatical aspect operations. For now, it is necessary to distinguish only two levels: a predicational level (which includes the verb and its main arguments) and a propositional level (which serves to locate the predication temporally, aspectually, modally and quantificationally — more on the last of these in section 4). This division corresponds, roughly, to the distinction in traditional logic between single- and multi-world logics, though there is no claim of translatability from the framework presented here to a more fully elaborated formal logic.

Grammatical aspect as conceived of in this paper operates on lexically specified or compositionally determined "inherent" aspect. By this is meant the categorization of situations/predications as in the work of Vendler (1967) or Mourelatos (1978), elaborated with respect to Russian by Brecht (this volume). Under such categorizations, predications (in the sense defined above) have inherent in them certain semantic specifications. Crucial to the operation of grammatical aspect in Russian is the specification of a natural boundary of an event. (This is similar to what is meant by the term "telicity," though I would argue that the notion appropriate to Russian aspect must be broader than is traditionally intended by telicity.) In order for a predication to be marked as [+closed] by grammatical aspect, it must be closable/telic. Grammatical aspect, then, operates on inherent aspect, subject to certain qualifications (particularly lexical and morphological). For a more thorough elaboration of this conception of aspect, see Timberlake (this volume).

It will also be necessary to be able to talk about event semantics in some consistent and minimally confusing way. I will use somewhat idiosyncratic terminology in what follows, but I am convinced that the clarity such terms make possible is worth the extra effort.

I will use the term **SUBEVENT** to refer to each instantiation of an event over a set of individuals, even if the subevents are not temporally discrete. Subevents can therefore be simultaneous or sequential. In the following schematic representations, each dash corresponds to what I am calling a subevent.

- 3) a. — b. — — — —
 —
 —
 —

(3a) and (3b) represent single sets of simultaneous and sequential subevents. I will use the term **COMPLEX EVENT** to refer to a set of subevents. Furthermore, as is true of events in general, complex events can be iterated.

- 4) a. $\begin{pmatrix} \text{—} \\ \text{—} \\ \text{—} \\ \text{—} \end{pmatrix}$ $\begin{pmatrix} \text{—} \\ \text{—} \\ \text{—} \\ \text{—} \end{pmatrix}$ $\begin{pmatrix} \text{—} \\ \text{—} \\ \text{—} \\ \text{—} \end{pmatrix}$
 b. (— — —) (— — —) (— — —)

(4a) and (4b) represent iterated complex events composed, respectively, of simultaneous and sequential subevents (compare (3a) and (3b) above).

One might expect the individuating *každyj* and the totalizing *vse* to correspond straightforwardly to sequential and simultaneous readings of subevents. Unfortunately, the matter is more complex than this. Stative predications, for example, neutralize the sequential/simultaneous distinction and are best interpreted as simultaneous (Padučeva 1974). Though individuation may still be present, it does not translate into sequentiality. Furthermore, even for events there is no such one-to-one correspondence; however, the pragmatics are fairly complex and the gains do not justify the untangling here. For the sake of clarity, in this paper I will treat, for the most part, only examples of *každyj* and *vse* in which *každyj* is best interpreted as involving a sequential realization of subevents and *vse* as simultaneous.

3. *Single complex events*

Consider now the problem raised in section 1 concerning the relationship between the way subevents are presented (by the choice of quantifying

adjective) and aspect choice. Throughout this section the discussion will be restricted to single complex events. We will compare the effect on aspect choice due to simultaneous vs. sequential presentation of the subevents.

Let us begin with single complex events comprised of simultaneous subevents (recall that for the sake of clarity, I am citing only data in which *vse* is used to present simultaneous subevents and *každyj* is used to present sequential subevents.) According to the correlation hypothesis (the explicit formulation of Forsyth's implicit claim), sentences like (5) and (6) are precisely what we would expect to find with respect to the relation between the semantics of aspect and the semantics of the quantifier *vse*.

- 5) *Zdes' sobralis'^P vse učastniki naroždajuščejsja kolonii.* (Makarenko)
'Here *all* the members of the developing colony *had gathered^P*.'
- 6) *Vzryv oborval^P vse nadeždy.* (Vorob'ev)
'The blast *shattered^P* all hopes.'

In (5), the inherently telic event of gathering is presented as realized, or closed, hence the perfective is used. (That the usage is, in fact, of the perfect sense of the perfective — given its context — is irrelevant for our purposes.) In (6), all the hopes are shattered by a single blast.

What the correlation hypothesis does lead us to expect however, is that *vse* should not occur as readily with the imperfective. Examples (7) and (8) suggest that this expectation is not to be borne out.

- 7) *Uže počti vse spali^I, kogda v barak prišli^P soldaty.* (Vorob'ev)
'Almost *everybody* was already *sleeping^I* when the soldiers came *^P* into the barrack.'
- 8) *Pojavlenie požarnyx privleklo^P ljubopytnyx — vse glazeli^I vverx i čitali^I, ves' rajon byl vzbudoražen.* (Ėmeľjanov)
'The appearance of the firemen attracted *^P* the curious — *everybody* was *looking^I* upward and *reading^I*, the whole region was agitated.'

In (7), the complex event, 'everybody sleeping', is presented in the progressive, as a frame for the arrival of the soldiers, a punctual action. Similarly, the progressive use of the imperfective in (8) serves as description of the particular scene. In both cases the subevents are simultaneous, and in both cases the complex events made up by these subevents appear in the progressive use of the imperfective. Examples (5)–(8) show that the use of *vse* need not affect aspect choice. Next we will look at similar examples containing the quantifying adjective *každyj* before turning to a proposal for a more accurate statement of the relation between NP quantifiers and aspect choice.

The uses of *každyj* that we will consider here are all representations of single complex events made up of sequential subevents. In this case, the correlation hypothesis would predict that *každyj* should condition the use of the imperfective, as in (9) and (10).

- 9) Na kuxne bylo vsego desjat' aljuminievyx misok: plennye vystroislis^P v očered', i povarixa *nalivala*^I v *každyju* misku po odnomu polovniku burdy . . . (Simonov)
 'In the kitchen there were ten aluminum bowls in all: the captives had formed up^P in line and the cook *was pouring*^I into *each* bowl a ladle of slops.'
- 10) Sobralis^P vse komandiry i politruki podrazdelenij . . . i *každyj* s volnieniem *vyskazival*^P to, čto nabolet^P u nego v duše. (Kozlova)
 'All the commanders and political instructors of the sub-units had gathered^P . . . and *each was agitatedly stating*^I what bothered him deep down.'

The individuation of *každyj* and the background or progressive usage of an imperfective, non-stative verb combine in (9) to create a sequentially presented complex event. The situation in (10) is similar, although of particular interest here is the juxtaposition of the first two clauses. The 'gathering' in the first clause of 'all' the commanders is presented in the perfective, while the 'stating' in the second by 'each' of them is presented in the imperfective. It is precisely this kind of example that presumably led Forsyth to the eminently sensible claim that is now under discussion. In (9) and (10), then, the correlation hypothesis gives correct predications, but only because the semantics of the quantifying adjectives and of aspect happen to coincide with the situation that the correlation hypothesis describes. Note, however, that the correlation hypothesis predicts that only two of the four possible concatenations of quantifiers and aspects are natural. (7) and (8) above show that a third (*vse* + imperfective) is also perfectly reasonable. As (11) and (12) below show, the fourth is also appropriate in particular circumstances.

The next two examples concern, again, sequential subevents, but in this case, the complex event is presented in the perfective. This is the fourth possible concatenation of quantifier and aspect, and the second that the correlation hypothesis suggests is "unnatural" (*každyj* + perfective).

- 11) Informirovav^P komandirov i komissarov častej o namečennom proryve, ja *každymu* iz nix *postavil*^P opredelennuju zadaču. (Birjukov)
 'Having informed^P the commanders and commissars of the units

of the projected breach, I *assigned*^P to *each* of them a particular task.'

- 12) *Každyj* iz nix *vložil*^P v obščee delo mnogo sil i ènergii, a nekotorye otdali^P samoe dorogoe — žizn'. (Blažej)
'Each of them *contributed*^P a great deal of strength and energy to the common cause, and several had given^P the most dear (thing) — life.'

Although the assigning of tasks in (11) is clearly sequential, the complex event is presented in the perfective. In (12) the individuation is apparent (if the sequentiality is not), and the perfective is again used.⁴

In contrast with (11) and (12), the sequentiality of subevents in (13) is explicit.

- 13) Daže bukvy "fitu" i "jať" on srisoval^P iz bukvarja i sam zapomnil^P. No k koncu nedeli Šurka uže *osvoila*^P *poočeredno vse* bukvy. (Lagin*)
'Even the letters "fita" and "jať" he [a teacher, of sorts] copied^P from the primer and memorized^P himself. But by the end of the week Šurka *had* already *mastered*^P *sequentially all* the letters.'

Note also that this example contains *vse* rather than *každyj*. The summarizing sense of *vse* is still present and the sequentiality is superimposed. See also note 4.

Examples (11) and (12) in conjunction with (7) and (8) show that the correlation hypothesis is not adequate to the task of describing the distribution that can be observed of quantifiers and aspects. Taken together, all the examples cited in this section suggest that the distribution of aspect is determined by the semantics of the feature system outlined in section 2, rather than by the kind of match-up of quantifiers and aspects suggested by the correlation hypothesis. If the choice of NP quantifier has any effect on aspect choice, it has to do not with the invariant semantics of aspect, but with the semantics of the features.⁵ In general, if the complex event in question is to serve as a frame for, or is simply to be coordinated with, some other event, the verb must be encoded in the imperfective (the progressive usage). If, on the other hand, the complex event is telic and its closure is what is important to the narrative, the verb must be encoded in the perfective. I have said nothing here about the iterative usage of the imperfective, which is the topic of the next section.

4. Iterated complex events

Thus far the discussion has been limited to single sets of universally quantified subevents, i.e., single complex events. The motivation for distin-

guishing between sub- and complex events is my claim that, contrary to what Forsyth says about the nature of "multiple events," there is a systematic difference between a multiplicity of events in which the multiplicity is introduced only by one of the verbal arguments and multiplicity which is introduced at what I am calling the propositional level. The argument that it is important to distinguish the two has so far been only partly substantiated. Section 3 presented data showing that universal quantification of the verb's arguments does not trigger any obligatory pattern of aspect usage in single complex events. Both aspects can occur with either of the quantifiers under consideration. Section 4 extends this observation and also takes up the asserted differences in multiplicity which derive from the levels at which the multiplicity is stated. By contrasting the effects of quantification at the predicational and propositional levels, these two sections demonstrate the usefulness of this distinction.

The discussion of iterated complex events is divided into two parts: the first deals with the subevents of iterated complex events, the second with the influence of the iterated complex event on aspect. Before beginning, a review of the traditional description of iterated events — a description which seems to be correct — is necessary.

Rassudova (1968), Forsyth (1970) and Bondarko (1971) make very similar points in describing the distribution of the imperfective and perfective when iteration is involved. All observe that the perfective can only be used when there is explicit mention of repetition; furthermore, the number of repetitions in such circumstances cannot be unrestricted, i.e. the perfective is most acceptable with, for example, *dvaždy* 'twice', *triždy* 'thrice', and is possible even with *mnogo raz* 'many times', but not with *obyčno* 'usually', *každyj raz* 'every time', or even *redko* 'rarely'. In order for the perfective to be used, the period of time over which the events are repeated must be able to be viewed as a unit. (See Rassudova 1968:49–50; Forsyth 1970:160–63; and Bondarko 1971:24, under what he calls "summarnoe značenie" 'summary meaning'.) This last restriction is, admittedly, fuzzy, but I doubt that it can be made any more precise. What counts as a "unit" varies with the context as well as the semantics of the verb phrase.

I will use the term "restricted iteration" to cover those cases where the perfective is possible, "unrestricted iteration" where it is not, although what, precisely, the restriction is is unclear. It appears to refer both to boundedness of the time interval over which the iterated event occurs and, as we shall see, the way that the number of repetitions of the iterated event is stated.

The first set of data in this section demonstrates that the complexity of

the subevents over which there is propositional level quantification is substantially irrelevant in the selection of aspect. The choice is made, in large measure, on the basis of the propositional level quantification and the restrictions, imposed in the form of what I consider to be semantic restrictions, having to do with the compatibility of the semantics of aspect and of the temporal quantification.

Unrestricted iteration clearly requires the imperfective; examples (14) and (15) are, therefore, hardly surprising.

- 14) Obyčno vmeste s nimi ja i A. F. Sobol' *besedovali*^I s *každym* soldatom i mladšim komandiro, prežde čem opredelit'^P ego v razvedku. (Birjukov)
 'Usually together with them A. F. Sobol' and I *would converse*^I with *each* soldier and noncom before assigning^P him to a reconnaissance party.'
- 15) Posle raboty *vse sobiralis*^I v dome, *eli*^I luk i boby, a potom ženščiny sadilis^I plesti solomennye sandali dlja prodaži . . . (Vorob'ev)
 'After work *everybody would gather*^I in a home, *eat*^I onions and beans, and then the women would sit^I to weave straw sandals for sale . . .'

As in previous examples, *každyj* and *vse* are best understood in these cases as sequential and simultaneous, respectively. In both examples the repetition is of an unspecified, presumably large, number of times, hence there is no choice but to use the imperfective. The semantics of the subevents is irrelevant to this choice. In (14) the repetition is explicit (*obyčno* 'usually'), but in (15) it must be understood from context and the use of the imperfective.

The data involving the perfective are perhaps more interesting, though in no way contrary to what we should expect once we have made the distinction between sub- and complex events. The fact of repetition must be stated explicitly, but the perfective is entirely acceptable in spite of the rather complicated semantics of the subevents.

- 16) Pravda, pojmannye na vsju žizn' zapomnjat^P uroki — triždy *dali*^P *každy* iz nix po sto palok — odnako èto vrjad li naučit^P ostafnyx. (Vorob'ev)
 'True, the caught ones would remember^P the lesson all their lives — three times *each* of them *was given*^P 100 strokes — but this would scarcely teach^P the others.'

- 17) Tebe ne stydno? Uže triždy vse studenty rešili^P zadaču bystree tebjja.
 ‘Aren’t you ashamed? Three times already *all* the students *have solved*^P the problem faster than you.’

Again, the sequentially resp. simultaneity of *každyj* and *vse* is not a factor in aspect choice. The internal structure of the complex event is essentially ignored, just as it was in the examples containing single complex events.

Examples (14)–(17) are intended to show that the structure of the sub-events need not be considered in aspect choice. It is important to note that I am not claiming that it *cannot* be considered. (For further discussion, see note 5.) These examples also indicate that the traditional description of iterated non-complex events holds for iterated complex events as well, though not all types of repetition are represented here. In particular, there have been no examples of universal quantification at the propositional level. It is these data which are most persuasive in convincing us that we do, in fact, need to distinguish the predicational level from the propositional.

The following three examples address universal quantification of the repetition of complex events; that is, at the propositional level. Given that, as we have already shown, universally quantified subevents can occur with either aspect, it is not difficult to show that the distinction between sub- and complex events is a significant one for an accurate description of aspect.⁶

- 18) Poèтому *každyj* raz, gljanuv na xronometr, staršina *stiskival*¹ zuby i . . . (Vorobëv)
 ‘Therefore *every* time, having glanced at the chronometer, the petty officer *would clench*¹ his teeth and . . .
- 19) Na boľšoj doroge na Xařkov *každyj* večer kričali¹ . . . (Makarenko)
 ‘On the main road to Xařkov *every* evening (they) *would shout*¹ . . .’

In all such cases, only the imperfective may be used. The perfective is, to the best of my knowledge, completely impossible. Hence, if we conflate these two possible types of multiplicity, we will not be able to explain the difference in aspect choice.

The statement of the restriction on the perfective concerning unrestricted iteration turns out to be easier to state than might have been the case. It might be expected that, for example, as long as the repetitions of an action were only two or three in number, the perfective would be possible. Even if the set of events were then quantified by *každyj*, we might expect that, as long as the context makes it fairly clear that only this number of repetitions is involved, the perfective would be acceptable. Curiously, perhaps, this

turns out not to be the case, as example (20) shows.

- 20) Vse èto proizošlo^P oèen' bystro no èetko zapomnilos'^P Ivanu Timofeevièu. Seryj volk *dvaždy napadal^I/napal^P* na staryx losej, i *každyj raz svalival^I/*svalil^P* xilogo odnim udarom gromadnoj lapy.
 'All this happened^P very quickly but Ivan Timofeeviè remembered^P it very clearly. The grey wolf *twice fell^{I/P}* on the old elks, and *every time brought^{I/*P}* down a sick one with one stroke of his enormous paw.'

The action that is explicitly quantified by *dvaždy* allows either aspect to be used, depending, for example, on whether the two attacks are perceived as being a "single" event (perfective) or not (imperfective). However, once *každyj* is used, only the imperfective is possible, even though it is entirely obvious from the context that the same two attacks are involved. The effect of universal quantification at the propositional level can, therefore, be stated rather mechanically: universal quantification at this level requires that the imperfective be used.

We have arrived at two rather different outcomes regarding the effect of universal quantification on aspect according as the quantification operates at the predicational or propositional level. The following two examples show clearly how independent the choice of aspect is of the degree of intricacy at the predicational level. The complexity of the real-world situations described provides a striking example of the relative freedom the speaker has in choosing aspect in accordance with his narrative needs.

First, let us look at the straightforward example in which unrestricted iteration requires that the imperfective be used.

- 21) Kogda pribyvala^I novaja gruppy plennyx, u Antošina byl takoj režim; on (triždyj) *peresprašival^I* po neskoľku raz *každyju* cifru, *každyju* familiju, i dlja kontrolja povtorjal^I.
 'When a new group of prisoners would arrive^I, Antošin's routine was thus: (thrice) he *would reask^I* several times *each* number, *each* surname, and as a check repeated^I them.'

In this obviously iterative context, the imperfective is required (the inclusion of *triždy* 'thrice' does not change this fact — it merely makes the situation more complicated). The subevents are defined as, roughly, 'reask each number several times' and 'reask each surname several times'. This set of subevents is then repeated three times (if *triždy* is included), and the entire complex event is iterated. Although our prejudices regarding iteration and the imperfective may make this example unsurprising, it is nonetheless an informative one. The reason for this has to do with the nature of

the iteration. Presumably, if that part of the context which requires that this sentence occur with an imperfective were removed, the whole situation could be described with a perfective. This is in fact the case, as (22) shows.

- 22) Pribyla^P novaja grupa plennyx. Antošin (triždy) *peresprosil*^P *každuju* cifru, *každuju* familiju po neskoľku raz, i dlja kontrolja povtoril^P.
 'A new group of captives arrived^P. Antošin (thrice) *reasked*^P *each* number, *each* surname several times, and as a check repeated^P them.'

Example (22) is clearly the "single event" counterpart of the iterated event in (21).

5. Conclusion

The aim of section 3 was to show that, contrary to Forsyth's implicit claim, aspect choice is by and large independent of predicational level multiplicity. Section 4 has shown that this remains true when the complex event is iterated. Furthermore, aspect is highly dependent on propositional level multiplicity. The difference in effect of propositional level and predicational level multiplicity is manifested most clearly when universal quantification of participants (predicational level) is contrasted with universal quantification of temporal occasions (propositional level). In the first case, the multiplicity can be treated as a "single event," and manipulated (that is, presented in either aspect) according to narrative needs (see p. 65). In the second, the multiplicity cannot be treated as a unit and must be presented in the imperfective.

Having distinguished the predicational and propositional levels, one is perhaps tempted to make the further claim that these levels remain ever separate and that the effect that multiplicity has on aspect choice is fixed according to the level at which the multiplicity is specified. The claim, though worth investigating, has not been substantiated in this paper, and, in fact, there is some indication, as discussed in note 5, that this stronger claim is incorrect.

The purpose of this paper has been solely to demonstrate the usefulness of distinguishing semantic levels within the sentence in a description of aspect. Clear evidence that this distinction is a substantive one derives from the interaction of aspect and multiplicity, particularly with respect to universal quantification.

NOTES

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1. In three popular first-year Russian texts, for example, this fact is presented in the initial encounter with aspect. Stilman, Stilman and Harkins (1972:210) say that the imperfective is used to describe "actions performed repeatedly (*He writes, or wrote, home every week—often*)". Baker, in his workbook to accompany *Russkij jazyk dlja vsech*, lists one of the uses of the imperfective as "repeated actions not summed up in a totality" (1977:104). Clark points out that "perfective verbs . . . are rarely used with words or phrases which indicate the duration or repeated nature of the actions" (1973:254).

2. In translating *každyj* 'each' and *vse* 'all', two words which will be of central interest, I have used what is appropriate to the English context. There are instances, for example, where each of these is best translated as 'everybody'. An asterisk next to the name of the author of quoted text indicates that I have altered the text somewhat.

3. Although I disagree with some of Forsyth's claims, it is to his credit that such matters are at least discussed. Rassudova (1968) and Bondarko (1971), two of the better Soviet handbooks, discuss neither this issue nor the one following in this section.

4. It is perhaps worth noting here that the very examples that Forsyth refers to in the quotation above (p. 59) can be used as counterevidence to his claim. Thus, sentence (i) below allows either an imperfective (as Forsyth quotes it) or a perfective (as below), depending on context.

- i) Znal, čto detej u nee bylo šestero i *odin za drugim peremerli*^P *vse* očen' rano.
'I knew that she had (had) six children and that they *had all died*^P *one after another* very early.'

This is an interesting example because it shows *vse* being used in a context where the subevents are overtly sequential (*odin za drugim* 'one after another'). In spite of this strong sequentiality and the rather long time period involved, the perfective is completely acceptable.

5. This is not to say that the choice of quantifier is in no way relevant to aspect use. It may happen, for instance, that *každyj*, by presenting subevents as sequential, creates a complex event which is too "spread out" to be used as a progressive coordinated with a punctual event. Curiously, this restriction contradicts the correlation hypothesis. Even in such cases, however, we should not conclude that quantifier choice determines aspect choice since neither aspect is acceptable; instead, it is a matter of incompatibility between the semantics of the relevant aspect feature and the quantifier. Furthermore, Fielder (this volume) presents evidence that predicational level multiplicity can affect aspect choice. Note, however, that the speaker is free to choose either aspect in these examples.

6. Although it is possible to use both *každyj* and *vse* as temporal modifiers, I will consider only the former, e.g., *každyj den', raz* 'every day, time'. These are cases where iteration is obligatorily involved. *Vse* is primarily used in expressions like *ves' den'* 'all day' or even *vse dni* 'all (the) days' to convey a period of time, or duration. This period of time may be relevant as background either to a state or to recurring actions, but it does not of itself imply repetition.

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Implicature and the Aspect of the Infinitive in Russian*

Grace E. Fielder

This paper investigates aspect usage in the infinitive complement (IC) following the predicators (PR) *udavat'sja*^I/*udat'sja*^P 'to succeed in doing, to manage to do'; and *prixodit'sja*^I/*prijtis*^P 'to have to do, to have the chance or opportunity to do'. These PR's were chosen because they have several properties in common. They are both impersonal PR's, i.e., they govern the dative, so that they share the same syntactic relationship with the IC. Semantically both have some kind of aspectual value themselves and therefore might be expected to affect IC aspect. This assumption is prompted by the asymmetric way in which they pattern with imperfective and perfective IC's (IC^I and IC^P, respectively). This asymmetry is illustrated by examples (1-4).

- (1) Ivanu udalos'^P *vstrečat'sja^I/vstretit'sja^P s nim.
'Ivan managed to meet with him.'
- (2) Ivanu udavalos'^I †vstrečat'sja^I/vstretit'sja^P s nim.
'Ivan managed to meet with him.'
- (3) Ivanu prišloš'^P vstrečat'sja^I/vstretit'sja^P s nim.
'Ivan had to meet with him.'
- (4) Ivanu prixodilos'^I vstrečat'sja^I/*vstretit'sja^P s nim.
'Ivan used to have to meet with him.'

All examples cited in this paper have been tested with a native speaker of Russian in order to determine the preference or acceptability of one aspect over the other. Native informant response is reported in terms of the following gradation (Timberlake 1982):

[no mark]	preferred, acceptable
[†]	not preferred, acceptable
[?]	marginally acceptable
[*]	unacceptable

No mark on either of the two competing forms means that both are equally acceptable. In the Russian examples the imperfective form precedes the perfective. The form in the original text, if appropriate, follows the source citation.

The following discussion will examine reasons for this asymmetric patterning of these PR's with IC^I and IC^P. Only sentences containing the past

tense form of these PR's has been considered in order to avoid the further complication of the interaction of tense with aspect.

Since a major assumption of this paper is that the PR affects the aspect of its IC, I will examine first the inherent lexical-aspectual properties of these verbs. In Vendler's terms (1967), these PR's are *achievement* verbs, i.e., they express the achievement of a goal. Thus *udavat'sja*^I/*udat'sja*^P 'to succeed in doing' means 'to achieve its goal', which is the action of the IC, while *prixodit'sja*^I/*prijtis*^P 'to have to' expresses the transition from one state to another or the onset of a state of obligation or opportunity, i.e., the inchoative of a stative. This achievement or transition occurs at a single moment along the time axis, and hence achievement verbs are typically expressed by a perfective (Maslov 1948, Brecht [this volume]). Indeed the perfective form of these verbs is numerically more frequent than the imperfective.¹

As a consequence of the fact that these verbs are achievement verbs there are certain restrictions on their own aspect usage. If the perfective is the most "natural" aspect for an achievement predicate, what then is the meaning of the imperfective for these PR's?

A typical meaning of the Russian imperfective corresponds to the progressive tense in English, i.e., an action in progress without reference to its limit or boundary. Achievement verbs cannot occur in the progressive sense of the imperfective in Russian (Maslov 1948, Brecht [this volume]), since they do not allow an internal reference point (cf. examples (5) and (6)). Their action, unlike that of an accomplishment verb, cannot be viewed as a process, but can only refer to one point in time — that moment of the goal achieved or transition attained.

- (5) *Poka Ivanu udavalos^I vstrečat'sja^I s nim, on pil čaj.
*‘While Ivan was succeeding in meeting him, he was drinking tea.’
- (6) *Poka Ivanu prixodilos^I vstrečat'sja^I s nim, on pil čaj.
*‘While Ivan was having to meet with him, he was drinking tea.’

In this respect *udavat'sja*^I and *prixodit'sja*^I are essentially the same as *prixodit'*^I, which cannot combine with *poka* (Maslov 1948:315).

Negation is often said to condition an imperfective. The effect of negation on aspect usage, however, is not as predictable as some textbooks would have it. Since negation does have the tendency to skew expected results, examples involving negation have been omitted from the following discussion and text counts.

Another meaning of the Russian imperfective is that of a durative action. Strictly speaking, a durative meaning is unacceptable for achievement verbs

for the same reasons that the progressive is. Example (7) is unacceptable. The only acceptable alternative would be (8), which uses a perfective *prišlos'* to express the inception of the state of obligation and an imperfective IC to express the durative action. (See below for a more detailed discussion.)

- (7) *Emu dolgo prixodilos'^I dumat'^I ob ètoj probleme.
 '*For a long time he was having to think about this problem.'
- (8) Emu dolgo prišlos'^P dumat'^I ob ètoj probleme.
 'He had to think about this problem for a long time.'

Udavat'sja^I seems to allow a quasi-durative reading only when the sentence involves negation:

- (9) *Materi dolgo udavalos'^I ubedit'^P doč, čto ona dolžna vyjti^P zamuž.
 '*For a long time the mother was succeeding in convincing her daughter that she had to get married.'
- (10) Materi dolgo ne udavalos'^I ubedit'^P doč, čto ona dolžna vyjti^P zamuž.
 'For a long time the mother was unable to succeed in convincing her daughter that she had to get married.' (But finally she succeeded.)

Note that in (10) it is not the action of the predicate that is durative, but rather the state of nonsuccess. The mother made repeated attempts to convince her daughter, and at last succeeded.

By eliminating negated and durative uses from consideration, it seems that the iterative is the most appropriate use of the imperfective for these achievement verbs. Iterativity refers to the events as multiple subevents of a macroevent. There is no difficulty in conceptualizing an achievement verb as referring to an iterated event; cf. (11) and (12). Since the action of an achievement verb is limited to a single point on the time axis, then, by extension, the meaning of its imperfective will be the iteration of that single point, resulting in a series of points along the time axis. (See Brecht [this volume] for a more detailed discussion of the iteration of achievement verbs in Russian.)

- (11) Emu často udavalos'^I vstrečat'sja^I s nim.
 'He often managed to meet with him.'
- (12) Emu často prixodilos'^I vstrečat'sja^I s nim.
 'He often had to meet with him.'

Another semantic property of these PR's is that they are *implicative*. The term "implicative verb" was introduced in Karttunen 1970 and has been elaborated in several subsequent publications (Karttunen 1971a,

1971b, 1973). Karttunen uses implicative in a truth-value sense, so that the assertion of a main sentence with an implicative verb as PR commits the speaker to the truth of the complement proposition (as augmented by tense and other modifiers of the same sentence). Thus sentence (13) implies sentence (14) (Karttunen 1970:328):

(13) Yesterday Bill managed to break a window.

(14) Yesterday Bill broke a window.

There are further logical ramifications of this analysis of implicature. The exact nature of implicature and the attendant concepts of presupposition, entailment, and consequence are still being debated (cf. Freed 1980, Givón 1980, Karttunen 1973 and 1975, Keenan 1971, and Kempson 1975), and I do not propose to add anything to these arguments. I prefer instead to adopt a more informal interpretation of implicature (similar to Givón's conception (1980)) that does not make reference to either the speaker's beliefs or the truth value of the sentence in real (or unreal) worlds. In this informal sense, the PR's *udavat'sja*¹/*udat'sja*^P and *prixodit'sja*¹/*prijtis*^P are implicative in that they carry a semantic implicature such that if the PR event occurred, then the IC event occurred as well. Thus sentences (15) and (16) both imply sentence (17):

(15) Ivanu udalos'^P vstretit'sja^P s nim včera.
'Ivan managed to meet with him yesterday.'

(16) Ivanu prišlo's'^P vstretit'sja^P s nim včera.
'Ivan had to meet with him yesterday.'

(17) Ivan vstretilsja^P s nim včera.
'Ivan met with him yesterday.'

This implicature entails a *temporal implicature*, such that the IC event must occur at the same time as the PR event. Givón (1980:48) asserts that implicative verbs encode a situation where one cannot conceive of a time separation between the two events and therefore the IC is more likely to be syntactically integrated into a single clause or proposition. This is illustrated by the problem of dependent versus independent temporal reference of the English IC. Compare the following data:

(18) John will meet with him next week.

(19) John met with him last week.

(20) John agreed to meet with him { next week.
last week.

(21) John managed to meet with him { *next week.
last week.

plicature of successfully completed action. The PR *prixodit'sja*¹/*prijtis*^P lacks this implicature. This feature of successful completion corresponds to the qualitative aspectual feature of completed or closed action; this feature conditions the perfective aspect.² For example, the difference in aspect use between (24) and (25) is conditioned by the aspect feature of completed versus non-completed action:

- (24) Ivan vstrečalsja¹ s nim.
'Ivan was meeting with him.'
- (25) Ivan vstretilsja^P s nim.
'Ivan met with him.'
- (26) Ivanu udalos'^P vstreti'sja^P s nim.
'Ivan managed to meet with him.'

While in (24) and (25) the predicate can in principle vary independently for the feature of completion, *udalos'*^P 'managed, succeeded' imposes the feature of completion on its IC and hence the perfective is conditioned. This aspectual implicature can potentially be used to explain the patterning of IC aspect after these PR's.

So far I have discussed two kinds of implicature, temporal and qualitative aspectual [± completion]. Another source for aspectual implicature is the actual aspect of the PR (= morphologically encoded aspect versus inherent lexical content). This aspectual implicature derives from temporal implicature and has to do with quantification. If, consistent with temporal implicature, it is the case that each time the PR event occurs, the IC event must occur, then it follows that if the PR event occurs more than once, i.e., it is iterated, then the IC event must occur more than once. This I call *quantitative aspectual implicature*. Because the primary function of the imperfective of both these achievement PR's is to mark iterativity, quantitative aspectual implicature for all practical purposes means that an imperfective of one of these PR's will imply the iteration of its IC.

Three types of implicature have been outlined above:

- (i) **TEMPORAL IMPLICATURE:** If the PR event occurred, then the IC event occurred as well (and at the same time).
- (ii) **QUALITATIVE ASPECTUAL IMPLICATURE:** If the PR event occurred/is completed, then the IC event occurred/is completed (successfully).
- (iii) **QUANTITATIVE ASPECTUAL IMPLICATURE:** If the PR event occurred once/more than once, then the IC event occurred once/more than once.

Implicatures (i) and (ii) follow from the inherent properties of the PR

itself. Implicature (iii) is in effect the quantification of (i). Both (ii) and (iii) are types of aspectual implicature and, as will become apparent below, compete with each other in their effect on aspect selection in the IC. This competition will be used to describe the facts of aspect usage in the IC following these PR's.

The competition between the two types of aspectual implicature is illustrated in Table 1. Qualitative aspectual implicature is described in terms of the feature [\pm completion]. Quantitative aspectual implicature is described in terms of [\pm iterativity].

Predicator	Qualitative Aspectual Implicature (IC)	Quantitative Aspectual Implicature (IC)
udalos ^P	[+ completion]	[- iterativity]
udavalos ^I	[+ completion]	[+ iterativity]
prišlos ^P	[- completion]	[- iterativity]
prixodilos ^I	[- completion]	[+ iterativity]

Table 1.

[+ completion] implies perfective aspect, while [- completion] implies imperfective aspect. Likewise, [+ iterativity] implies imperfective aspect, and [- iterativity] perfective. If the qualitative and quantitative aspectual features are consistent, then the aspect selection of the IC is more likely to be determined by the PR since the consistency of these features should ensure the IC's dependence on its PR. The logic behind this assumption is that if temporal implicature encodes a situation where one cannot conceive of a time separation between the PR event and the IC event, then aspectual implicature should, by the same token, encode a situation where one cannot conceive of a difference in the aspect of the two events. The strength of the aspectual implicature of a PR, and conversely the degree of dependence of its IC, is directly related to the consistency of these features.

The next section will examine the facts of aspect selection in the IC following each of these predicators in light of aspectual implicature.

According to Table 1, *udalos*^P imposes the features of [+ completion] and [- iterativity] on its IC. Both of these are consistent with conditioning the perfective aspect. One would then expect that mainly perfective IC's would follow this PR. In fact, only IC^P is acceptable.

- (1) Ivanu udalos^P *vstrečat'sja^I/vstretit'sja^P s nim.
 'Ivan managed to meet with him.'

- (27) V sarajax po uglam bylo svaleno mnogo vsjakogo loma, no deľnyx predmetov ne bylo. Po svežim sledam mne udalos'^P *vozvraščat'¹/vozvratit'^P koe-kakie cennosti, utaščennye v samye poslednie dni. (AM:7, vozvratit'^P)
 'A lot of all sorts of scrap had been dumped in the sheds all along the corners, but there were no usable objects. By following the fresh traces, I managed to return some valuables that had been stolen in the very last days.'
- (28) Mjatežnikam udalos'^P *privlekat'¹/privleč'^P na svoju storonu značitel'nuju čast' ispanskoj armii i graždanskoj gvardii. (MB:58; privleč'^P)
 'The insurrectionists managed to win over to their side a significant part of the Spanish army and civil guard.'
- (29) Ot nekotoryx porokov predstaviteljam "špany" so vremenem udalos'^P *izbavljaťsja¹/izbavit'sja^P, no èto proizošlo ne skoro. (AM:227; izbavit'sja^P)
 'The representatives of the "riff-raff" managed to free themselves in time from certain vices, but this did not come about quickly.'

In all of the above examples, an IC¹ is not acceptable because the imperfective aspect is incompatible with the implicatures of *udalos'*^P. This holds true even in those contexts where one might expect an imperfective to be conditioned. Examples (27) and (27a) show that even the introduction of explicit iterativity (*v neskolko priemov*), which should condition the imperfective, cannot override the qualitative aspectual implicature of [+ completed] carried by *udalos'*^P.

- (27) . . . mne udalos'^P *vozvraščat'¹/vozvratit'^P koe-kakie cennosti . . .
 ' . . . I managed to return some valuables . . . '
- (27a) . . . mne udalos'^P v neskolko priemov *vozvraščat'¹/vozvratit'^P koe-kakie cennosti . . .
 ' . . . I managed to return in several ways some valuables . . . '

This sort of test can be carried out even further (see examples (30) and (30a)). "Vse plus comparative" *obligatorily* conditions the imperfective aspect in a simplex sentence since it focuses on the action as a process (Bondarko 1971:13). Yet it does not condition an IC¹ following *udalos'*^P. The positive aspectual feature of completion plus the negative feature of iterativity override the semantic force of "vse plus comparative." It must be added, however, that the resulting sentence (30a) is only marginally acceptable, since "vse plus comparative" is incompatible with the perfective *prodvinuťsja*. Substitution of *ešče* for *vse* would make (30a) acceptable.

- (30) V tečenie ètix dnej protivnik vse bliže prodvigalsja^I/**prodvinulsja*^P na bližnie podstupy k Morata de Taxunja. (~MB:138)
 ‘During the course of those days the enemy advanced even closer onto the nearby approaches to Morata de Taxunja.’
- (30a) ?V tečenie ètix dnej protivniku udalos^P vse bliže **prodvigatsja*^I/*prodvinuťsja*^P na bližnie podstupy k Morata de Taxunja.
 ‘During the course of those days the enemy managed to advance even closer . . .’

Prixodit'sja^I carries the opposite implicatures of [- completion] and [+ iterativity]. Both of these are consistent with the imperfective aspect. One should therefore anticipate mainly IC^I to follow this predicator, and, in fact, IC^I does follow this predicator almost without exception.

- (4) Ivanu prixodilos^I vstrečat'sja/**vstretit'sja*^P s nim.
 ‘Ivan had to meet with him.’
- (31) Vremenami im prixodilos^I podderživat^I/**podderžat*^P svjaz' s desjaťju i bolee korrespondentami, osobenno v operativnoj glubine i neredko pri slyšimosti na “nole”. (~AMC:110)
 ‘At times they [radio operators] would have to keep up a connection with ten and more correspondents, especially in strategic depths and often under conditions of zero audibility.’
- (32) Trudnostej na puti k otlíčnym rezul'tatam u nas bylo nemalo: odno vremja ne xvatalo učebnyx posobij po novoj boevoj texnike, po načalu bylo nemnogo i ljudej, xorošo znavšix ètu texniku. Prixodilos^I do predela naprjagat^I/**naprjač*^P usilija bojcov i komandirov, samim doxodit^I/**dojti*^P do istiny. (MB:19; *naprjagat*^I, *doxodit*^I)
 ‘We had more than a few difficulties along the road to excellent results: at one time there weren't enough textbooks on the new military technology, at first there were even very few people who knew this technology well. It was necessary to strain to the limit the efforts of the soldiers and commanders, to reach the truth themselves.’

Although the preference of IC^I over IC^P is not surprising, the fact that IC^P is virtually unacceptable is. The nonoccurrence of IC^P after *prixodilos*^P has not been noted before (cf. Rassudova 1968:59, Forsyth 1970:229 and 263, Murphy 1965:142). There are two areas of usage, however, which are problematic and I will mention them only in passing. The first is when the IC is a procedural (Forsyth 1970) or *Aktionsart* (Isačenko 1962). In example (33), an IC^P is apparently acceptable because of the special lexical properties of *prožit*^P ‘to live through’, the imperfective of which can only have an explicitly iterative meaning.

- (33) On pročítal svoi stixi i vdrug skazal: “Žizn’ u čeloveka odna”. Ver-nuvšis’ v gostinicu, ja dolgo ne mog usnut’, voročalsja, dumal: net, žizn’ ne odna — za odnu prixodilos’^I †proživat’^I/prožit’^P ne odnu, ne dve žizni, a mnogo. V ètom, kažetsja, vsja beda, no i vse sčast’e. (~IÈ:9.93)

‘He finished reading his poems and suddenly said: “Man has but one life”. When I returned to the hotel, for a long time I could not fall asleep, I tossed and turned and thought: No, [man has] not one life — during one life it is necessary to live through not one, not two lives, but many. This, it seems, is where all sorrow lies, but also all happiness.’

Further, not only is *prožit’^P* a procedural, but the phrase “*Za plus accusative*” ‘for a duration of time’ independently encourages the choice of the perfective aspect (Forsyth 1970:64). Nevertheless, it is important to note that the IC^I is still acceptable, although not preferred.

This is an example of only one type of procedural. There are other types which simply cannot combine with *prixodilos’^I* because of their own aspectual restrictions, e.g., the verb occurs only in the perfective, and the perfective is not permissible after *prixodilos’^I*. It is not clear just what the limitations are for procedurals combining with *prixodilos’^I*, or even if these limitations are consistent for all types of procedurals. This question requires further considerable study.

The other grey area concerns examples containing the phrase, *teper’ prixodilos’^I*. Contrasted with *teper’ prišlos’^P*, *teper’ prixodilos’^I* seems to have the meaning of *konstatacija fakta*. An occasion arises in which the subject must perform an action which is somehow undesirable or unpleasant in varying degrees:

- (34) Tak ili inače, rezul’tat byl nalico. Odin—no’ v poľzu protivnika ili no’—no’ čertu na potexu. Vmeste togo čtoby raskryt’ istoriju, ee “razdavili” i teper’ prixodilos’^I vse načinat’^I/načat’^P snačala. (~BR: 291)

‘One way or the other, the result was obvious. One to nothing in favor of the enemy, or nothing to nothing in no one’s favor. Instead of revealing the story, they had hushed it up. Now what I was going to have to do was to start everything all over again.’

This use appears to be a narrative device which places us at the very moment of the change of state — between the moment of obligation having arisen and the moment of the performing of the obligatory action. (This could explain why this phrase is usually used in the historical present.) This separation serves to sever the connection between the two actions both in a

psychological sense (i.e., acknowledging the obligation, but objecting to or steeling oneself for the ensuing action) and in a temporal sense (roughly the equivalent of a future in the past). This weakened connection between the PR event and the IC event violates the aspectual implicature of *prixodilos'*^I and thus allows an IC^P to appear if properly motivated.

Udavať'sja^I has mixed implicatures: [+ completion], which conditions the perfective aspect, and [+ iterativity], which conditions the imperfective aspect. This suggests that the aspect selection of the IC will not necessarily be dependent on the PR and that, in principle, either aspect should be possible. This is in fact the case, as illustrated in examples (2) and (35–37).

- (2) Ivanu udavalos'^I †vstrečať'sja^I/vstretit'sja^P s nim.
'Ivan managed to meet with him.'
- (35) Inogda nam udavalos'^I †proizvodit'^I/proizvesti^P takoj siľnyj nažim, čto my načinali polučať daže mjaso, kopčenosti i konfety, . . . (AM:22; proizvesti^P)
'Sometimes we would manage to exert such strong pressure, that we would begin to receive even meat, smoked foods, and candy, . . .'
- (36) Naši vospitanniki vseĝda byli golodny, i èto značiteľno usložnjalo zadaču ix moraľnogo perevospitanija. Toľko nekotoruju, neboľšuju časť svoego appetita kolonistam udavalos'^I udovletvorjat'^I/†udovletvorit'^P pri pomošči častnyx sposobov. (AM:23; udovletvorjat'^I)
'Our pupils were always hungry and this significantly complicated the problem of their moral reeducation. Only a certain, small part of their appetite did the colonists manage to appease through the help of private means.'
- (37) Postепенno u nekotoryx iz sotrudnikov složilos' predstavlenie, čto glavnaja ix zadača — likvidacija raznoglasij. Oni sčitali boľšim dostiženiem, kogda im udavalos'^I †dobivať'sja^I/dobit'sja^P soglasovannyx rešenij. (VSE:556; dobit'sja^P)
'Gradually some of our co-workers formed the impression that their main problem was the elimination of discord. They would consider it a big accomplishment whenever they managed to reach concerted decisions.'

Thus, both aspects are permissible with *udavať'sja*^I, but there are differences in preference for different examples. These differences can be explained. In (35) and (37), the action of the IC is stressed as successfully completed and the perfective is preferred. In (36), the imperfective is preferred because the action is not really successfully completed — their appetite is only partially satisfied. Since in all of the above examples both

aspects are acceptable, what mixed implicature predicts is that either aspect in principle will be acceptable, but not which one will be preferred. A possible solution to predicting preference will be discussed below.

Prijtis^P presents essentially the same situation as *udavat'sja*^I: mixed implicatures of [- completion] and [- iterativity], and correspondingly mixed data.

- (3) Ivanu prišlos'^P vstrečat'sja^I/vstretit'sja^P s nim.
'Ivan had to meet him.'
- (38) So vsej ètoj soveršenno novoj dlja menja texnikoj prišlos'^P znakomit'sja^I/†poznakomit'sja^P i detaľno ee izučat'^I/†izučit'^P. (VSE:371; znakomit'sja^I, izučat'^I)
'I had to familiarize myself with all this technology which was completely new to me, and study it in detail.'
- (39) My byli s nim odnogo vozvrasta i sovместimy po xarakteru. Pravda, vnačale prišlos'^P terpelivo otučat'^I/*otučit'^P ego ot črezmernoj voľnosti, čtoby priversti k discipline i ubedit' v neobxodimosti bolee seřeznogo otnošenija k svojim objazannostjam. (MB: 95-6; otučat'^I)
'We were the same age and had compatible characters. True, at first I had to patiently break him of excessive liberties in order to provide him with discipline and convince him of the necessity of a more serious attitude towards him obligations.'
- (40) —Možno mne posmotret', kak myši kota xoronili?— sprosila Šurka, kogda Evronsinja vernulas' s rynka i zanjatija prišlos'^P vremenno ?prekraščat'^I/prekratit'^P. (LL:89; prekratit'^P)
"‘‘Could I see how the mice buried the cat?’’ asked Šurka, when Efrosinja returned from the market and it was necessary to stop the lessons temporarily.'

Although both aspects should, in principle, be acceptable following *prijtis*^P, there is considerable variation not only in the preferences, but also in the degree of acceptability (note, especially, (39) and (40)). In order to account for this variation, we need a systematic discussion of the factors that determine aspect selection if the PR alone does not.

Clearly if the aspectual implicatures do not line up, then the aspect of the IC is not wholly determined by the PR. Aspect selection will then depend on the presence or absence of certain factors which operate at the level of the IC. Some of these factors are quantitative aspectual, other qualitative aspectual. In other words, those same factors which compete at the level of the PR also compete at the level of the IC. In order to document this, we will consider in greater detail the aspect usage of the IC with *prišlos'*^P and

and *udavalos*^I, both of which have mixed aspectual implicatures and can potentially combine with IC's of either aspect.

The quantitative features which compete at the IC level are those of iterativity and durativity. Both of these independently condition the imperfective. If durativity, for instance, is not explicitly specified in the IC, a perfective IC is generally preferred with governing *prišlos*^P (41a) or *udavalos*^I (42a). If, however, the feature of durativity (*dolgo* 'for a long time') is specified on the domain of the IC, an imperfective will be preferred (41b) and (42b).

- (41a) Mne prišlos^P ?ob"jasnjat^I/ob"jasnit^P služaščemu, čto nomer mne nužen vsego na tri-četyre časa, prosto podremať. (VSE:137; ob"jasnit^P)
 'I had to explain to the concierge that I needed the room for all of 3-4 hours, just to take a nap.'
- (41b) Mne prišlos^P očen' dolgo ob"jasnjat^I/?ob"jasnit^P služaščemu, čto nomer mne nužen vsego na tri-četyre časa, prosto podremať.
 'I had to explain for a very long time [= do a lot of explaining] to the concierge that I needed the room for all of 3-4 hours, just to take a nap.'
- (42a) Načafnaja skorost' snarjada byla nevelika, potomu i udavalos^I inogda ?razgljadyvat^I/razgljadet^P ego v polete. (NK:334; razgljadet^P)
 'The initial speed of the missile was not very great, and therefore [we] sometimes managed to spot it in flight.'
- (42b) Načafnaja skorost' snarjada byla nevelika, potomu i udavalos^I inogda dolgo razgljadyvat^I/?razgljadet^P ego v polete.
 'The initial speed of the missile was not very great, and therefore [we] sometimes managed to examine it in flight for a long time.'

The last two examples raise several questions, foremost being the status of iterativity in (42a). While I stated earlier that iterativity favors the imperfective, (42a) has a perfective IC. This can be attributed to the fact that iterativity is specified on the level of the PR, not the IC, and despite the [+iterativity] feature of *udavalos*^I, the [+completion] feature still favors IC^P. If iterativity is additionally specified on the IC level, however, an IC^I can be favored. A major problem is how to establish the scope of temporal adverbs such as *inogda* 'sometimes'. Unfortunately, it is not always possible to state categorically on which level it is operating. There are other formal devices for expressing iterativity, the scope of which is less problematic. A singular object can encourage an IC^P, since it facilitates the conceptualization of the action as singularized (43a), whereas a multiple object will con-

versely favor an IC^I (43b); see Rassudova 1968 (72).³

- (43a) Inogda nam udavalos^I ?soveršat^I/soveršit^P vylazku iz sfery uzkoj pedagogiki v neketoruju sosednjuju sferu . . .
 'Sometimes we managed to make an excursion out of the sphere of strict pedagogy into some neighboring sphere . . .'
- (43b) Inogda nam udavalos^I soveršat^I?soveršit^P vylazki iz sfery uzkoj pedagogiki v neketorye sosednie sfery . . . (AM:22, soveršat^I)

In (43b), the scope of the iterativity is unquestionably that of the downstairs clause (*vylazki* being the direct object of the infinitive), and hence IC^I is preferred.

The same principle holds true for examples containing *prišlos*^P. In general, *prišlos*^P tends to prefer IC^P in a neutral context because of its feature of [- iterativity] as in (44a); an imperfective, however, will be preferred if the IC is explicitly iterated (44b).

- (44a) Mne prišlos^P †vystupat^I/vystupit^P na sobranii, . . .
 'I had to appear at a meeting . . .'
- (44b) Mne prišlos^P vystupat^I/†vystupit^P na sobranijax ne toľko u sebja na zavode, no i na drugix. (VSE:106, vystupat^I)
 'I had to appear at meetings not only at my own factory, but also at others.'

As the preceding examples demonstrate, the quantitative aspectual features of [+ iterativity] and [+ durativity] can condition an imperfective IC when they are specified on the IC level. This indicates a certain degree of independence for the IC vis-à-vis its PR and the PR's aspectual implicature.

It has been asserted that the presentation of the action as completed is an example of a qualitative aspectual feature. In (45a), both the action of the PR and the action of the IC are iterated; the IC^I is preferred. In (45b), there is the additional qualitative aspectual feature of completion (*uspešno* 'successfully') specified at the IC level, and this conditions IC^P despite the presence of iterativity.

- (45a) Inogda udavalos^I zabrasyvat^I/†zabrosit^P artillerijskix razvedčikov za liniju fronta. (NK:306; zabrasyvat^I)
 'Sometimes [we] managed to launch artillery scouting planes behind the front line.'
- (45b) Inogda udavalos^I uspešno †zabrasyvat^I/zabrosit^P artillerijskix razvedčikov za liniju fronta.
 'Sometimes [we] managed to successfully launch artillery scouting planes behind the front line.'

These examples show how aspectual features, quantitative and qualitative, competing at the level of the IC proposition can influence the aspect of the IC.

In addition to aspectual features at the IC proposition level, certain lexical properties of the infinitive predicate itself can influence aspect selection. This is another argument for a certain degree of independence on the part of the IC.

- (46) No tem ne menea puš' čitateľ budet spokoien: nam i v drugix slučax ne vseгда udavalos'^I sobljudať^I/†sobljusti^P dolžnym obrazom pravila, no vse že my svodili koncny s koncami. (AG:142; sobljudať^I)
 'But nonetheless let the reader stay calm: even in other instances we have not always managed to observe all the rules [of narration] as required, but all the same we have made the ends meet.'
- (47) No v naše vremena takie slučai byli obyčny — krasivym ženščinam ne vseгда udavalos'^I †vyxodit'^I/vyjti^P zamuž. (PV:51; vyjti^P)
 'But in our time such situations were usual — beautiful women did not always manage to get married.'

Although (46) and (47) seem to be the same type of context, there is a difference in preference. In order to account for this difference, it is necessary to make reference to the inherent lexical properties of the IC itself. The aspectual relationship between *sobljudat'*^I 'to observe, to strictly adhere to' and *sobljusti*^P 'to observe, to execute, to carry out exactly' is somewhat different from that, for example, of *vyxodit'*^I/*vyjti*^P *zamuž* 'to get married, to become someone's wife', which is a telic pair. Inherently *sobljudat'*^I is an atelic process, while *sobljusti*^P is a telicized process, i.e., it is made telic through its aspect rather than through its inherent lexical meaning. The perfective aspect imposes a resultative meaning on the process of observing, i.e., the rules are observed with a result, e.g., the ends were made to meet. As a consequence of this difference in semantic properties, *sobljudat'*^I/*sobljusti*^P is inherently less telic than *vyxodit'*^I/*vyjti*^P *zamuž* and is thus less likely to occur as a perfective in this context. This shows that the inherent lexical properties of the infinitive predicate itself must be taken into account when discussing aspect choice.

This same type of phenomenon can also be observed when *prišlos'*^P is the PR:

- (48) Prišlos'^P v partijnom komitete akademii sobirať^I/†sobrat'^P vsju gruppu i ubeždat'^I/**ubedit'*^P ee v tom, čto zakon Gej-Ljusaka otryaet naučnye zakonomernosti, a student, usomnivšijsja v nem,

ne znaet ni zakona Gej-Ljusaka, ni dialektiki. (VSE:104; *sobirat'*^I, *ubeždat'*^I)

'I had to collect the entire group at the party committee of the academy and try to convince them that the law of Guy-Lusac reflected scientific regularity and that any student who doubted it did not know either the law of Guy-Lusac or dialectics.'

As pointed out by Maslov (1948), certain imperfectives can have a conative or attemptive meaning. Although this is a qualitative aspectual feature (attempted versus completed action), it is lexically constrained in that only certain verbs exhibit this sub-aspectual distinction. For example, *ubeždat'*^I means 'to try to convince', while *ubedit'*^P means 'to convince'. If the conative sense is intended, as it is in (48), then only the imperfective can be used. By contrast, *sobirat'*^I/*sobrat'*^P 'to collect, to gather together' lacks this sub-aspectual distinction so that in the same context the perfective *sobrat'*, although not preferred, is acceptable.

Parenthetically, because of the lexical-semantic content of *udavat'sja'*^I and its additional implicature, the attemptive sense of the imperfective would be logically contradictory and thus does not occur after this PR:

- (49) Pri pomošči očen' naprjažennoj diplomatii nam inogda udavalos'^I **ubeždat'*^I/*ubedit'*^P svojim žalkim vidom, †*zapugivat'*^I/*zapugat'*^P buntom kolonistami, i nam perevodili, k primeru, na sanatornuju normu. (AM:21; *ubedit'*^P, *zapugat'*^P)
'With the help of very intense diplomacy, we sometimes managed to persuade [them] with our sorry look, intimidate [them] (with the threat of) a riot of the colonists, and they would convert us, by way of example, to a sanatorium norm.'

Thus, the imperfective *ubeždat'*^I is not allowed because of its sub-aspectual meaning, while *zapugivat'*^I, which lacks this meaning, is acceptable in the same context.

The foregoing assertions concerning aspect use in the IC following these PR's are confirmed by text counts (see note 1):

	<u>Imperfective IC</u>	<u>Perfective IC</u>
<i>udalos'</i> ^P	0%	100%
<i>udavalos'</i> ^I	28%	72%
<i>prišlos'</i> ^P	50%	50%
<i>prišodilos'</i> ^I	99%	1% ⁴

Table 2.

The preceding discussion shows the necessity of discussing aspect usage in the IC in light of several competing factors:

(1) The independence versus the dependence of the IC vis-à-vis its PR. This is a reflection of the strength of the PR's aspectual implicature, which is derived from two sets of (often competing) aspectual features: qualitative and quantitative.

(2) The quantitative and qualitative aspectual features which operate on the propositional level of the IC, independent of the PR level.

(3) The inherent lexical content of the IC itself. This includes inherent qualitative and quantitative aspectual features as well as such peculiarities as the conative sense of the imperfective and the idiosyncracies of procedurals.

This framework of analysis should prove appropriate for the discussion of IC's governed by other PR's, both implicative and non-implicative, since the concepts and methodology discussed above need not be restricted to this class of verbs.

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NOTES

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1. Text counts from approximately 1000 pages of contemporary Russian prose show the following frequency:

udalos' ^P	85%	udavalos' ^I	15%
prišlos' ^P	62%	prixodilos' ^I	38%

2. See Timberlake (1982) and (this volume) for more detailed discussions of qualitative and quantitative aspectual parameters and the distinction between predicate and propositional levels.

3. Rassudova also contends, however, that the selection of IC^I results in aspectual synonymy, a point with which I take issue.

4. This one instance of a perfective infinitive following *prixodilos'*^I seems to be an exception because the aspect pair is *byvat'*^I/*pobyvat'*^P. Apparently there is something strange about verbs prefixed with *po-* in that they can appear where not expected (Timberlake, personal communication). It is interesting to note that my native informant would not allow *pobyvat'*^P in this example.

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Prepositional Quantifiers and the Direct Case Condition in Russian

Leonard H. Babby

Introduction.

In this article I will present syntactic and semantic evidence that subject and object phrases with prepositions as their first constituent (e.g., *okolo sta sosen* ‘about a hundred pines’) are direct case noun phrases (NP), not prepositional phrases (PP), and that these prepositions are constituents of the quantifier phrase (QP), an optional NP position that did not exist in Old Russian.¹

1.0 Definition of subject. Syntactic subject in Russian can be defined as a *noun phrase* with nominative case marking whose *head noun* can potentially control verb agreement; linear word order plays no role in defining subject in Russian.² It is necessary to define subject in these terms for the following reasons: i) The head noun of a nominative NP can occur in an oblique case when it is in the scope of a NP-internal (attributive) quantifier, i.e., [NP_{nom} QP_{nom} $\bar{\text{N}}_{\text{obliq}}$], where NP is the maximal projection of N (N^{max}) (see (1) where the nominative subject NP has a genitive head); ii) The oblique head of a quantified subject NP does not obligatorily impose agreement on the verb (cf. 1 and 2):³

- (1) a. *Prošlo pjat' dnei.*
passed five days
n. 3rd. sg. nom. gen. m. pl.
‘Five days passed.’

b. [S [VP *prošlo*] [NP [QP *pjat'*] [$\bar{\text{N}}$ *dnei*]]]

The labelled bracketing in (1b) represents the constituent structure of sentence (1a); *dnei* is the head of the subject NP and it is marked genitive because it is in the scope of the QP.⁴

- (2) a. *Èti pjat' dnei prošli očen' bystro.*
these five days passed very fast
nom. nom. gen. pl. pl.
‘These five days passed very quickly.’

b. [S [NP [DET *èti*] [QP *pjat'*] [$\bar{\text{N}}$ *dnei*]] [VP *prošli očen' bystro*]]

According to our definition, both sentences in (1a) and (2a) have nominative subject NP's. The verb-subject word order and absence of verbal agreement in (1a) do not affect the subject status of [_{NP} *pjat' dneŝ*]; although it has fewer subject-coding properties than the subject NP in (2a), it is nevertheless the syntactic subject (see Keenan 1976; Cole, Harbert, Hermon, and Sridhar 1978).

The definition of subject in Russian proposed above has the following corollary; if a NP controls verb agreement, it must be the subject; but the absence of verb agreement gives no conclusive information about a given NP's subject status.

2.0 Prepositional subjects. Let us now consider sentences like the following with respect to this definition of subject (notice that the prepositions *okolo*, *po*, *do*, and *ot . . . do* all have quantitative meaning):

- (3) a. *Na sobranii prisutstvovalo okolo sta čelovek.*
 at meeting was-present about hundred people
 n. sg. gen. gen.
 'There were about a hundred people present at the meeting.'
- b. *Na každom stule sidelo po odnomu maščiku.*
 on each chair sat per one boy
 n. sg. dat. m. sg. dat. m. sg.
 'One boy was sitting on each chair.'
- c. *Ežednevno gibnet do soroka myšej.*
 daily dies up-to forty mice
 sg. gen. gen. pl.
 'As many as forty mice die each day.'
- d. *Mne grozilo ot trex do pjati let zaključenija.*
 me threatened from three to five years incarceration
 dat. n. sg. gen. gen. gen. pl. gen.
 'I was threatened with from three to five years incarceration.'

Traditional grammar gives us two possibilities for representing the syntactic structure of these sentences. *Okolo sta čelovek* in (3a), for example, can be analyzed as either having a "prepositional subject" (as in (4a)) or as being subjectless, in which case *okolo sta čelovek* would have to be a complement to the verb (see 4b)); see Sidorov and Il'inskaja 1949:345, Gasparov 1971:195.

We do not, however, have to rely on this kind of indirect evidence to prove that *okolo sta čelovek* in (3a) is the subject. In the following paragraphs I will present four straightforward syntactic arguments in support of our assertion that the phrases introduced by quantitative prepositions like those in (3) must be the subject.

2.1 Argument I: Subject-verb agreement. Phrases introduced by quantitative prepositions can, under certain circumstances, impose plural agreement on the verb when the head \bar{N} is plural (see Popov 1974:80).

- (6) a. *Na sobranii prisutstvovali okolo 400 predstavitelej...*
 at meeting were-present about representatives of ...
 pl.
 'About 400 representatives of . . . were present at the meeting . . .'
- b. *Otkazalis' vyjti na rabotu okolo 12 tysjač rabočix.*
 refused go to work about thousand workers
 pl.
 'About 12,000 workers refused to go to work.'
- c. *V bližajšie časy... budut sobrany do trexsot oficerov.*
 in nearest hours will-be gathered up-to 300 officers
 pl. pl.
 'As many as 300 officers will be gathered in the next few hours.'
- d. *V každoj polutorke sideli po dva korrespondenta i ležalo*
 in each truck sat per two correspondents and laid
 pl. n. sg.
po desjat' paček gazet.
 per ten packets of-newspapers
 'In each truck there were two correspondents (sitting) and ten bundles of newspapers (lying).'

See (9) for an additional example.

According to the definition of subject given in §1.0, the presence of verb agreement provides indisputable evidence that the phrase controlling it is the syntactic subject of the sentence. Since the phrases with quantitative prepositions in (6) control plural agreement, there can be no doubt that they are subjects, not complements; cf. (4).⁵

2.2 Argument II: Passivization. The second argument involves passivization. Quantitative prepositions introduce direct object phrases, and the

transitive sentences containing these objects can be passivized. Since passivization makes a direct object the surface subject (see Babby and Brecht 1975), we can conclude, for example, that the direct object *po grušē* 'one pear each' in (7a) is the subject of the corresponding passive sentence (7b):

- (7) a. *Otec dal detjam po grušē.*
 father gave children per pear
 nom. m. sg. m. sg. dat. dat.
 '(Their) father gave the children one pear each.'
- b. *Otcom dano detjam po grušē.*
 (by) father given children per pear
 inst. n. sg. dat. dat.
 'The children were given one pear each by (their) father.'
- (8) a. *Professora našego instituta izdali okolo sta učebnikov.*
 professors of-our institute published about 100 textbooks
 nom. pl. gen. gen. pl. gen. gen.
 'The professors of our institute published about 100 textbooks.'
- b. *Professorami našego instituta izdano okolo sta učebnikov.*
 professors of-our institute published about 100 textbooks
 inst. n. sg.
 'About 100 textbooks have been published by the professors of our institute.'

Since there is no productive impersonal passive construction in Russian, we must conclude on the basis of these data that *po grušē* in (7b) and *okolo sta učebnikov* 'about 100 textbooks' in (8b) are subjects (recall that word order does not play a role in determining the subject of a Russian sentence; see note 2).

2.3 *Argument III: Gerund constructions.* Phrases containing a quantitative preposition can control gerund clauses, i.e., function as their understood subject. Since in standard Russian only the subject of the main clause can have this function, we can conclude that *po dva, po tri čeloveka* must be the syntactic subject in (9).

- (9) *Okolo Saški postojanno torčali, dergaja ego za rukav i*
 near Sashka always hang-around tugging him at sleeve and
 gen. pl. gerund
mešaja emu igrat', po dva, po tri čeloveka. (Kuprin)
 preventing him to-play per two three people
 gerund infin. gen.
 'There were always two or three people (at a time) hanging around Sashka, tugging at his sleeve and preventing him from playing.'

Notice that *po dva, po tri človeka* also imposes plural agreement on the main verb *torčali* (see §2.1).

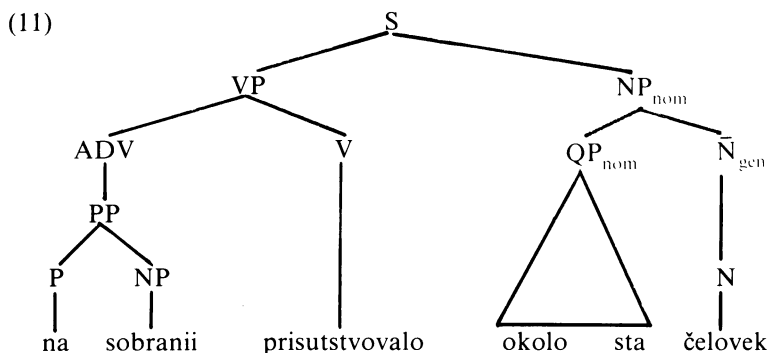
2.4 *Argument IV: Conjunction.* The fourth syntactic argument that phrases like *okolo sta človek* ‘about 100 people’ in (3a) are subjects comes from conjunction. Phrases introduced by prepositions with quantitative meaning can combine with nominative *noun phrases* containing quantifiers to form conjoined subject NP’s that impose plural agreement on the verb (see Babby 1980c:35):

- (10) *Vosem’ krepostnyx sten i okolo desjatka nebolšix*
 eight fortified walls and about unit-of-ten small
 nom. gen. gen. gen. gen. gen.
fortov zaščičajut gorod. (Izvestija)
 forts defend city
 gen. pl. acc.
 ‘Eight fortified walls and about ten small forts defend the city.’

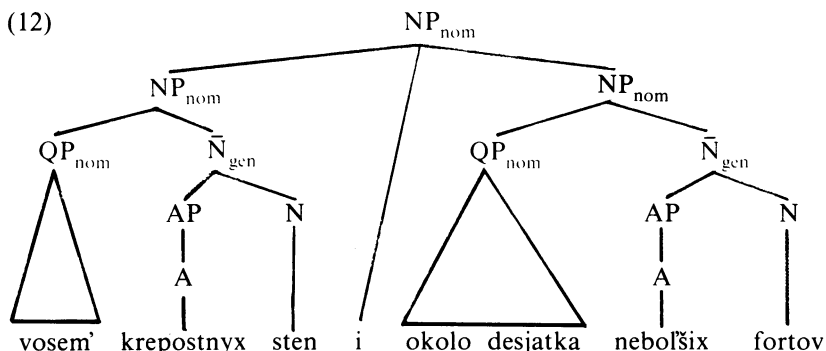
Sentences like (10) are important, not only because they demonstrate that phrases introduced by a quantitative preposition are subjects, but also because they provide us with information about the structure of these phrases. It is a well established fact that only constituents belonging to the same grammatical category can be conjoined by means of the conjunction *i* ‘and’. Since *vosem’ krepostnyx sten* ‘eight fortified walls’ is a NP, we can conclude that *okolo desjatka nebolšix fortov* ‘about ten small forts’ must also be a NP (not a PP as in (4a)), i.e., the subject NP in (10) has the structure [_{NP} NP i NP] (not [_{NP} NP i PP]).

3.0 *Structure of “prepositional subjects.”* It has been demonstrated in the preceding sections that sentences like those in (3) and (6) have subject phrases containing a quantitative preposition as their first constituent. Sentences like (10) suggest that these phrases are not PP’s, as we might expect (see (4a)), but rather are nominative NP’s with a preposition (or PP) embedded in them. Since *okolo* and *sta* in (3a) form a constituent and *sta* is a constituent of QP (see (1a)), we can conclude that the constituent structure of (3a) can be represented in (11) — see page 97 (the internal structure of QP is discussed in §8).

This “NP-hypothesis” claims that the structure of subject (and direct object) phrases introduced by a quantitative proposition is essentially the same as that of any other subject (or direct object) NP containing a quantifier as one of its constituents (see (1b)). For example, under this hypothesis,



both the conjuncts forming the subject NP in (10) have identical structures:



An obvious advantage of the NP-hypothesis (see (11)) over the PP-hypothesis (see (4a)) is that the NP-hypothesis conforms to the simple definition of syntactic subject proposed in §1 (i.e., a NP with nominative case marking that can potentially control verb agreement).

In the following sections I will discuss the NP-hypothesis in greater detail, providing additional evidence that it accounts for the data far better than the PP-hypothesis. The last part of the paper contains a discussion of the internal structure of the QP and the restricted syntactic distribution of NP's containing prepositional quantifiers.⁶

4.0 *The syntax and semantics of okolo-phrases.* The following phrase is two-ways ambiguous:

- (13) *okolo desjati sosen*
 near/about ten (gen) pine trees (gen)

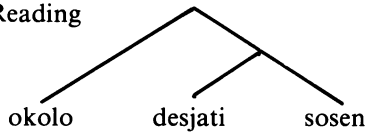
Under one reading it has a locative interpretation (near = in the vicinity of,

e.g., *Daču postroili okolo desjati sosen, posažennyx moim dedom*. ‘The cottage was built near the ten pines planted by my grandfather’). Under the second it has a strictly quantitative meaning (around = approximately, e.g., *On posadil okolo desjati sosen za domom*. ‘He planted approximately ten pines behind the house’).

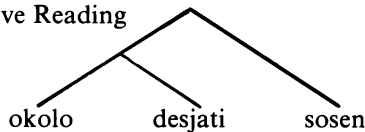
4.2 There are basically two ways to account for ambiguity — lexically or structurally. According to the lexical approach, both readings of (13) would have the same syntactic structure, the ambiguity being attributed entirely to the locative vs. quantitative meaning of the preposition *okolo* (cf. *I went to the bank yesterday*, where the ambiguity is due to the two meanings of the word *bank*). The structural approach assigns each reading to a different syntactic structure (e.g. in English, the two readings of the phrase *beautiful girl's dress* corresponds to two different bracketings, i.e., $[[beautiful\ girl's]]\ [[dress]]$ and $[[beautiful]]\ [girl's\ dress]]$). I shall show below that the ambiguity observed in (13) corresponds to two radically different syntactic structures.

4.3 When *okolo* has the locative reading, *desjati sosen* ‘ten pines’ forms a constituent, and the quantifier *desjati* is *optional* (cf. *Daču postroili okolo sosen, posažennyx moim dedom* ‘The cottage was built near the pines planted by my grandfather’). The immediate constituent structure of (13) in its locative reading can therefore be represented in (14a) below. But when (13) has a quantitative reading, *okolo* appears to modify *desjati* and the two quantifier elements form a constituent: *desjati* in this case is *obligatory*, i.e., if *okolo* (= approximately) is present, then the quantifier *desjati* must also be present (cf. **On posadil okolo sosen* ‘He planted approximately pines’). The immediate constituent structure of (13) in its quantitative reading can therefore be represented in (14b).

(14) a. Locative Reading



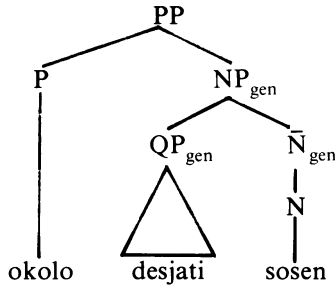
b. Quantitative Reading



In (14a), the locative reading, the genitive case marking on *sosen* is due to the preposition *okolo*, which governs the genitive case, and not to the quantifier *desjati*, since the latter is *optional*, and *sosen* is marked genitive even

when it is absent (e.g., *Daču postroili okolo sosen* ‘The cottage was built near the pines’). These facts suggest that (14a) is a prepositional phrase whose structure can be represented in (15a):

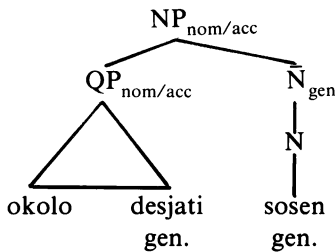
(15a): Locative Reading



The preposition *okolo* governs the genitive case marking on NP, from where it is “percolated” down onto both QP and \bar{N} (recall that a quantifier can impose genitive marking on a \bar{N} in its scope only if the NP dominating them is in a direct case (see notes 4, 6)). The reason that *desjati* is optional under the locative reading is also clear from (15a): QP is an optional NP constituent.

4.4 In (14b), which corresponds to the quantitative reading of (13), the genitive case marking on *sosen* is due not to the preposition *okolo*, but to the entire constituent *okolo desjati* ‘about ten’, and this can be easily demonstrated: if *okolo* is removed, which is possible only under the quantitative reading, *sosen* remains in the genitive (e.g., *On posadil desjat’ sosen za domom* ‘He planted ten pines behind the house’). Thus *okolo* in (14b) governs only *desjati*, and the whole constituent *okolo desjati* is responsible for the genitive marking on *sosen* (see §6 where this analysis is confirmed). These facts can be accounted for only under the assumption that (14b) has the structure of a direct case *noun phrase* containing a quantifier, which supports the conclusions reached in §3 (see (11)):

(15b) Quantitative Reading



Notice that (15b) accounts for the observation that *desjati* is obligatory under the quantitative reading of (13) (but optional under its locative reading): either the entire QP *okolo desjati* can be omitted in (15b) or only *okolo*, which modifies *desjati*, can be omitted. *Desjati* alone, however, cannot be omitted because it would result in a QP whose sole constituent was a modifier: **On posadil okolo sosen* 'He planted about pines'. Under the locative reading of (13), *okolo* is not a constituent of the optional QP and, consequently, cannot be omitted.

Since a QP in Russian can impose genitive marking on \bar{N} only when the NP dominating them is marked with a direct case, it must be the case that the superordinate NP node in (15b) is nominative or accusative, even though none of the lexical items it dominates is marked nominative or accusative.⁷

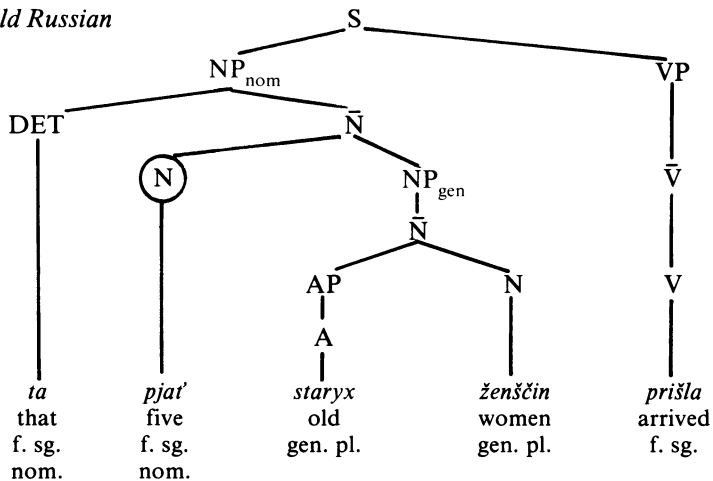
4.5 Phrase-internal evidence was presented above that (13) is a PP when it has a locative reading (14a) and that it is a direct case NP when it has a quantitative reading (14b). This analysis is also supported by phrase-external evidence, i.e., by the different syntactic distribution that (13) has under its two readings. When it has a quantitative reading, (13) can be used only as subject (nom), direct object (acc), or adverb of duration (acc) (see note 6), i.e., its syntactic distribution is identical to that of an NP with direct case marking (see (14b)). But when (13) has a locative reading, it can be used only as an adverb of place, and has the same syntactic properties that any PP has when it is used as an adverb (see (14a)). Thus the radically different syntactic distribution of (13) in its two readings is an automatic consequence of the PP vs. NP structure of (13) proposed in (14a) vs. (14b).

5.0 *Prepositional quantifiers: diachronic aspects.* This section contains a diachronic account of how certain words denoting quantification were reinterpreted as quantifiers, i.e., as constituents of QP, which is an optional NP position or "slot" that did not exist in Old Russian (cf. Lightfoot's 1979 diachronic analysis of English quantifiers).

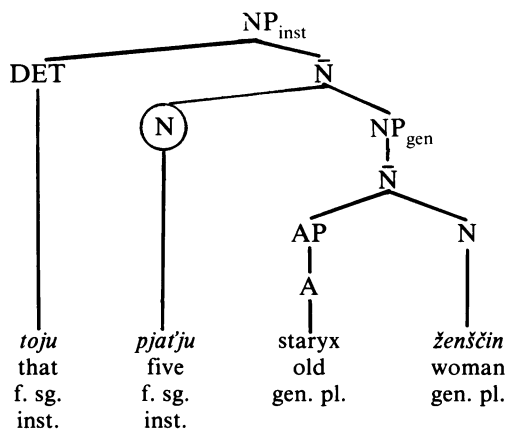
5.1 The common denominator shared by all prepositions that can occur in sentences like (3) and (6) is semantic: they all have quantitative meaning. In addition to the prepositional quantifiers already mentioned, the following are in common use in modern Russian:

- (16) a. *Prošlo s nedelju.*
 passed about week
 n. sg. acc. f. sg.
 'About a week passed.'

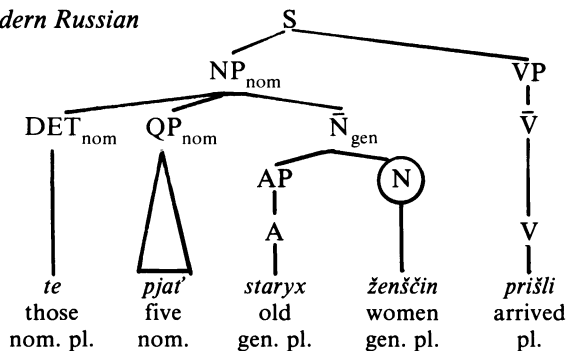
(17) *Old Russian*



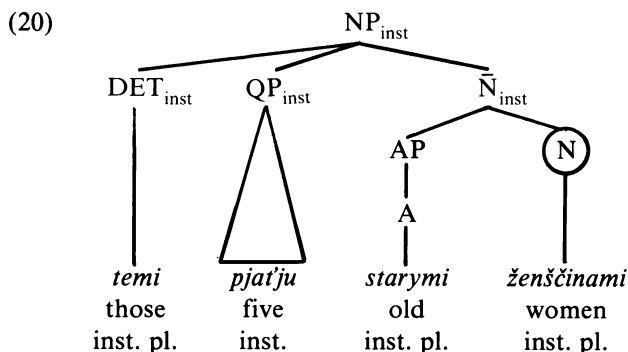
(18)



(19) *Modern Russian*



tion, its genitive marking is now to be explained in terms of its inclusion in the scope of the quantifier *pjat'*. It is easy to demonstrate this by simply looking at the internal case relations when this phrase is marked with an oblique case in MR.



- (21) **temi* *pjat'ju* *staryx* *ženščin*
 inst. inst. gen. gen.

If *staryx ženščin* 'old women' were an adnominal genitive construction in MR, a change in the case marking on the highest NP dominating it from direct case to oblique would have no effect on its genitive case marking (cf. OR (17/18) vs. MR (19/20/21)). The fact that genitive *staryx ženščin* changes to instrumental *starymi ženščinami* in (20), when the case marking on NP is changed from nominative to instrumental, provides indisputable evidence that *staryx ženščin* in (19) cannot be the adnominal genitive (see note 4). Thus the radical change in the internal structure of Russian noun phrases alluded to above shows up most dramatically in the oblique cases in MR.

Once the new QP position was created, other words denoting quantity were able to occur in it (and undergo a corresponding change in their morphosyntactic properties).

It should be pointed out that the diachronic change described above had the effect of making MR surface case relations considerably more complex; in OR only NP (the highest projection of N) was case-marked (this case was then percolated down onto all NP's constituents). It became possible in MR to mark an NP and its \bar{N} differently when NP had direct case marking and contained a quantifier. This in turn complicated subject-verb agreement when the subject NP contained a head \bar{N} marked genitive (see note 3) (see Freidin and Babby).

5.3 Besides nouns like *pjat'* 'five' through *desjat'* 'ten', words denoting

We have seen above that quantifiers in MR have many different sources (nouns, adjectives, even sentences (see note 8)). I have argued that prepositions with quantitative meaning have also become quantifiers. Given the heterogeneous source of quantifiers in MR, it is not at all surprising that prepositions denoting quantity should also be able to occupy the QP position.

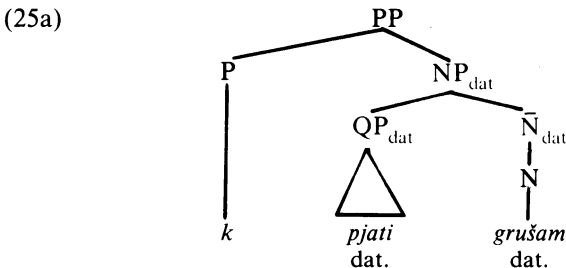
6.0 *The prepositional quantifier po.* It was pointed out in our discussion of (13) (*okolo desjati* (gen.) *sošen* (gen.)) that when a prepositional quantifier governs the genitive case, it is not easy to tell whether the genitive case on the head \bar{N} is determined by the preposition or the QP containing it. But when the prepositional quantifier governs a case other than the genitive, the NP-internal case relations are completely transparent: genitive marking on \bar{N} can be accounted for only in terms of the QP's scope, not the preposition's government. To illustrate this we will consider the prepositional quantifier *po*, which has a distributional meaning (see (3b)) and governs the dative case, e.g.,⁹

- (24) *Po pjati gruš upalo s každogo dereva*
 per five pears fell from each tree
 dat. gen. n. sg.

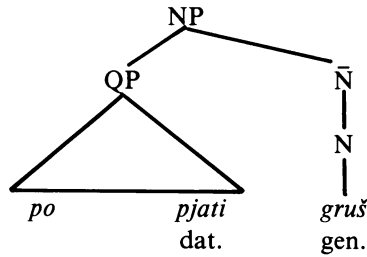
'Five pears fell from each tree.' (see Sidorov and Iľinskaja 1949)

Po pjati gruš is the subject of (24) (see §2).

Notice first of all that the dative vs. genitive case marking tells us that the phrase *po pjati* (dat.) *gruš* (gen.) must be a NP: if it were a PP, we would expect dative, not genitive marking on *gruš*, i.e., we would expect **po pjati grušam* (dat.), which is ungrammatical. This can be easily demonstrated by replacing *po* with the preposition *k* 'to, toward', which also governs the dative, but is *not* a prepositional quantifier. The case relations are quite different, i.e., we get *k pjati* (dat.) *grušam* (dat.). Note also that *po pjati gruš*/**grušam*, but not *k pjati grušam*/**gruš*, can be either subject or direct object, i.e., has the same syntactic distribution as a direct case NP. These facts can be accounted for by assigning these phrases the following structures:



(25b)



In (25a), *k* governs dative marking on the NP, and the dative is percolated from NP down onto QP and \bar{N} ; \bar{N} cannot be marked genitive in the scope of QP in (25a) because it is dominated by an NP with oblique case marking (see discussion of the Direct Case Condition in note 4; §7; Babby 1980b).

In (25b) *po* governs dative marking on *pjati* only: \bar{N} is marked genitive because it is in the scope of QP and is also dominated by a NP with direct case marking. Thus in (25a), *k* determines the dative case on both *pjati* and *grušam*, whereas in (25b) *po* determines dative case marking on *pjati* only, and the QP *po pjati* determines the genitive marking on *gruš* (cf. (15a) vs. (15b), the locative vs. quantitative reading of (13)).

7.0 The Direct Case Condition and prepositional quantifiers. We have seen above that a QP can contain a prepositional quantifier if and only if the NP node dominating it is marked nominative or accusative (see note 4). For example, sentence (26a) is grammatical because the verb *znať* 'know' takes accusative direct objects. But this same sentence is ungrammatical when *znať* is replaced by *vladeť* a verb which has approximately the same meaning in (26b), but governs the instrumental case (both variants of (26b) are ungrammatical).

- (26) a. *Každýj lingvist dolžen znať* [_{NP_{acc}} [_{QP} *ot dvux do*]
 each linguist must know from two to
 nom. nom. gen.
pjati] [_{\bar{N}} *inostrannyx jazykov*]
 five foreign languages
 gen. gen. gen.

'Every linguist must know from two to five languages.'

- b. **Každýj lingvist dolžen vladeť* [_{NP_{inst}} [_{QP} *ot dvux do*]
 know know gen.
pjati] { [_{\bar{N}} *inostrannyx jazykov*]
 gen. gen. gen.
 [_{\bar{N}} *inostrannymi jazykami*]

In addition to prepositional quantifiers, there are at least three other surface case phenomena that are restricted to direct case NP's (see 27); all four can be related:

- (27) a. Prepositional quantifiers can occur in direct case NP's only.
 b. A NP in the scope of sentence negation can be marked with the genitive of negation if and only if it would be in a direct case if the sentence were not negated. The same is true of the partitive genitive. This condition on genitive case marking has been referred to as the Direct Case Condition in Babby 1980c.
 c. An attributive quantifier like [QP *pjat'*] can impose genitive marking on a sister \bar{N} if and only if the NP node dominating them is nominative or accusative. If this NP is marked with an oblique case (e.g. inst.), then both the QP and \bar{N} must be marked with this oblique case (cf. (19) vs. (20/21); note 4).
 d. Quantifier words like *malo* 'little, few' can be used in direct case NP's only (see Zaliznjak 1977:519).
- (28) a. *Semejnaja žizn' dostavljala emu [NP_{acc} malo udovol'stviija]*
 family life provided him little satisfaction
 nom. nom. dat. gen.
 'Family life gave him little satisfaction.'
- b. *U nas doma [NP_{nom} malo knig]*
 at us at-home few books
 gen. gen.
 'We have few books at home.'

Notice that while the genitive of negation and partitive genitive involve case marking on NP (highest projection of N), the other three phenomena listed in (27) involve case marking on \bar{N} .

7.1 The Direct Case Condition illustrated in (27) can be explained as follows (see Babby 1980c for details). There are basically two kinds of NP in the underlying representation of a Russian sentence, governed and ungoverned. Governed NP's carry the oblique case marking required by the lexical category that governs them (prepositions, verbs, certain adjectives, and a few verbal nouns are case assigners or governors in Russian). Ungoverned NP's are caseless, i.e., they have no underlying case marking associated with them. They must therefore be case-marked syntactically, either by a specialized syntactic rule or in terms of their surface syntactic configuration. More specifically, if an ungoverned NP does not acquire an oblique case by a rule like the one that marks genitive in the scope of negation, it is marked with the appropriate direct case in accordance with its syntactic position. Underlying subject and direct object NP's are caseless.

There are two principles that are central to the syntax of case marking in Russian:

- (29) i. *Principle of Inertness*. A NP can be case-marked only one in the derivation of a given sentence, after which it is “inert,” i.e., its case cannot be altered in any way. This means that there are no case-changing rules in Russian.
- ii. *Principle of Lexical Satisfaction*. If a lexical item governs a case, this case must be realized in the sentence. (Direct case marking, which is ungoverned, can sometimes not be morphologically realized, see (11) and (15b); see Freidin and Babby for details.

According to the theory of case outlined above, only NP's that would be nominative or accusative in affirmative sentences can be marked genitive in negated sentences because these NP's are the only ones that are ungoverned, i.e., have no case marking on them when the rule marking genitive of negation applies. The fact that governed NP's are not marked genitive in the scope of negation is accounted for by the Principle of Inertness (29i): governed NP's already have case marking on them (inherent case) and remain unaffected when the rule of genitive marking applies. Thus the genitive case marking on NP's in negated sentences does not replace nominative and accusative case, it is rather marked instead of nominative and accusative. Once a case is marked on NP (no matter how), it is percolated down onto the constituents of NP that are markable.

7.2 This theory, which was originally meant to account only for the syntactic constraints on genitive marking in negated sentences (27b), can also account for the facts presented in (27c). If a NP containing [_{QP} *pjar'*] is governed, its underlying oblique case marking must be percolated onto both the QP and \bar{N} (see Principle 29ii), and \bar{N} cannot therefore subsequently be marked genitive in QP's scope because this would violate the Principle of Inertness (29i) (see (19) and (20)). If a NP containing [_{QP} *pjar'*] is ungoverned (caseless in the underlying structure), there is nothing to prevent \bar{N} from being marked genitive in QP's scope. When direct case marking subsequently applies to this NP, the nominative or accusative case marking is percolated down into QP (*pjar'* is nominative in (19)), but not into \bar{N} , which is already marked genitive (see Principle of Inertness in (29i)). Thus the surface “government/agreement” case pattern that is characteristic of NP's containing [_{QP} *pjar'*] is completely predictable in the theory of case presented above in §7.1 (see (19) and (20)).

7.3 This theory of surface case marking also provides a straightforward explanation for the fact that prepositional quantifiers can occur in direct case NP's only: a QP containing a preposition, which is a case assigner or

governor, cannot occur in a governed (oblique) NP because there would be two case assigners operating in the same domain. This would result in a violation of the Principle of Lexical Satisfaction (29ii) because both governed cases cannot be realized simultaneously on the governed words. For example, sentence (26b) is ungrammatical because there is a “case conflict” in QP: both *vladet'*, which governs the instrumental case, and the prepositional quantifiers *ot* and *do*, which govern the genitive, cannot simultaneously have their oblique case marking realized on *dva* and *pjat'*. Thus no matter which of the two cases we select, the other remains unexpressed, which violates the Principle of Lexical Satisfaction.

There is no case conflict when a prepositional quantifier is contained in a NP with *direct case* marking because nominative and accusative case are configurationally determined, not lexically governed. Thus, no violation of Lexical Satisfaction (29ii) takes place when the nominative or accusative associated with a NP node cannot be realized morphologically in the surface structure (see (25b), (15b), (12), and (11)).¹⁰

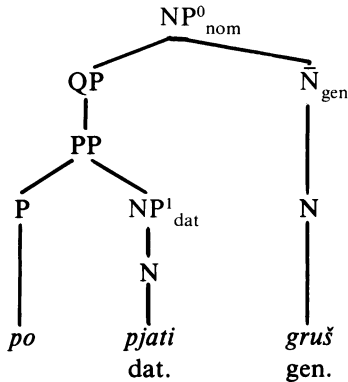
I have attempted to demonstrate above that i) The theory of case marking outlined in §7 accounts for all four examples of the Direct Case Condition presented in (27), ii) The syntactic properties of phrases containing prepositional quantifiers are entirely regular and predictable only under the hypothesis that these phrases are direct case NP's, not PP's (cf. (4a) vs. (4b); §§3 and 4).

8.0 The internal structure of QP. This last section is devoted to the internal structure of QP, which has been left unspecified until now.

Since prepositional quantifiers behave like any other preposition with respect to the crucial property of case government, it is reasonable to assume that they are in fact still prepositions in MR, i.e. that they have not changed their grammatical category from preposition to quantifier. This means that any special properties associated exclusively with prepositional quantifiers must be attributed to their position in QP, not to their categorial status. Given these assumptions, the internal structure of the subject NP *po pjati gruš* in (24) can be represented as (30) (see following page). The preposition *po* governs the dative case on [_{NP}*ppjati*], and the prepositional phrase *po pjati* is a constituent of QP, which is itself responsible for the genitive marking on the \bar{N} in its scope.

According to this analysis, *pjat'* is a noun in MR just as it was in OR (see (17)). The observation that *pjat'* does not behave like a noun in MR (see Jakubinskij 1953) follows from the fact that it is never the head of the highest NP dominating it (NP⁰ in (30)) — it occurs exclusively in QP, where

(30)



it cannot control verb agreement (when in subject NP) and cannot be modified by an adjective or determiner. This means that *pjati* is felt to be less noun-like in MR primarily because its inherent gender cannot be realized morphologically.¹¹

8.1 There appears to be several problems with this analysis of QP's internal structure. First of all, if *pjati* is the head of an NP (see NP¹ in (30)), there is no obvious way to explain why it cannot be modified by adjectives or determiners as it was in OR (see (17)). Sentences like the following illustrate what appears to be an even more serious problem.

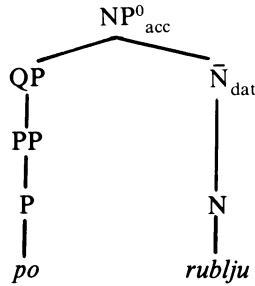
(31) a. *Otec dal nam po rublju*
 father gave us prep. ruble
 nom. m. sg. m. sg. dat. dat.
 'Father gave us each a ruble.'

b. *Pejte po kaple v den'*
 drink drop in day
 dat.
 'Drink one drop each day.'

c. *U oboix ostalos' po rebenku*
 at both remained child
 gen. n. 3rd. sg. dat. sg. m.
 'They were each left with one child.' (Astafeva 1975:22)

Po rublju 'one ruble each', which is the direct object in (31a), is understood as meaning one (each) even though the number *odin* 'one' is not specified. According to our analysis of *po pjati gruš* in (30), where *po* is the head of PP and the noun *pjati* is the head of NP¹, the direct object NP in (31a) should have the rather unlikely structure in (32). The most striking thing about (32) is that the prepositional quantifier *po* marks its dative case on the head \bar{N} of the NP dominating QP (i.e., NP⁰) and not on a constituent of

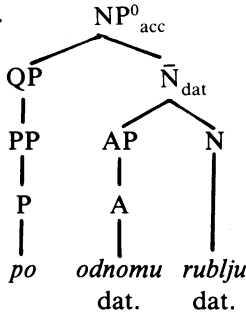
(32)



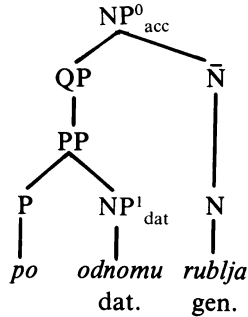
QP (i.e. NP¹) as in all the other examples that we have seen until now (see (30)).

If we insert *odin* ‘one’, which is syntactically a simple \bar{N} adjective in MR, the seemingly anomalous government pattern in (31) is not altered, i.e., we get (33a), not (33b), which is completely ungrammatical (cf. (30)).

(33) a.

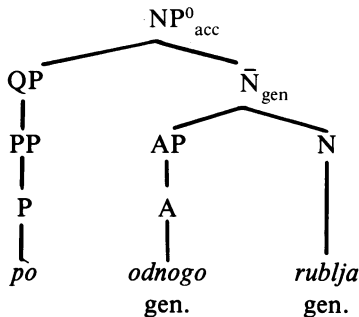


b.



Given (30), we might have expected the structure in (34) rather than the one in (32); but (34) is totally ungrammatical.

(34)



\bar{N} in (34) would be marked genitive in the scope of QP, which is immediately dominated by a NP with direct case marking. But (34) is impossible because it violates one of the most fundamental principles of Russian grammar — the Principle of Lexical Satisfaction (29ii): the preposition *po* is

a dative case assigner, but the dative case is not realized in (34). I have included this discussion of the ungrammatical (34) because it suggests that the unique case government illustrated in (31) can also be accounted for quite naturally in terms of the Principle of Lexical Satisfaction.

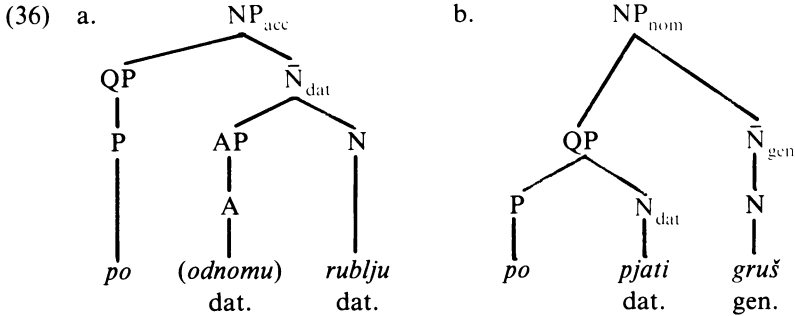
A preposition normally governs the case of the NP immediately dominated by the PP node it heads (see *po pjati* in (30)). Since PP does not dominate a NP in (32), and since the dative case governed by *po* must be realized for the sentence containing it to be grammatical (see (29ii)), *po* satisfies its government requirement by marking its dative case on \bar{N} , the nearest available caseless projection of an N (see §7 for discussion of caseless underlying NP's). Once \bar{N} has been marked dative in this way, it cannot be subsequently marked genitive in QP's scope because the Principle of Inertness (29i) prevents this.

Now, if we state the domain of prepositional case government in terms of minimal c-command,¹² the seemingly anomalous dative \bar{N} case government in (32) turns out to be entirely regular.¹³ In a PP dominating a P and NP, the P minimally c-commands the NP and governs its case marking. In (32), however, the PP does not contain a NP, and therefore does not branch. This means that the preposition *po* in (32) minimally c-commands \bar{N} and therefore governs its case. Thus if we state the domain of prepositional government as in (35), the fact that *po* governs the dative case marking on the head \bar{N} in situations like (32) is completely predictable:

- (35) *Domain of prepositional case government.* A preposition governs the case marking on the highest projection of N that it minimally c-commands.

While the Principle of Lexical Satisfaction and the generalized statement of prepositional case government in (35) enable us to show that the case marking pattern in (32) is exactly what we should expect, there are nevertheless two minor problems still remaining with our analysis of the internal structure of QP: i) the preposition *po* in (32) is dominated by a PP that does not branch and ii) *pjat'* in (30) cannot be modified by an adjective or determiner even though it is the head of a NP. Observe, however, that these two problems are essentially the same: in both cases we posited a maximal category projection (NP in (30) and PP in (32)) for which there is in fact no empirical justification. It therefore seems that when words with quantitative meaning are "reanalyzed as quantifiers," i.e., are able to appear in the attributive QP slot, only minimal categories are admitted, in this case P and N, not PP and NP. In other words, only [_N *pjat'*] and [_P *po*] occur in QP, not [_{NP} . . . *pjat'* . . .] and [_{PP} *po* . . .]. This hypothesis has no effect on the

maximally general statement of preposition case government in (35), but does account for the fact that *pjat'* cannot be modified by adjectives and determiners in MR. The structure of the direct object *po rublju* in (31a) can therefore be represented by (36a) and the subject NP *po pjati gruš* in (24) by (36b) (*po* minimally c-commands [\bar{N} *rublju*] in (36a) and [\bar{N} *pjati*] in (36b):



Since dative case government of *po* is satisfied by marking it on *pjati* in (36b), the head \bar{N} can be marked genitive in QP's scope since there is no oblique case marking to block it as there is in (36a).¹⁴

Summary. I have argued in this paper that what we have been calling prepositional quantifiers are prepositions with quantitative meaning that are confined to the QP position in NP's that are marked either nominative or accusative, i.e., NP's whose case is not governed by a lexical case assigner (see Direct Case Condition). Prepositional quantifiers cannot occur in a NP with oblique (lexically governed) case marking because this would be a violation of the Principle of Lexical Satisfaction.

I have also argued that the numbers *pjat'* through *desjat'* 'ten' are nouns in MR. They appear to be less noun-like in MR than in OR because in MR they are confined to the QP and cannot therefore function as the head of the NP dominating them. This explains why they cannot control either NP-internal or NP-external agreement. By contrast, the numbers *pjat'* through *desjat'* in OR were the heads of the NP's dominating them (cf. (17) vs. (19)).

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NOTES

1. This article is a continuation of my work on the syntax of Russian surface case, which was begun in Babby 1980b and 1980c; see also Freidin and Babby for a treatment of Russian case in the Extended Standard Theory.

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2. *Word order.* The primary function of word order in Russian is to formally mark the partition of the sentence into theme and rheme. Thus in a sentence like the following, where nominative and accusative are not morphologically distinguished, it is *not* correct to claim that *mat'* 'mother' must be the syntactic subject merely because it precedes the verb: *Mat' ljubit doč'* '(lit.) mother-loves-daughter'. Under one common reading, *doč'* is interpreted as the subject. It is at the end of the sentence because it is the rheme (answering the question *Kto ljubit mat'* 'Who loves mother?'). The best description of theme and rheme in Russian can be found in Adamec 1966, Kovtunova 1976, and Lobanova and Gorbačik 1976 (see Babby 1980c, chap. 5).

3. *Agreement.* Finite verbs (and adjectives) in Russian which do not agree with their subjects appear in the neuter, third person, singular form, which is also used in subjectless (impersonal) sentences. The presence vs. absence of verbal agreement with the oblique head of quantified subject noun phrases depends on a number of *semantic* parameters (e.g., definiteness), a discussion of which goes beyond the scope of this paper (see Crockett 1976 and Corbett 1979 for details).

4. *Direct Case Condition.* A head \bar{N} in the scope of QP can be marked genitive if and only if the NP dominating them is in a direct case, i.e. nominative or accusative. If the NP dominating them is in an oblique case, the genitive marking on \bar{N} is impossible: both the QP and \bar{N} in its scope must be marked with the dominating NP's oblique case marking. Compare [N_{pnom} [Q_{pnom} *pjat'*] [\bar{N}_{gen} *dnej*]] and [N_{pinst} [Q_{pinst} *pjat'ju*] [\bar{N}_{inst} *dnjami*]] (cf. **pjat'ju dnei*). This unique "government/agreement" surface case pattern is explained in terms of the Direct Case Condition in Babby 1980b.

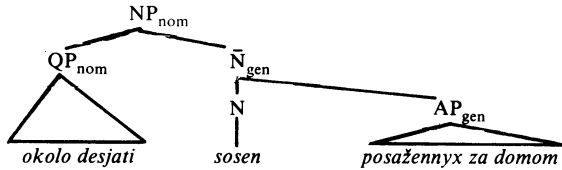
5. *Animacy and agreement.* My native informants have observed that a subject phrase introduced by a quantitative preposition can normally impose plural agreement on the verb only if the phrase's head noun is *animate* (see note 3). This is particularly clear in the case of sentence (6d) (cf. *sideli* (pl.) vs. *ležalo* (sg.)).

6. *Distributional facts.* Noun phrases containing quantitative prepositions have a highly restricted syntactic distribution: they can be used only as subjects (nominative), direct objects (accusative), and adverbs of time (accusative) (e.g. *My spali okolo desjati časov*. 'We slept about ten hours'). This means that their distribution is identical to that of NP's marked with the genitive of negation and the partitive genitive, and that the occurrence of NP's containing quantitative prepositions is therefore determined by the Direct Case Condition. An explanation for this striking fact is presented in §7 below.

7. *\bar{N} vs. NP modifiers.* One obvious way to test the claim that the superordinate NP in (15b) is nominative or accusative is to add a posthead participial modifier and observe its case marking. If attached at the NP level, it should have direct case marking, and if attached at the \bar{N} level, it should have genitive marking. My native informants accept only posthead participial constructions *in the genitive case* (cf. (i) vs. (ii) below). But this demonstrates only that these participle constructions are exclusively \bar{N} modifiers in standard Russian, and not that the NP node itself is marked genitive (see sentence (iii)). Hence this test turns out to be inconclusive.

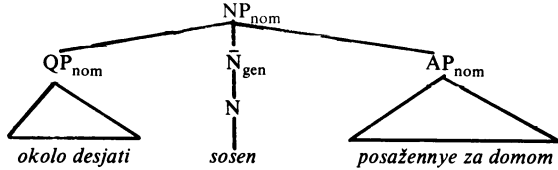
- (i) a. *okolo desjati sosen, posażennyx za domom*
 about ten pines planted behind house
 gen. gen. gen.
 'the approximately ten pines planted behind the house'

b.



- (ii) a. **okolo desjati sosen, posażennye za domom*
 planted
 nom.

b.



The following example, which comes from the translation of an Ian Fleming novel into Russian and which is felt by my native informants to contain a “mistake,” is quite revealing.

- (iii) *okolo sta jardov otdejajuščie ego ot sklada*
 about 100 yards separating him from warehouse
 gen. gen. nom.
 ‘the approximately 100 yards separating him from the warehouse’

The participle construction in (iii) is incorrectly attached at the NP-level, where it is marked nominative, just as (15b) and (iib) predict. In other words, the “mistake” in (iii) involves assigning the participle construction to the NP-level; but once this is done, our hypothesis that prepositional quantifiers can occur only in direct case NP’s correctly predicts that the participle must be marked with a direct case.

8. *Attributive vs. nonattributive quantifiers.* This paper deals with “attributive quantifiers,” i.e., constituents of a QP that is immediately dominated by NP. There is also a nonattributive quantifier position in Russian. It is found exclusively in constructions like the following, where the quantifier word is the focus (rheme) of the sentence and the genitive NP associated with it is the topic (theme) (see House 1981 for discussion).

- (ia). *Deneg u nix [QP ne gusto]*
 money at them not thick
 gen. pl. n. sg.
 ‘They do not have very much money.’
- (ib). *Deneg u nix [QP v obrez]*
 money at them in edge
 ‘They don’t have any money to spare.’
- (ic). *Deneg u nix [QP kot naplakal]*
 money at them cat cried
 ‘They have almost no money.’
- (id). *Deneg u nix [QP mnogo]*
 money at them much
 ‘They have a lot of money.’

- (ie). *Publiki segodnja prišlo [QP celaja bezdna]*
 public today came entire chasm
 gen. sg. n. sg. f. sg. f. sg. (nom)
 'A great number of people came today.'
- (if). *Knig segodnja ja kupil [QP vsego odnu]*
 books today I bought only one
 gen. pl. acc. sg.
 'I bought only one book today.'

The majority of these "focused" quantifiers cannot be used attributively (**U menja okazalos' kot naplakal deneg*). I mention them here only because they illustrate so clearly the great variety of categorial sources that a quantifier can have in Russian (adjective in (ia), prepositional phrase in (ib), sentence in (ic), noun phrase in (ie), and number in (if)).

9. *Po* in its distributive meaning governs the accusative as well as the dative, and there is a great deal of stylistic variation. More colloquial varieties of Russian prefer the accusative (*po pjat'*) to the dative (*po pjati*). Since these distinctions do not concern us here (what is important for us is the fact that *po* does not govern the genitive), I will use the more literary *po* + dative construction (see Gorbačevič 1971; Vinogradov 1972 (240); Astafeva 1974 (23) for discussion).

10. I assume that the restriction of quantitative words like *malo* to direct case NP's (see (27d)) has essentially the same explanation as the restriction on prepositional quantifiers: *malo* is a case-assigner, and its use in a governed (oblique) NP would result in a violation of Lexical Satisfaction.

11. As far as I have been able to determine, the numbers *pjat'* through *desjat'* in OR were used in the singular only. Thus *pjat'* through *desjat'* appear to have lost only their inherent gender, which is a criterial property of nouns in MR.

12. A node B c-commands a node A if B does not contain A, and if A is dominated by the first branching category dominating B.

13. The anomaly here is lexical, i.e., it is the number *odin* 'one', which is the only number in MR that is syntactically an adjective, and cannot occur in QP.

14. I consider this analysis of the internal structure of the QP in Russian to be highly tentative. But if it turns out to be correct, then certain basic assumptions of both \bar{X} -theory (see Jackendoff 1977) and EST (Chomsky 1981) will have to be reconsidered. Notice, first of all, that QP in (36) is not the maximal projection of a head Q, which is a violation of \bar{X} -theory (a parallel problem seems to arise in the analysis of adverbial phrases and their heads and, perhaps, in the analysis of COMP; see Jackendoff 1977, chap. 9).

According to Chomsky 1981 (50), case assignment is closely related to government, which he defines as the relation between the head of a construction and the categories dependent on it (Chomsky 1981:5; see Babby 1980b: note 4). More specifically, "a category governs its complements in a construction of which it is the head" (p. 50) and case is assigned to a NP by the category that governs it. But the prepositional quantifier *po* in (36a) and (36b) is not the head of the construction and the nouns marked dative are not its complements. Sentences like (31a) are particularly troublesome for Chomsky's analysis of case: even if (32) (not (36a)) were the correct representation of the case relations in the direct object NP in (31a), the fact remains that *rublju* dat. 'ruble' is not the complement in a construction headed by *po*, yet its dative case marking can have no source other than *po*.

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Conditions on Voice Marking in Russian

Richard D. Brecht and James S. Levine

0. Introduction

A number of linguists have attempted to explain the function of the morpheme *-sja* in Russian in several seemingly unrelated semantic constructions. Channon (1968, 1974) was the first to advance the idea, later adopted and further developed by Chvany (1974, 1975), that *-sja* on the “intransitive” member of a transitive/intransitive verb pair is a reflexived or pronominalized “copy” of a moved argument. Babby (1975) treats *-sja* as the surface syntactic marker of a direct object which has been removed from its underlying position by a rule of preposing or deletion; the only function of *-sja* on underlying transitive verbs, according to Babby, is to mark “syntactically derived intransitivity.” In another paper Babby and Brecht (1975) characterize *-sja* as the “voice morpheme” in Russian, where voice is defined as the relationship between the NP’s in a verb’s subcategorization feature and the realization of these NP’s in the surface structure of the sentence. In their analysis *-sja* serves as the morphological indicator of the marked voice relation, i.e., it signals the marked realization in surface structure of a subcategorization feature on the verb. The present paper builds on the contributions of these earlier studies, essentially adopting the analysis of *-sja* and the theory of voice developed in Babby (1975) and Babby & Brecht (1975). Our goal is to redefine this theory of voice by establishing the necessary conditions on the nonoccurrence of the Patient as the direct object — a crucial factor in the syntax and semantics of the voice marker *-sja* in Russian. This refinement will lead to a general discussion of the notion of “Patient” and a reexamination of the traditional problem of “inalienable possession.” However, before proceeding, we must sketch briefly the facts on which this analysis of voice in Russian is based and add some new data not previously discussed.

1. Voice in Russian

A speaker describes observed reality by referring to various participants in what may be called the propositional situation. These include, among others, the Agent (the conscious initiator of the action) and the Patient (the entity which undergoes the action).¹ Normally, the Agent of the action is the grammatical subject of the sentence and in Russian is in the nominative case, while the Patient is the direct object in the accusative case. Thus, the

syntactic relations of nominative subject//predicate//accusative object normally mirror the underlying semantic roles of Agent//Action//Patient. This direct correlation is not obligatory, however; the speaker may choose to make some other participant the grammatical subject of the sentence. When such a rearrangement of the normal pattern occurs, languages often require that the verb in such a sentence be specially marked to indicate this “divergence.” On the contrary, the presentation of the Agent as subject and the Patient as direct object is considered normal and is not usually signaled by any special mark on the verb. This phenomenon of the syntactic arrangement of Agents, Patients and other participants in sentences and particularly the correlation of these semantic notions with the grammatical roles of subject and direct object is what is broadly understood as voice.²

The general voice marker in Russian is the morpheme *-sja*. It signals that in a given sentence the Agent//Action//Patient relationship is not grammatically encoded in its normal mode as nominative subject//predicate//accusative object. The *-sja* morpheme appears in transitive sentences when the Patient does not appear as the direct object. In intransitive sentences the Agent may not be encoded as the grammatical subject and *-sja* will obligatorily occur. When the Agent or Patient arguments do not appear as nominative subject or accusative direct object, respectively, they may either appear in another case or they may be omitted entirely. While the appearance of these arguments in cases other than the nominative and accusative has received some attention, the conditions under which they are totally omitted have never been identified. This is the problem which we address in this paper.

2. *Inventory of -sja Constructions in Russian*³

We shall now present the basic *-sja* constructions as reported in the handbooks. We shall begin with the transitive sentences, listing first those instances where *-sja* occurs because the Patient appears in a case other than the accusative, specifically the nominative or instrumental. We will then review the sentence types where the Patient has been omitted. After this we will examine the inherently intransitive constructions.

2.1 Patient as nominative subject.

In passive sentences the Patient appears as the nominative subject of the sentence. The Agent, if present, is in the instrumental case.

- (1) a. Naš klub organizuet interesnye večera.
‘Our club organizes interesting parties.’
- b. Našim klubom organizujutsja interesnye večera.
‘Interesting parties are organized by our club.’

- (2) a. Učenyje mnogix stran izučajut kosmos.
'Scientists of many countries study the cosmos.'
- b. Učenymi mnogix stran izučaetsja kosmos.
'The cosmos is studied by scientists of many countries.'

In the passive sentences the Patient is not the grammatical object of the sentence and so the voice marker *-sja* must occur. The passive can also occur in instances where an Agent is obviously involved but his identity is unknown or irrelevant.⁴

- (3) a. Na našej ulice stroitsja poliklinika.
'A polyclinic is being built on our street.'
- b. V ètom kinoteatre pokazyvajutsja detskie kinofilmy.
'Children's films are shown in that theater.'

2.2 Patient in the instrumental case.

The following are examples of sentences with Patients in the instrumental case.

- (4) a. Kramin delilsja s nim svoim saxarom.
'Kramin shared his sugar with him.'
- b. Ja rešil obmenjaťsja s nim fotografijami.
'I decided to exchange photographs with him.'

Once again *-sja* functions here to mark that the Patient does not occur as the direct object.

2.3 Patient Omitted.

2.3.1 *Reflexives.* In Russian the reflexive pronoun occurs as the Patient in the accusative case when it is either stressed or contrasted, or when the action involved is not usually conceived of as reflexive:

- (5) a. V konce koncov malčik *sebja* moet.
'The boy is finally washing himself.'
- b. Ja dolžen i *sebja* odet'.
'I even have to dress myself.'
- (6) a. Anton zaščiščaet *sebja*.
'Anton is defending himself.'
- b. Maša vidit *sebja* v zerkale.
'Masha sees herself in the mirror.'

In (5) the reflexive direct object is contrasted and stressed. In (6) it occurs with a verb which is not characteristically reflexive: 'defending' and 'seeing' are not intuitively reflexive as are 'washing' or 'dressing', for example.

When the Patient is not stressed or contrasted and the action involved is characteristically reflexive, then the reflexive pronoun is normally omitted — just as it is in English.

- (7) a. Maščik moetsja v duše.
 ‘The boy is showering (himself).’
 b. Devočka odevaetsja očēn’ medlenno.
 ‘The girl dresses (herself) very slowly.’
 c. Vanja vytiraetsja polotencem.
 ‘Vanja is drying (himself) off with a towel.’

In English the active form of the verb is used in this construction. In Russian, since the Patient does not occur as the direct object, the voice marker *-sja* must appear. However, contrary to the passive constructions in (1) and (2) above, the subjects in these sentences are clearly agentive, consciously performing actions upon themselves. They therefore cannot be understood as Patients. Since the Patient is missing and thus does not occur as the direct object, the voice marker *-sja* appears on the verb.

2.3.2 *Reciprocals.* The same conditions which hold for the reflexive pronouns in Russian apply to the reciprocal pronouns as well. That is, when the reciprocal direct object is neither stressed nor contrasted, and when the action involved is by nature reciprocal, the construction *drug druga* is omitted. As with the reflexives, *-sja* must appear to mark the non-occurrence of the Patient as the direct object.

- (8) a. My vstretilis’ na ulice.
 ‘We met (each other) on the street.’
 b. Oni dolgo obnimalis’ i celovalis’.
 ‘They hugged and kissed (each other) for a long time.’

2.3.3 “*Agent Attributives.*” Besides the reflexive and reciprocal constructions there are other instances where the Patient may be omitted:

- (9) a. Sobaka kusaetsja.
 ‘The dog bites.’
 b. Lošad’ brykaetsja.
 ‘The horse kicks.’

Compare these with the following examples:

- (10) a. Èta sobaka kusaet detej.
 ‘This dog bites children.’
 b. Lošad’ brykaet stenu.
 ‘The horse is kicking the wall.’

The subject in these examples is clearly the Agent of the action. The morpheme *-sja* therefore specifies that the Patient is absent, as was the case with the reflexive and reciprocal constructions. The question then naturally arises regarding the conditions on the omissibility of the Patient in sentences such as these. The principle involved is discussed in the literature in terms of the "recoverability of deletion." Simply put and using a less transformational metaphor, sentence constituents may be omitted provided that the information conveyed by that part of the sentence is self-evident in the particular context so that the communicative process is unimpaired (cf. Chomsky 1965:182). In reflexives and reciprocals the Patient is omissible because it is the object of a characteristically reflexive or reciprocal action and is a pronoun which indicates identity with the subject. It is thus eminently "recoverable" from a semantic point of view. In the examples in (9) and (10) the omitted Patients are of such low semantic specificity that they may be characterized as "anyone or anything" (see Babby 1975:322).⁵ Obviously, Russian permits the omission of such highly unspecified Patients on condition that the omission again be marked by the voice morpheme. The omitted constituent is recoverable because the verbs are perceived as transitive (the object is part of the subcategorization of the verb (Babby and Brecht 1975)) and so the presence of a Patient is clearly understood. The notion of the "attribution" of some quality to the Agent derives from another condition on recoverability of deleted Patients, which has never been noted, viz. "inalienable possession."⁶ This will be discussed in greater detail in subsequent sections.

2.3.4 "*Exclusive Patients.*" Janko-Trinickaja (1962:171ff) discusses "reflexive verbs with the object included" ("vozvratnye glagoly vključennogo ob"ekta"):

Vozvratnye glagoly ètogo razrjada vključajut v svoje leksičeskoe značenie kak značenie samogo proizvodjaščego perexodnogo glagola, tak i značenie ob"ekta ètogo proizvodjaščego glagola . . .

(Janko-Trinickaja 1962:173)

In the active voice these verbs are capable of taking only one particular Patient.

- (11) a. Kurica neset jajca.
'The chicken lays eggs.'
- b. On zažmuril glaza.
'He is squinting his eyes.'
- c. Lev oskalil zuby.
'The lion is baring its teeth.'

- d. Papa vysmorkal nos.
'Papa blew his nose.'

Since a speaker who knows the lexical meaning of the verb knows also the Patient with which it must occur, the Patient need not be present. In fact, the specific mention of the Patient is so redundant as to be stylistically infelicitous.⁷ As always, when the Patient does not appear as the direct object, *-sja* is added to the verb:

- (12) a. Kurica nesetsja.
b. On zažmurilsja.
c. Lev oskalilsja.
d. Papa vysmorkalsja.

In fact, the normal way of conveying the meanings of the English glosses in (11) is by means of the construction exemplified in (12), where the Patient has been omitted and the voice marker *-sja* obligatorily occurs to mark the omission.

2.3.5 "*Prioritized Patients.*" Some verbs seem to have as part of their meaning a "favored" or "prioritized" Patient, even though other Patients may also occur. This prioritized Patient is a logical candidate for omission based on the principle of semantic recoverability. That is, when any of these verbs occurs without an explicit Patient the hearer automatically assumes that it is the favored Patient which has been omitted.

- (13) a. My stroili klub/most/dorogu.
'We were building a club/bridge/road.'
b. My stroili žife/dom/domašnie postrojki.
'We were building a dwelling/house/home additions.'
c. My stroilis'.
'We were building (our house).'

Example (13a) shows that this verb may occur with a Patient from a wide variety of semantic domains. However, when the Patient involved is from the domain of "personal habitat," as in (13b), it may be optionally omitted, resulting in (13c).

Other examples of verbs cited by Janko-Trinickaja (1962:175–77) which behave in a similar fashion are those in (14):

- (14) a. tratit' = 'waste' but tratit'sja = 'waste money'
b. ukoloť = 'prick' but ukoloťsja = 'prick one's finger'
c. stirať = 'wash' but stiraťsja = 'do one's laundry'

2.4 Intransitive Constructions.

2.4.1 *Agent/Experiencer in the Dative Case.* The *-sja* constructions considered thus far have dealt with transitive verbs whose Patients do not occur as direct objects. For intransitive verbs *-sja* arises when the Agent does not appear as the nominative subject of the sentence. For example, the expected subject of certain intransitive verbs may appear in the dative case, thereby mapping onto the noun phrase an Experiential rather than an Agentive interpretation. Compare the active sentences in (15) with their marked counterparts in (16):

- (15) a. Ja ne xoču spat'.
 'I don't want to sleep.'
- b. Kak vy živate?
 'How are you doing (lit. living)?'
- c. Segodnja ja počemu-to ne rabotaju.
 'Today for some reason I am not working.'
- (16) a. Mne ne xočetsja spat'.
 'I don't feel like sleeping.'
- b. Kak vam živetsja?
 'How are you doing?'
- c. Segodnja mne počemu-to ne rabotaetsja.
 'Today for some reason I don't feel like working.'

2.4.2 *Agent Omitted.* With certain verbs (mostly verbs expressing some form of communication) it is possible to omit the Agent because it is either unspecified or of a class of nouns directly inferable from the context:

- (17) a. O čem govoritsja v ètom rasskaze?
 'What are they talking about in this story?'
- b. O kom govoritsja v ètoj knige?
 'Who are they talking about in this book?'
- c. O čem poetsja v ètoj pesne?
 'What are they singing about in this song?'
- d. Vy znaete, o čem soobščaetsja v ètoj gazete?
 'Do you know what they are reporting about in this paper?'
- e. Vy znaete, o kom rasskazyvaetsja v ètom tekste?
 'Do you know who they are discussing in this text?'

In these sentences the Agent is clearly the author, reporter, or songwriter. Since the Agent is obvious, it may be omitted, provided the voice morpheme marks this omission.

3. The analysis of *-sja* as we have outlined above is, in our view, comprehensive and convincing. Nonetheless, there are certain well-known facts of Russian yet to be considered which pose serious problems for this analysis. We are referring here to certain data involving the occurrence of the Patient in the instrumental as well as the accusative case. This accusative-instrumental alternation has surely been noted, but has yet to be adequately explained. It occurs after certain verbs which express movement of an object-Patient by an Agent. In Levine 1980 it was argued that the instrumental case after these verbs occurs only when the object being moved is an inalienably possessed one, normally represented by a noun denoting a part of the Agent's body. This phenomenon is illustrated by the following examples.

- (18) a. *Devuška trjasla derevo.*
'The girl shook the tree (acc. case).'
b. *Devuška trjasla rukoj.*
'The girl shook her hand (inst. case).'
- (19) a. *Vanja dvigal stol.*
'Vanja was moving the table (acc. case).'
b. *Vanja dvigal nogoj.*
'Vanja was moving his leg (inst. case).'
- (20) a. *Rebenok ševalil cvetočki v vaze, stojaščeĵ na stolike.*
'The child moved the flowers (acc.) in the vase which stood on the table.'
b. *Rebenok ševalil gubami, starajas' čto-to proiznesti.*
'The child moved its lips (inst.) trying to say something.'
- (21) a. *Veter kačal verxuški derev'ev.*
'The wind swayed the tops (acc.) of the trees.'
b. *Les kačal verxuškami derev'ev.*
Lit: 'The forest swayed the tops (inst.) of the trees.'

It is interesting to note that many of these verbs may take an accusative Patient even when the object is a body-part noun. However, in such instances the interpretation is that the Agent is consciously manipulating a part of his body as if it were somehow separate or detached from him, i.e., an alienable entity.

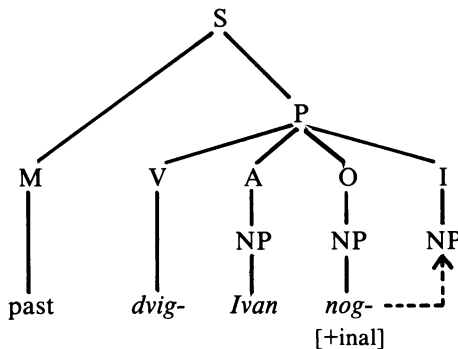
- (22) a. *Boris s trudom dvigal nogu v gipse.*
'Boris had trouble moving his leg (acc.) in a cast.'
b. *Nina trjasla palec, čtoby uspokoit' boľ.*
'Nina shook her finger (acc.) to relieve the pain.'

- c. Nina trjasla ruku, kak budto ona obožglas'.
 'Nina shook her hand as though she had burned herself.'

Additional data show that the instrumental-accusative alternation is not limited to utterances where the verb complement denotes a part of the Agent's body. In these data the notion of inalienability is metaphorically extended to nouns whose referents are normally presumed to be alienable. Evidence for this derives from the fact that such nouns are treated syntactically as though they were inalienable. This occurs most often with nouns denoting clothing, tools and similar objects, which by virtue of their physical contact and movement with the body are viewed as functioning as its parts.

- (23) a. Rebenok ševalil pelenkami.
 'The infant moved its diapers (inst.)' (The infant is wearing the diapers.)
- b. Vor trjas meškom s den'gami.
 'The thief shook the bag (inst.) with the money.'
- c. Policejskij vertel dubinkoj.
 'The policeman twirled his nightstick (inst.)'

The question which naturally arises here is why nouns viewed as inalienably possessed objects should be assigned the instrumental rather than the accusative case? In Levine 1980 an attempt was made to account for this fact within a Case Grammar framework. In that paper the author proposed a movement rule which took a NP marked for the feature [+inalienable] from under the domination of the Object node and attached it under the Instrument node. It was assumed that a late case-marking rule spelled out its instrumental inflectional ending. The tree diagram below graphically illustrates the movement rule assumed to operate in a sentence like *Ivan dvigal nogoj* 'Ivan was moving his leg'.



Notice, however, that this analysis for the assignment of the instrumental case in inalienable possession sentences is incompatible with the analysis of voice and the formation of *-sja* verbs outlined in sections 1 and 2. Recall that the analysis of *-sja* verbs predicts that whenever a Patient does not appear as the direct object, the particle *-sja* is automatically assigned to the verb. But here we are dealing with just such an instance where the Patient NP doesn't show up as the direct object in the accusative case, and yet no *-sja* is introduced. The sentence resulting from the above derivation is *Ivan dvigal nogoj*, not the deviant sentence **Ivan dvigalsja nogoj*. Thus, if one accepts this analysis accounting for the instrumental case of inalienably possessed nouns — that the Patient is moved from the O-node to the I-node, then the fact that no *-sja* occurs seriously jeopardizes the whole analysis of voice described above. The present paper, however, will show that this analysis of *-sja* is essentially correct and that the data expressing inalienable possession can be explained without recourse to a movement rule. We will show that once a vital refinement is introduced into the theory of voice, both the syntax (the absence of *-sja* and the acc-inst case alternation) and the semantics (inalienable possession) can be explained within the present analysis of *-sja*.

4. The evidence for the analysis of *-sja* as presented in section 1 is overwhelming. To accommodate the data in sentences (18) through (21), however, an important revision must be introduced. This revision concerns the notion of Patient itself. By Patient we simply mean the participant in the utterance which in some fashion undergoes the action of the verb. It is well known, however, that some Patients are more affected by the action of the verb than others. For example, compare the English sentences *John drank the vodka* and *John liked the vodka*. Intuitively speaking, the vodka is more affected in the situation described by the former sentence than by the latter. One could call Patients which are most affected by the action “Strong Patients,” and those which are less affected “Weak Patients.” In sections 1 and 2 we were dealing only with strong Patients. We shall argue below that it is the strong Patient which provokes the introduction of *-sja* when it does not occur as the direct object of the verb. In section 3 in fact we were treating sentences containing a class of NP's representing weak Patients. Thus, the nonoccurrence of *-sja* in the inalienable possession sentences is not problematic once the distinction between strong and weak Patients is taken into account.

On the surface the solution calling for a distinction between strong and weak Patients to accommodate a small number of sentences may seem *ad*

hoc. Nevertheless, this distinction correlates directly with the findings of a recent study on transitivity by Hopper and Thompson 1980. In this article the authors argue that clauses may be characterized as more or less transitive depending on the effectiveness with which an action is transferred from an Agent to a Patient. The more effectively an action is “carried over” or “transferred” from one participant to another in a clause, the more transitive that clause will be. What we have termed strong Patients are in fact Patient NP’s which occur in what Hopper and Thompson call “highly transitive clauses.” Weak Patients, on the contrary, are Patient NP’s which occur in clauses of “low transitivity.” In their study Hopper and Thompson argue that the relative position of a clause on the scale of transitivity is measured in terms of a number of component features which are proposed as the parameters of transitivity. Among the features which Hopper and Thompson propose, the following are relevant for the present data: “Individuation” and “Affectedness.” Following Hopper and Thompson, we will understand Individuation as the “distinction of the Patient from the Agent.” The Affectedness feature characterizes the degree to which the action alters the state of the Patient. Clauses which are positively specified for these features are, by definition, highly transitive and in our terms contain strong Patients. They will therefore contain Patient NP’s in the accusative case. Conversely, in Russian, Patients will occur in an oblique case when they are weak, i.e., when they are less individuated and less affected by the action of the verb.

To illustrate, let us return to sentences (18)–(21) above. In the examples with an accusative direct object, the a-sentences, the Patient is clearly perceived as separate (i.e., Individuated) from the Agent; and, furthermore, as a result of the action, the Patient has been significantly affected, i.e., it has undergone a change of state. For example, in sentence (18a) the tree has changed from a state of rest to a state of agitation. In (19a) the table was in the process of being moved from one place to another. By contrast, in the b-sentences with instrumental complements, the Patients denote a part of the Agent and therefore represent the paradigm instance of nonindividuation. Moreover, it can be argued that the instrumental Patients in these sentences are not perceived as affected in the same way as the accusative Patients in the a-sentences. In the b-sentences the Patients neither undergo any internal physical change, nor do they necessarily end up in a new position or location. In fact, the Agent is not at all concerned with the effect of his action on the state of the Patient. Thus, inalienably possessed Patients are both [–Individuated] and [–Affected], and the morphosyntactic encoding of Patients so specified is the instrumental case in Russian. By contrast,

the sentences in (22) with the body-part nouns in the accusative case clearly express a somewhat atypical circumstance in which the Agent is acting upon a part of his body as though it were somehow detached from him. In this instance the Agent focuses his attention upon the Patient with the explicit desire to effect a change in its state. This is different from the inalienably possessed body parts, which are clearly perceived as a part of the Agent rather than as the object of his action.

5. Thus far we have been dealing with Patients that are either [+Affected], [+Individuated] or [-Affected], [-Individuated]. These may be viewed as the paradigm instances of strong and weak Patients, respectively. However, the classification of Patients and its relationship to the syntax of *-sja* is much more complex. Below we will examine certain data on *-sja* which rarely have been noted and never have been accommodated within the theory of voice.

Recall that in the reflexive and reciprocal examples in section 2 the claim was made that *-sja* occurs because a strong Patient has been omitted. As we have already discussed, such an omission is possible only on condition that the semantic material omitted is somehow recoverable within the context of the message. In such instances the omitted Patient is recoverable because it is identical or coreferential with the subject of the sentence:

- (24) Maša_i moe_t Mašu_i = Maša moe_t sebja = Maša moe_tsja.
 'Masha_i washes Masha_i = Masha washes herself = Masha washes.'

The issue of omissibility and recoverability was also discussed with regard to sentences like *Starik zažmurilsja* 'The old man squinted' in Section 2.3.4. There it was noted that such verbs may omit their Patients specifically because they are the only Patients which these verbs are capable of taking, i.e., the information about which Patient is involved is already encoded in the lexical specification of the verb and is therefore redundant in the sentence as a whole. A similar explanation was offered for sentences like *Oni strojatsja* 'They are building a house', where one Patient is granted most favorable status with regard to a particular verb and is therefore similarly omissible. It has never been noted, however, that the lexical recoverability involved in all of these examples is a necessary, but not a sufficient, condition for the omissibility of these Patients. In these examples, as well as in the reflexive and reciprocal ones, the Patients, besides being identified by the lexical coding of the verb, are also inalienably possessed. Thus, inalienable possession is also a necessary condition for this type of Patient omission. In the sentences containing verbs like *zažmurit'sja* 'squint', *oskali't'sja*

'bare one's teeth', *nastorožit'sja* 'prick up one's ears', it is inconceivable that an Agent could carry out these actions on another person. Similarly, sentences of the type *Ona ukololas'* cannot mean that the Agent pricked someone else's finger, nor can *Oni strojatsja* mean that the Agents are building someone else's house. The latter meaning would have to be rendered by a lexically explicit sentence such as *Oni strojat ix dom* 'They are building their (someone else's) house'. Therefore, we now have before us instances of verbs with Patients which are strong, as evidenced by the occurrence of *-sja*, and at the same time inalienable. If we understand inalienability as identifying something which is inherently associated with or permanently possessed by the Agent, then in fact we are dealing with strong Patients which must be marked [-Individuated]. In other words, these Patients must be marked [+Affected] and [-Individuated]. Thus, in addition to the weak Patients in the b-sentences of examples (18)–(21), which are all [-Affected] [-Individuated], and the strong Patients in the a-sentences, which are all [+Affected] [+Individuated], it is possible to have Patients which are [+Affected] and [-Individuated]. The fact that *-sja* occurs in these sentences is direct evidence that the voice marker in Russian appears when a strong Patient, obligatorily marked [+Affected], does not occur as the direct object.⁸

Other data from Russian support our contention that inalienable possession, which we now define as [-Individuated], along with lexical redundancy is a necessary condition for the omission of Patients. We are now referring to sentences like the following, defined by Vinogradov (1947:635) as "active-objectless" (*aktivno-bezob"ektnoe*):

- (25) a. *Sobaka kusaetsja.*
 'The dog bites.'
 b. *Èto krapivo žžetsja.*
 'This nettle stings.'
 c. *Korova bodaetsja.*
 'The cow butts.'

In section 2.3.3 we described these sentences as having Patients which are omissible because they are of minimal semantic specificity. However, we have seen that inalienability (more precisely, [-Individuated] NP's) is another necessary condition for deletion of Patients, and we would claim that it is this feature which accounts for the particular meaning associated with the examples in (25). Specifically, each of these sentences makes a statement about a particular inalienable characteristic of the subject/Agent, that is, that it typically performs the action denoted by the verb. Sentence

(25a) does not mean that the dog is biting someone, but rather that the dog characteristically bites. This meaning is present only when the direct object is marked [-Individuated]. Being so marked, it meets the condition for its omission and *-sja* obligatorily occurs to mark the omitted Patient. This explains why only sentences with *-sja* are capable of expressing this notion of “inalienable characteristic,” whereas the corresponding sentences without *-sja* are not.⁹ To be sure, pragmatic considerations assist this interpretation (we all know that dogs bite), but it is the [-Individuated] marking which explicitly signals the habitual relationship between the dog and the Patient and so the notion of “inalienable characteristic.”

6. Let us summarize the conclusions reached to this point. In sections 1 and 2 we reviewed and elaborated the theory of voice in Russian as presented in Babby 1975 and Babby and Brecht 1975. Specifically, it was noted that the morpheme *-sja* marks the fact that in transitive sentences the Patient does not occur as the direct object and in intransitive sentences the Agent/Experiencer does not appear as the grammatical subject. Such “displaced” Agents and Patients may occur in another case in the sentence or be completely omitted. In sections 3 and 4 we argued that omitted Patients cannot be “weak,” as defined by the semantic matrix of [-Affected] [-Individuated]. Such weak Patients must occur in the instrumental case without any voice marking on the verb. Section 5 was devoted to the conditions on the omissibility of Patients in Russian. We argued there that the obvious condition of lexical redundancy is necessary but not sufficient for the omissibility of the Patient. In this regard we noted that all omitted Patients in Russian are semantically “inalienable;” in Hopper and Thompson’s terms they must be marked [-Individuated]. Pursuing the logic of these arguments, we may now specify the exact conditions for the omissibility of Patients and the correlative occurrence of *-sja*. Furthermore, the force of the evidence will add significant weight to the argument for the independent existence of the features [\pm Affected] and [\pm Individuated].

We can list the logically possible Patient types, using the features of [\pm Affected] and [\pm Individuated] as follows:

I.	II.	III.	IV.
+Affected	+Affected	-Affected	-Affected
+Individuated	-Individuated	+Individuated	-Individuated

In Hopper and Thompson’s terms the strongest Patients, i.e., those occurring in the “most highly transitive sentences,” are marked [+Affected] [+Individuated] and the weakest [-Affected] [-Individuated]. If our argu-

ments in section 5 are correct, Patients marked [+Individuated] (I and III) cannot be omitted and so they cannot provoke the occurrence of *-sja*. By the same token, in sections 3 and 4 we saw that the weakest Patient, marked [-Affected] [-Individuated] (IV), also cannot be responsible for the appearance of *-sja*. This then leaves us with only one possible marking for omitted Patients in Russian: [+Affected] [-Individuated] (II).

Thus far our arguments for the conditions on the omissibility of Patients have been essentially semantic. That is, they are based on the fact that all sentences with *-sja* arising from omitted Patients involve Patients which are “inalienably possessed” in whole (reflexives and reciprocals) or in part. Furthermore there is important syntactic evidence that also supports this semantic argument. Note the following sentences:

- (26) a. Vanja zažmurilsja.
 ‘Vanja squinted.’
 a’. *Vanja zažmurilsja glazami.
 ‘Vanja squinted his eyes.
 b. Sobaka oskalilsja.
 ‘The dog bared (its teeth).’
 b’. *Sobaka oskalilsja zubami.
 ‘The dog bared its teeth.’
- (27) a. Mama ukololas’.
 ‘Mama pricked herself.’
 a’. ?Mama ukololas’ pal’cem.
 ‘Mama pricked her finger.’
 b. On ustavilsja na menja.
 ‘He stared at me.’
 b’. ?On unstavilsja na menja glazami.
 ‘He fixed his eyes upon me.’
- (28) a. Devočka utknulas’ v podušku.
 ‘The girl buried herself in the pillow.’
 a’. Devočka utknulas’ golovoj v podušku.
 ‘The girl buried her head in the pillow.’
 b. Maščik potupilsja.
 ‘The boy lowered his gaze/head/eyes.’
 b’. Maščik potupilsja vzorom.
 ‘The boy lowered his gaze.’
- (29) a. Ona stuknulas’ o dver’.
 ‘She bumped into the door.’

- a'. Ona stuknulas' kolenom o dver'.
'She bumped her knee against the door.'
- b. Ona porezalas' ob ostryj kamen'.
'She cut herself on a sharp rock.'
- b'. Ona porezalas' nogoj ob ostryj kamen'.
'She cut her foot on a sharp rock.'
- c. Ona udarilas' o stol.
'She hit against the table.'
- c'. Ona udarilas' spinoj o stol.
'She hit her back against the table.'

These examples represent a range of Patients which are more or less lexically redundant. In (26) the Patients are exclusive, i.e., they are the only ones possible after their respective verbs. They are therefore eminently omissible, given the conditions of lexical redundancy and "inalienability." In (27) the Patients are "prioritized" and the most favored is thus regularly omitted with the concomitant appearance of *-sja*. Note, however, that the prioritized Patient may appear after these verbs when it is no longer totally lexically redundant, specifically when it is stressed or modified by other nonrecoverable lexical information.

- (30) a. On ustavilsja na menja svoimi kruglymi, černymi glazami.
'He fixed his round, dark eyes on me.'
- b. On šil i ukololsja bošim palcem.
'He was sewing and pricked his thumb.'

The examples in (30) indicate very clearly that the [-Individuated] Patient occurs in the instrumental case when it is not omitted. As in the b-examples in (18)–(21) above, the feature [-Individuated] on a noun phrase causes it to appear in the instrumental case. However, since the Patients in (30), in contrast to the b-examples in (18)–(21), are [+Affected], the nonoccurrence of the Patient as the direct object provokes the *-sja* morpheme. If then the Patient is lexically redundant, it simply is omitted and *-sja* remains, as in example (27). If for some reason it no longer is redundant, as in (30), it must appear in the instrumental case and the *-sja* still remains to indicate that the [+Affected] Patient is not the accusative direct object. In (28) we find a situation which is somewhat different. In these sentences, in contrast to (26) and (27), the [+Affected] [-Individuated] Patient is optionally omitted, i.e., the primed and nonprimed examples are essentially equivalent. This, we would argue, is a consequence of the "squishy" nature of lexical redundancy (cf. Ross 1972). That is, this set of verbs is only in the process

of establishing its “prioritized” Patients and so a certain ambivalence in the occurrence or absence of the Patient is to be expected. As above, the feature [-Individuated] requires that the Patient noun phrase be put into the instrumental case. On the contrary, the [+Affected] feature guarantees that the Patient provokes *-sja* since it is not the direct object.

If we now look at the examples in (29), we see further instances of “inalienable” Patients in the instrumental case after verbs in *-sja*. In the nonprimed examples the Patient is omitted because it is totally lexically unspecified, representing only some body part. (Note the parallel with the sentences of the *Sobaka kusaetsja* type in 2.3.3.) This Patient is marked only [+Affected] [-Individuated] and given no other lexical content. This makes it totally recoverable, and so omissible. If a speaker wishes to be more specific, however, he may optionally mention the affected part of the body, but this [-Individuated] noun phrase must again appear in the instrumental case. (Cf. the primed examples in (29).) Note that these examples are one step lower in their degree of specificity of the Patient than are those in (28), where the Patient is restricted to a specific area of the body, for instance the head, and is understood as such unless again the speaker chooses to be more precise. (For example, *Ona utknulas' nosom/podborodkom* ‘She buried her nose/chin’.) The only information conveyed by the nonprimed examples in (29) is that the omitted Patient is an inalienable body part, and therefore any specificity as to which part of the body is affected must be lexically provided.¹⁰

7. Conclusion

The preceding discussion constitutes very strong evidence for the analysis of *-sja* as the general voice marker in Russian, indicating the violation of the direct correlation between semantic and syntactic functions. We have also identified a previously overlooked condition on the omissibility of Patients, viz., the feature [-Individuated]. (This condition correlates directly with the historical source of the morpheme *-sja*, which is the dative and accusative “reflexive” pronoun in Old Russian.) We have also argued for the direct correlation of the instrumental case with the feature [-Individuated]. It appears that this feature is essentially equivalent to the traditional notion of “inalienable possession.”

To be sure, this study does not constitute an exhaustive account of the meaning of *-sja* or of the instrumental case in Russian. Nevertheless, it is clear that the feature [-Individuated] is expressed by the instrumental case and the presence of *-sja* is correlated with the nonoccurrence of a [+Affected] Patient in direct object position. This analysis of *-sja*, we contend,

constitutes the syntactic basis upon which exhaustive semantic descriptions of individual sentences containing *-sja* can be conducted. Finally, the evidence from Russian is important in that it confirms Hopper and Thompson's feature analysis for transitivity in general and the separate existence of the features [\pm Affected] and [\pm Individuated], in particular.

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NOTES

1. We will not pause here to debate whether notions like Agent, Patient, Experiencer, etc., are semantic, pragmatic, or some combination of the two. See Chomsky 1980 (54ff.) for a theoretical discussion of the problem. For the purposes of this paper we will assume that they are semantic.

2. More precisely, this correlation is referred to as "diathesis" and the term "voice" is properly reserved for the formal (morphological or syntactic) processes associated with it. See Meščuk and Xolodovič 1970 and Xolodovič 1970.

3. This inventory is based on traditional taxonomies of *-sja* constructions as given in Isačenko 1960 and Janko-Trinickaja 1962. It involves both semantic and syntactic criteria, reflecting the fact that the combination of the voice syntax and the lexical meaning of nouns and verbs results in rather clearly perceived and predictable nuances associated with different utterances.

4. Certain lexical combinations in sentences with Patients as subjects result in clearly perceived semantic nuances. This has led some scholars to subdivide this general construction into several different semantic classes. (Cf. Isačenko 1960 (382ff.))

A. "Passive-qualitative" ("passivno-kačestvennoe")

- (i) a. Posuda b'etsja.
'The china is breakable.'
- b. Škaf ne otkryvaetsja.
'The cupboard doesn't open.'

B. "Reflexive-passive" ("vozvratno-passivnoe")

- (ii) a. Mne vspomnilas' èta noč.
'I recalled that night.'
- b. Emu predstavilas' strašnaja kartina.
'He imagined a horrible scene.'

C. "Consigned action" ("predostaviteľnoe")

- (iii) a. Ja brejus' u parikmaxera.
'I get shaved at the barber shop.'
- b. On vzvesilsja v poliklinike.
'He got weighed at the clinic.'

D. Accidental action ("neproizvolnoe")

- (iv) a. On igral nožom i poranilsja.
'He was playing with the knife and got cut.'
- b. On upal s lestnicy i ubilsja.
'He fell from the ladder and hurt himself.'

Compare these with the following:

- (v) a. On poranil sebja nožom.
'He cut himself with a knife.'
- b. On ubil sebja vystrelom iz pistoleta.
'He shot himself with a pistol.'

Whatever the source of these semantic nuances, lexical or even pragmatic, the *-sja* morpheme functions uniformly here only to mark the nonoccurrence of the Patient as the direct object.

5. One might view the Patients in these sentences as instances of the empty pronominal element PRO. (Cf. Chomsky 1982 (14) and the references cited there.) A discussion of the issues involved is beyond the scope of the present paper.

6. See Levine 1980 for an overview of the subject of "inalienable possession" in Russian.

7. See Kilby 1977 (151ff.) for a discussion of the inherent lexical redundancy in the objects of these verbs.

8. In fact, this is not a firm argument that *-sja* responds only to the feature [+Affected], for as Hopper and Thompson have noted there are other features not considered here which may be relevant to the notion of strong Patient. All that these sentences prove is that the feature [+Individuated] is not necessary in the specification of strong Patients. Below we will see evidence that Russian is capable of marking both the notion of strong Patient and the notion of inalienable Patient within the same sentence.

9. The sentence *Sobaka kusaet* means 'The dog is biting', not 'The dog bites'.

10. One could argue for a different analysis of the sentences in (29). For example, the nonagentive character of the subject suggests that this noun phrase can be analyzed as the Patient of the action, thus giving the sentences in (29) the same passive interpretation that we find in *On ubilsja* 'He got hurt'. The instrumental noun phrase then would be analyzed as a second Patient, inalienable to be sure, which is obligatorily put into this case. (Cf. *On sčitaet ee duroj* 'He considers her a fool'.) Both analyses of these sentences are compatible with the analysis of *-sja* proposed here. The decision as to which is correct involves factors which lead beyond the scope of this paper.

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Syntagmatic Constraints on the Russian Prefix *pere-*

Michael S. Flier

Two basic views, morphological and lexical, characterize most of the current research on Russian verbal prefixation. The morphological view focuses on the prefixes as a closed set or paradigm of morphemes. Each morpheme represents a syntagm of prefix features selected and integrated by morphological encoding rules; cf. Flier 1975, van Schooneveld 1978, Gallant 1979. Implicit in this view is the assumption that morphosemantic invariance underlies contextual variation, that despite the multiplicity of meanings a given prefix might manifest in combination with different verbs, it is possible to strip away contextual accretions and analyze the prefixes in isolation as an internally coherent system.

Such an approach has obvious merits, as Jakobson has shown in his studies of Russian case (1936, 1958) and verbal categories (1932, 1957). As members of a closed paradigm the prefixes can be compared and contrasted on common ground. Prefixes with partially overlapping syntagms may be expected to share some contextual meanings as well; in some instances such prefixes may even compete with one another as stylistic variants. The isolation of distinct prefix features makes possible the assignment of specific connotations to specific features or combinations of features rather than to the prefix as a whole, a factor of no small importance in determining the constraints on connotational meanings.

The lexical view, which is found in most dictionaries, textbooks and scientific grammars, treats prefixation in context rather than in isolation. It seeks to identify and classify the submeanings or meaning-types (*tipy značeniĭ*) of each prefix in the context of specific verbs. Apparently the status of prefixes as bound morphemes suggests limiting their description to actually occurring collocations and their semantic patterns. Unfortunately classification by the prefixed verb rather than the prefix in isolation permits an open-ended proliferation of meanings, submeanings, subtypes of submeanings, etc.; cf. Bogusławski 1963. But the very fact that most linguists who approach prefixation from the lexical perspective actually posit a fairly limited number of basic submeanings suggests that context not be dismissed out of hand as uninteresting or unimportant.

It is fair to say that neither the morphological view nor the lexical view has a monopoly on insight. Rather they appear to be two sides of the same coin, providing, as it were, an internal and external view of one and the

same reality. Future progress in prefix research depends on the elaboration of a synthetic alternative that recognizes the descriptive advantages of treating the prefixes as paradigmatic correlates, but does not neglect the syntagmatic factors — lexical, morphosyntactic-propositional (aspect, tense, mood), pragmatic (presupposition) — that determine a relatively small number of stable and storable submeanings. The present paper is offered as a preliminary attempt to reconcile the opposite views through a comprehensive approach — *morphosyntagmatic*, for want of a better term — that expresses the inherent complexity of Russian verbal prefixation more accurately than either of the other two in isolation.

In an earlier paper (Flier 1975) I sketched an outline of Russian verbal prefixation from a morphological perspective by discerning the morpho-semantic invariants behind the individual submeanings of the prefixes *pere-*, *pro-*, *ob-*, *po-*, and analyzing the invariant syntagms themselves as interrelated elements of a common subhierarchy in the complete system of prefixes. We will review the results of that study in order to clarify and elaborate several points in the descriptive scheme before turning to the syntagmatic constraints on Russian verbal prefixation as exemplified by *pere-* in general and by the submeaning *pere-* <repetition> in particular.

The morphological view of Russian verbal prefixation

Verbal prefixes, like a number of other functional morphemes and categories — prepositions, cases, deictic pronouns, tense, aspect — make reference to abstract delimitation, proximity, dimension, direction, etc., and can therefore be analyzed in abstract spatial terms capable of metaphorical interpretation in nonspatial universes. The use of metaphor is so integral a part of human language that it is not remarkable that an evaluative system of spatial relations, with its inherent limits, hierarchies and implications, might underlie sentential operators like the verbal prefixes; cf. Church 1961, Lakoff and Johnson 1980.

The introduction of a prefix to a predicate implies the addition of at least three types of prefix features that immediately alter the perspective of the narrated event.

The FRAME FEATURES (configuration) project at least one limit onto the event, thereby anchoring it and inviting correlation with categories of limitation on the propositional and pragmatic levels. The limit may be specified as **inceptive**, **lateral** or **terminal**, or be left unspecified. The imposition of a limit simultaneously produces a bifurcation of metaphorical space into **domain** and **periphery**, i.e., space inside and outside the limit, respectively. Furthermore, the plane of the domain itself functions as a limit or

threshold, separating the **supradomain** above from the **subdomain** below. In evaluative terms the threshold represents natural order, separating the metaphorical space above and below into positive and negative polarities of evaluation; cf. Gallant 1979:60ff.

The OPERATION FEATURES make explicit the way in which the narrated event is to be related to the prefix frame. At the very least they include TRAJECTORY FEATURES, which detail the dynamic course of the event relative to the domain and the periphery by indicating the locus of its **origination**, **progression** and **destination**; and RELATION FEATURES, which express the relation of the trajectory to the limits(s) involved — **discreteness**, **contact**, **scission** or **transgression**.¹

The PERSPECTIVE FEATURES characterize the viewpoint of the observer of the narrated event as **internal** or **external** to the domain of the prefix frame.

The preliminary analysis of *pere-*, *pro-*, *ob-* and *po-* assumed a common prefix frame consisting of a domain bounded by inceptive (A), lateral (B) and terminal (C) limits (Flier 1975:219ff.); see fig. 1.

THE PREFIX FRAME AND THE PREFIX OPERATOR *PERE-*

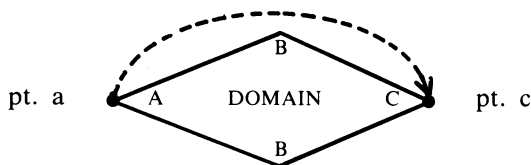


FIG. 1

The feature [spanned] was introduced to indicate that the course of the narrated event specified by all four prefixes spanned the domain from the periphery beyond the inceptive limit (pt. a) to the periphery beyond the terminal limit (pt. c). Thus [+spanned] is actually a cover feature for four operation features: [origination/periphery], [scission/inceptive limit], [destination/periphery], [contact/terminal limit]. The four prefixes were differentiated according to the valuation of the features [lateral] and [domanial]; see fig. 2. In terms of the operation features noted above, the feature valuations for [lateral] and [domanial] are to be understood as follows: [-lateral] = [discreteness/lateral limit], [+lateral] = [contact/lateral limit], [-domanial] = progression/periphery, [+domanial] = [progression/domain].

Perspective features were not mentioned in the 1975 study because all the prefixes involved presuppose an external point of view, that is, the speaker focuses on the external spanning of the domain, on the fact that the narrated event begins and ends in the periphery.

THE [+spanned] SUBHIERARCHY

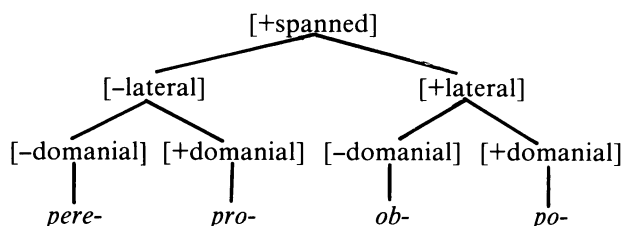


FIG. 2

According to this more detailed description of the prefix features involved, a narrated event specified by *pere-* is viewed as breaking contact with the inceptive limit in the periphery, proceeding over the domain threshold² (since there is no contact with lateral limits as in the case of *ob-*), and establishing contact with the terminal limit in the periphery. The componential breakdown of the prefixes is important not only for cross-classificatory purposes; it also permits the association of particular connotations of submeanings with specific features or combinations of features; see table 1.

CONNOTATIONS ASSOCIATED WITH FEATURES OF THE *pere-* SYNTAGM

[+spanned] = [origination/periphery] [destination/periphery]
[scission/inceptive limit] [contact/terminal limit]

'complete, contained, enveloped, bounded, perdurative'

[-lateral] = [discreteness/lateral limit]

'linear, ordered (nondiverted), cumulative, direct, intensive'

[-domanial] = [progression/periphery]

periphery: 'solution, goal, satisfactory, superior, excessive'

domain: 'obstacle, problematic, unsatisfactory, inferior'

TABLE 1.

The connotations associated with the three features underlying *pere-* vary, depending on their interaction with lexical features of the verb. As expected, the metaphorical connotations are more pronounced with nonspatial verbs. Verbs with *pere-* <translocation> (e.g., *perenesti*, *pereexat*) simply connote complete transference from pt. a to pt. c ([+spanned]),

passage across a space viewed simply as an obstacle ([–domain]), and direct, linear motion ([–lateral]). Verbs with *pere-* <superiority> (e.g., *perekričat'*, *perexitrit'*) connote complete envelopment of the object ([+spanned]), superiority of the subject of the narrated event over the inferior object under comparison ([–domanial]), and direct, nondiverted achievement of the superior performance ([–lateral]). In the case of *pere-* <repetition> (e.g., *perepisat'*, *peregruppirovat'*), verbs connote complete envelopment of the object which is to be affected ([+spanned]), superiority of the current performance over the previous performance ([–domanial]), and direct, nondiverted achievement of the superior performance ([–lateral]). We shall examine this particular submeaning of *pere-* in greater detail below.

The syntagmatic view of Russian verbal prefixation

The prefix *pere-* can be used to illustrate the way that prefixation is handled in the lexical approach. There is common agreement on twelve submeanings of prefixed verbs in *pere-*; see table 2. It is possible to find lexical as well as morphosyntactic and pragmatic constraints on the verbs that can occur with *pere-* in a given submeaning. Thus *pere-* <translocation> is limited to verbs of motion in the lexical, not morphological, sense (*perejiti*, *perebrosit'*); *pere-* <division>, to verbs denoting division by means of an instrument (*pererezat'*, *perepilit'*); *pere-* <cessation>, to verbs denoting a durative process involving agitation (*perebrodit'*, *perebojat'sja*); etc.

A morphosyntactic category like transitivity places constraints on some of the submeanings of *pere-*. Verbs with *pere-* <division> and *pere-* <superiority> are all transitive³, while those that occur with *pere-* <interval> and *pere-* <cessation> are all intransitive. Verbs with *pere-* <translocation> and *pere-* <seriatim> can be transitive or intransitive.

Pragmatic constraints on the cooccurrence of verbs and *pere-* concern presuppositions introduced by the lexical meaning of the verb. Thus *pere-* <excess> implies a domain consisting of a generic event evaluated as normative in degree, duration and/or quantity. Because the event is viewed in positive rather than negative terms, the spanning of the domain typically yields a negative connotation of an event performed to excess, an event overdone. If *pere-* <excess> presupposes a positive referent, then by contrast *pere-* <repetition> implies a negative one, a domain consisting of the result of a previous event now evaluated as inadequate in degree, duration and/or quantity. Since the result is viewed in negative terms, the spanning of the domain typically yields a positive connotation of the result from the reperformed event, the event done over.

This is not the place to pursue in any detail the various syntagmatic

BASIC SUBMEANINGS OF *PERE-*

<translocation>	<i>perebežat</i> 'run across, through' <i>perebrošit</i> 'throw across, through'
<interval>	<i>perekurit</i> 'fill time interval by smoking' <i>perekusit</i> 'fill time interval by snacking'
<duration>	<i>perezimovat</i> 'spend the winter' <i>pereždat</i> 'spend a period of time watching'
<interchange>	<i>peregljadyvat'sja</i> 'exchange glances' <i>perepisyvat'sja</i> 'correspond with one another'
<interjacency>	<i>pereplesti</i> 'fill a space by plaiting' <i>peresypat</i> 'fill a space by sprinkling'
<transformation>	<i>perelit</i> 'transform by pouring' <i>perežeč</i> 'transform by burning'
<cessation>	<i>perebolet</i> 'cease being ill' <i>perebrodit</i> 'cease fermenting'
<repetition>	<i>peredelat</i> 'redo' <i>pereorientirovat</i> 'reorient'
<division>	<i>pererezat</i> 'cut across, divide by cutting' <i>peregryzt</i> 'gnaw through, divide by gnawing'
<seriatim>	<i>peremyt</i> 'wash one after the other' <i>perestreljat</i> 'shoot one after the other'
<superiority>	<i>perekričat</i> 'outshout' <i>peretancevat</i> 'outdance'
<excess>	<i>peresolit</i> 'oversalt' <i>perevarit</i> 'overcook'

TABLE 2.

factors that constrain the verbs able to cooccur with *pere-* in all its submeanings. It is clear from the discussion above, however, that factors other than purely lexical play a role in determining the kinds of prefix-verb collocations that are possible. We shall turn now to one specific submeaning, *pere-* <repetition>, to illustrate the interaction of various syntagmatic constraints in the realization of one specific submeaning.

The submeaning pere- <repetition>

The submeaning <repetition> is one of the most productive for the prefix *pere-*; it occurs with a wide range of verbs, so wide, in fact, that one might think it were completely open-ended.

1. Ivan *perečital* knigu v biblioteke.
'Ivan *reread*^P the book in the library.'
2. Povar *perekipjatil* boršč.
'The cook *reboiled*^P the borscht.'
3. Maščik *pereodelsja*.
'The boy *changed clothes*^P (redressed).'
4. Učlašijsja *perexodil* peškoi.
'The pupil *retook*^P the move with the pawn.'

As productive as this submeaning might be, there are many verbs that cannot occur with it.

5. Marija **pererezala* lentu.
'Maria **recut*^P the ribbon in half.'
6. Sup **perekipel* v kastrjule.
'The soup **reboiled*^P in the pot.'
7. Babuška **perebojalas*, uznav ob ubijstvu.
'Grandmother **became afraid again*^P on learning of the murder.'
8. Učitel' **perenes* knigu v biblioteku.
'The teacher **retook*^P the book to the library.'

Apparently the constraints on *pere-* <repetition> have been difficult to discern. Ella Sekaninová, the author of the most comprehensive work to date on the prefix *pere-* (1963), offers only a few remarks on the restrictions of occurrence. She notes (55–57) that the verbs with *pere-* <repetition> are all transitive (but note sentence 4 above), denote concrete actions expressing result and the possibility of repetition. She excludes verbs of motion (see sentence 8) and verbs of division (see sentence 5), but despairs of characterizing in general terms the verbs that cannot occur with *pere-* <repetition>.

She divides the actual verbs with *pere-* <repetition> into two subgroups, those that simply mean 'again' (*snova*), e.g., *perebelit* 'rewhiten', *perestraxovat* 'reinsure', and those that mean 'again and differently' (*snova i inače*), e.g., *peregruzit* 'reload', *peregruppirovat* 'regroup'. She proposes two transformational schemes to characterize these two groups in formal terms (see table 3). Several of Sekaninová's points require comment.

First, it is unreasonable to suppose that the verbs that do not cooccur with *pere-* <repetition> can be characterized in any straightforward, positive way. We assume that each submeaning of a prefix can be associated with a specific inventory of syntagmatic features that defines the set of collocatable verbs and excludes the rest. It is unlikely that the excluded

TRANSFORMATIONAL CORRELATIONS FOR *PERE*- <REPETITION>

- a. N — *pere*-V — A ⇔ N — *snova* — V^P — A
 b. N — *pere*-V — A ⇔ N — *snova i inače* — V^(P) — A

N = nominative case (noun, pronoun)

A = accusative case (noun, pronoun)

V = verb

P = perfective aspect

TABLE 3.

verbs as a set can be characterized only negatively, in terms of the defining features of *pere*- <repetition> for which they lack positive specification. Second, although verbs of motion and division are precluded from combining with *pere*- <repetition>, the other limitations noted by Sekaninová are typical rather than absolute. Third, one clearly begs the issue of appropriate definition by listing “possibility of repetition” as a criterion for inclusion. It is precisely the notion of repeatability that requires clarification. As it turns out, “repetition” is a misleading term, because not all verbs that denote repeatable actions cooccur with *pere*- <repetition>: thus under normal circumstances (9a) cannot be transformed into (9b).

- 9a. Maľčik *snova* *zagrjaznil* *pol*.
 ‘The boy dirtied the floor again.’
 9b. Maľčik **peregrjaznil* *pol*.
 ‘The boy*redirtied^P the floor.’

The association of an evaluated result and a repeat performance that achieves a *different goal* (*inače*) appears to be crucial. The establishment of a transformational relationship between *snova* and *pere*- <repetition> is a necessary but not sufficient condition for predicting the latter’s occurrence.

An examination of all the verbs that occur with *pere*- <repetition> reveals a small set of common properties. With few exceptions, which will be noted below, the verbs are transitive or reflexive, and denote an arrangement of relations among objects or parts of objects to produce a desired result in the most general sense. By “arrangement” is meant the setting in order, in proper sequence or relationship. The verbs in question share the denotation of arranging concrete or abstract entities, ideas, processes, relationships, in order to achieve a preconceived result or condition which is viewed as desirable, harmonious or suitable. The evaluative component of the verbs of arrangement introduces properties of modality that have not been recognized in previous studies of *pere*-.

A provisional grouping of verbs of arrangement with *pere-* <repetition> is provided in table 4. It is based on the way in which the domain specified by the lexical features of the verb is affected by the reperformance of the event. This categorization is intended only as an illustration of the fact that the verbs of arrangement do not constitute an amorphous mass, but divide into a number of relatively distinct subgroups. In some cases the subgroups partially overlap because of shared properties; the inclusion of a given verb in one subgroup rather than another is likely to be a reflection of relative degree rather than absolute exclusivity. The five basic groups are 1) reorganization of object⁵, 2) addition to object, 3) subtraction from object, 4) interconnection of objects, and 5) reproduction of object.

1. *Reorganization of object*

a. Reorganize

<i>pereorganizovat'</i>	'reorganize'
<i>perestroit'</i>	'rebuild, retune'
<i>perepisat'</i>	'rewrite'

b. Redistribute

<i>peredelit'</i>	'redivide, redistribute'
<i>peregruppirovat'</i>	'regroup'
<i>peremesit'</i>	'remix, reknear'

c. Retrain

<i>pereučit'</i>	'reteach, retrain'
<i>pereobučat'</i>	'reteach'
<i>peredressirovat'</i>	'retrain (animals)'

d. Re-refine

<i>peresejat'</i>	're-strain, resift'
<i>peresortirovat'</i>	're-sort'
<i>peremolotit'</i>	'rethresh'

e. Reprocess

<i>perekoptit'</i>	'resmoke'
<i>peresušit'</i>	'redry'
<i>peregladit'</i>	'reiron'

f. Reanalyze

<i>pereosmyslit'</i>	'reinterpret'
<i>pereispytat'</i>	'retest'
<i>perevesit'</i>	'reweigh'

g. Reperform

<i>perexodit'</i>	'retake (a move in a game)'
<i>pereskakat'</i>	'rerun (horserace)'
<i>perebrošit'</i>	'retoss, rethrow (discus, shot)'

2. <i>Addition to object</i>	
a. Re-cover	
<i>perekryt'</i>	're-cover'
<i>perezolotit'</i>	'regild'
<i>perebintovat'</i>	'rebandage'
b. Reequip	
<i>perekomplektovat'</i>	'replenish'
<i>perevooružit'</i>	'rearm'
<i>perezarjadit'</i>	'reload, recharge'
3. <i>Subtraction from object</i>	
a. Recut, regrind	
<i>peregranit'</i>	'refacet'
<i>pereskoblit'</i>	'replane, rescrape'
<i>perebrit'</i>	'reshave'
b. Restore by cleaning, drying	
<i>pereteret'</i>	'rewipe'
<i>peremesti</i>	'resweep'
<i>peredrait'</i>	'reswab, repolish'
4. <i>Connection of objects</i>	
a. Reconnect	
<i>perešnurovat'</i>	'relace'
<i>pereklepat'</i>	'rerivet'
<i>perekonopatit'</i>	'recaulk'
b. Relocate	
<i>perestavit'</i>	'relocate, re-place'
<i>peresadit'</i>	'replant'
<i>perexoronit'</i>	'rebury'
c. Reestablish conventional relationship	
<i>peresnjat'</i>	'rerent'
<i>perevenčat'</i>	'remarry'
<i>perezaložit'</i>	'repawn, remortgage'
d. Reidentify	
<i>pereklejmit'</i>	'rebrand'
<i>pereštempelovat'</i>	'restamp, repostmark'
<i>pereimenovat'</i>	'rename'
5. <i>Reproduction of object</i>	
a. Replicate	
<i>peregovorit'</i>	'repeat'
<i>perezapisat'</i>	're-record'
<i>perepečatat'</i>	'reprint'
b. Re-create	
<i>peresozdat'</i>	're-create'
<i>perezit'</i>	'relive, re-create'

TABLE 4.

Several of the subgroups are close in meaning to some of the other submeanings of *pere-*, e.g., “relocate” to <translocation> (concern with the different location of the object vs. the means by which the object is moved from one location to another), “reprocess” to <transformation> (implication of relative impermanence of the result vs. relative permanence), “reconnect” to <interjacency> (suggestion of the relatively conventional vs. unconventional connection of objects). It is to be expected that variant submeanings of one underlying prefixal invariant refer to transitional areas of semantic intersection rather than neatly delineated semantic fields.

The cooccurrence of verbs of arrangement with *pere-* <repetition> has implications for the domain at the morphosyntactic and pragmatic levels (see table 5).

SYNTAGMATIC CONSTRAINTS ON THE DOMAIN OF *PERE-* <REPETITION>

SEMANTIC	MORPHOSYNTACTIC-PROPOSITIONAL	PRAGMATIC
'arrangement'	Perfective	Complete
	Transitive/Reflexive	Inadequate result or condition
		Reversible result or condition
	Agentive logical subject	Volition
		Conventionally positive intent

TABLE 5.

Complete/perfective. The previous narrated event to be redone must be complete, whole, encapsulated, since the prefix *pere-* requires inceptive and terminal limits that must be spanned. The morphosyntactic correlate of prior completion is perfective aspect. Thus (10a) presupposes a domain characterized by (10b), but not (10c), which is not viewed as complete or closed.

10a. Marija *perepisala* piš'mo.
'Maria rewrote^P the letter.'

10b. Marija *napisala* piš'mo.
'Maria wrote^P the letter.'

- *10c. Marija *pisala* pišmo.
 ‘Maria wrote/was writing^I a/the letter.’

Note that complete/perfective refers to the *domain* of the prefix frame, not to the aspect of the predicate in *pere-* itself. Sentence (10d) still presupposes the domain in (10b), but does not specify the reperformance as completed.

- 10d. Marija *perepisovala* pišmo.
 ‘Maria was rewriting^I the letter.’

Inherently unbounded domains associated with imperfective verbs of state or activity are excluded from the scope of *pere-* <repetition>. Thus (11a, 12a) are precluded because (11b, 12b) do not constitute proper domains for reperformance.

- 11a. Petr **pererabotal* segodnja.
 ‘Peter *reworked^P today.’
- 11b. Petr *rabotal* včera.
 ‘Peter worked^I yesterday.’
- 12a. Ivan **perezanimalsja* vo vtornik.
 ‘Ivan restudied on Tuesday.’
- 12b. Ivan ploxo *zanimalsja* v ponedel'nik.
 ‘Ivan studied poorly on Monday.’

Perfective aspect provides the external limits of the previous event that must be done over in order to alter the net result. An event cannot be construed as a rearrangement without a previously completed referent.

Inadequate result or condition/transitivity-reflexivity. The submeaning *pere-* <repetition> presupposes a completed event that has produced a result or condition perceived as inadequate at the time of the reperformance. The result or condition is most typically expressed through the affected object of a transitive verb. The inadequacy may be quantitative and/or qualitative.

13. Osel *razdelil* (dobyču) porovnu na tri časti i govorit: — nu, teper', berite! Lev rasserdilsja, s"el osla i velel lisice *peredelit'*. L. Tolstoj
 ‘The ass divided^P (the catch) into three equal parts and said [says]: Go on, take it! The lion became enraged, devoured the ass and ordered the fox to redivide^P [it].’

The inadequate result or condition may be the product of a poorly executed previous performance (14) or a change in the original, adequate result (15).

14. Gorničnaja *perekraxmalila* ploxo nakraxmalennoe befe.
 ‘The maid restarched^P the poorly starched linen.’

15. Ja pomnju, kak krasivo naši mastera *pozolotili* ètot krest. Uže prošlo mnogo let, nam *prixoditsja ego perezolotiti*.
 'I remember how beautifully our craftsmen gilded^P this cross.
 Many years have gone by. We must regild^P it.'

Sekaninová is correct in noting that the verbs of motion, even when transitive, do not occur with *pere-* <repetition>. Such exclusion is apparently a consequence of the fact that the object cannot be construed as inadequate because it is not identified with the domain of the prefix frame; cf. fig. 1.

- 16a. Učitel' *otnes* knigu v biblioteku.
 'The teacher took^P the book to the library.'
 16b. Učitel' **perenes* knigu v biblioteku.
 'The teacher **retook*^P the book to the library.'

In terms of the prefix frame depicted in fig. 1, the book in (16a) is moved from *pt. a* to *pt. c*; the domain between limits A and C has been spanned. If the event is viewed as completed (perfective), the book is located in the library. The net result of the performance is adequate.⁶ The inceptive limit A is no longer relevant to the new result (the object is located at *pt. c*) and thus the narrated event cannot be reperformed: (16b) cannot have the sub-meaning <repetition>.

There is an interesting class of exceptions to this otherwise consistent pattern, namely, the subgroup "reperform" under "reorganization of object."

17. Učaščijsja *perexodil* peškoj.
 'The pupil retook^P the move with the pawn.'
 18. Oni *pereskakali* dlja utočnenija rezul'tata.
 'They reran the horserace to determine a clear winner.'
 19. Ivanov *perebrosil* disk dlja vyjasnenija rezul'tatov sorevnovanija.
 'Ivanov retossed^P the discus to determine the winner of the event.'

Even though the verbs in (17–19) denote translocation and are not necessarily transitive (17, 18), the result achieved is viewed as inadequate because the totalized event is correlated with abstract quantification (strategic position, time, distance, etc.) in the specialized context of a game, contest or activity. Each move, run, toss, etc. constitutes a closed event whose quantified measure can be compared with those of other performances of the same event. The quantified measure, whether explicit or implicit, serves the function of affected object. In this sense, the lexical verbs of motion may be viewed as verbs of arrangement and cooccur with *pere-* <repetition>. A rule-governed event is reperformed to achieve a quantitatively (and hence qualitatively) better result.

Reversible result or condition/transitivity-reflexivity. A corollary of inadequate result or condition is reversibility, that is, the possibility of altering the result of condition by reperformance. Reversibility, like inadequacy, is most typically determined through the affected object. If a previous narrated event has affected the object irreversibly, the object is eliminated as a candidate for rearrangement and the verb cannot cooccur with *pere-* <repetition>.

20a. Tatjana *sрубila* staruju berezu.
'Tatiana chopped down^P the old birchtree.'

20b. Tatjana **pererubila* staruju berezu.
'Tatiana *rechopped down^P the old birchtree.'

Verbs of division like *rubit'* preclude reversibility because the basic integrity of the divided object has been transformed.

Volition/agentive logical subject. Verbs of arrangement presuppose volition on the part of the performer of the action, that is, a conscious desire on the part of the performer to achieve an adequate result. Consequently, verbs of arrangement require an agentive logical subject.

21a. Student *pereslušal* ariju.
'The student listened^P to the aria again.'

21b. Student **pereslyšal* vopľ v lesu.
'The student *reheard^P the cry in the forest.'

22a. Davajte *peresmotrim* raspisanie dežurnyx.
'Let's reexamine (reconsider)^P the schedule of the people on duty.'

22b. Davajte **perevidim* raspisanie dežurnyx.
'Let's *resee^P the schedule of the people on duty.'

The possibility of analytic evaluation of a result is predicated on the volition of an agent who has within his power the ability to reperform the event (21a, 22a).

Positive intent/agentive logical subject. It is not enough for the agent of the previously performed to have desired an adequate result; his intent must have been conventionally positive. Verbs denoting conventionally negative actions cannot cooccur with *pere-* <repetition>.

23a. Ivan *pereorientiroval* Aleksandru.
'Ivan reoriented^P Alexandra.'

23b. Ivan **perekonfuzil* Aleksandru.
'Ivan *reembarrassed^P (reflushed) Alexandra.'

24a. Mať *peremyla* pol.
'Mother rewashed the floor.'

- 24b. Maľčik **peregrjaznil* pol.
 ‘The boy *redirtied^P the floor.’

The inadequacy of the result of the previous performance is contrasted with the adequate result of the reperformance, which fulfills the basically harmonious, positive intent of the verbs of arrangement (23a, 24a). Without conventionally positive intent, the occurrence of *pere-* <repetition> is precluded.

The conventional aspect of the agent’s positive intent is apparently a crucial factor in the way modality constrains the occurrence of verbs of arrangement. If conventions are changed, previously excluded collocations are possible. Thus in the context of a game in which children compete to see which one can produce the dirtiest floor, (24b) is acceptable, while sentences with *peremyt’* ‘rewash’ and *perečistiit’* ‘re-clean’ are unacceptable. The normal convention *clean = positive/dirty = negative* is reversed and thus the evaluative polarities of *clean* and *dirty* are reversed: *dirty = positive/clean = negative*.

In sum, each of the syntagmatic factors mentioned above must be present in order for a verb to cooccur with *pere-* in the submeaning <repetition>. The absence of any one of them precludes a prefix-verb collocation in this submeaning.

Conclusions

Although we have only touched on some of the syntagmatic factors that play a role in constraining types of prefix-verb collocations, it is clear that the context relevant for prefixes as sentential operators is much more extensive and complex than simple transformational schemes would lead one to believe. Limitations of space do not permit us to address important questions concerning the interrelationship of prefixal submeanings, the hierarchical dimensions of prefix features and individual lexical features and their effect on feature attenuation and neutralization, the relationship between prefix frames and narrative frames, the correlation of prefixal and aspectual limits, etc. These and similar topics suggest a fruitful direction for further research. Suffice it to say that our concentration here on the role of context in the operation of prefixes provides evidence in support of a synthetic approach to Russian verbal prefixation, one which recognizes the value of analyzing the verbal prefixes from a syntagmatic as well as a morphological perspective. Only by adjusting our sights to encompass variation as well as invariance can we hope to understand the diverse and complex function of the verbal prefixes in the Russian grammatical system.

NOTES

1. Gallant (1979:62-3) uses the term "relational features" in reference to the operation feature **progression** and the relation features.

2. Trajectory features not bound to the periphery beyond the inceptive, lateral or terminal limits (e.g., *ob-*) refer to the supradomain unless otherwise indicated. Prefixes like *pod-* and *vz-*, for example, make reference to the subdomain.

3. Verbs with the submeaning <superiority> are derivationally transitive, that is, the subject noun phrase of the embedded clause is raised to become the object of the matrix clause; as illustrated in the following example:

Ivan *kričal* gromče (došše), čem vse ostal'nye *kričali*.

The imposition of limits (intensity, time) permits comparison of otherwise unbounded events. The subject of the embedded clause (*vse ostal'nye*) is raised to become the object of the derivationally transitive verb *perekričat'*:

Ivan *perekričal* vse ostal'nyx.

'Ivan outshouted all the rest.'

4. According to native informants, sentence (4) is ambiguous. The pupil has either cancelled a strategically unsatisfactory move of his pawn by taking the move back and moving another piece or he has cancelled a similarly bad move of another piece by taking it back and moving his pawn instead.

5. The verbs in this subgroup denote a basic restructuring of the object itself without necessarily implying the application of external elements (subgroup 2) or the removal of elements (subgroup 3).

6. Qualification of the predicate containing verbs of translocation refers not to the object and its ultimate destination, but to the way in which the translocation is performed; cf. the qualification of *organizovat'* (verb of arrangement) and *perenesti* (verb of translocation):

- a. Boris bystro organizoval svoj proekt.
'Boris organized his project quickly.' [efficient performance]
- b. Boris ploxo organizoval svoj proekt.
'Boris organized his project badly.' [inadequate result]
- c. Boris bystro perenes knigu domoj.
'Boris took his book home quickly.' [efficient performance, adequate result]
- d. Boris *ploxo perenes knigu domoj.
'Boris took his book home *badly.' [*inefficient performance, adequate result]

No matter what sort of interpretation one might try to derive from sentence (d), the result remains adequate, the book is located at Boris' home.

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Two Types of Perfective, Three Stems: Problems and Hypotheses*

Jules F. Levin

Introduction.

For many verbal concepts in Russian we find more than the usual two aspect stems, perfective and imperfective. There is a third, and sometimes more than three. The unifying factor for all relevant verbs is that there are two possible perfective stems as well as an imperfective stem. Both are prefixed, and contrast in meaning. The difference in meaning between the two types of perfective reflects a difference of meaning that inheres in the stem. The contrasting meaning of the two stems is taken up in this paper.

In the fourteen verbs of motion the two meanings are realized as the determined–nondetermined opposition when the stems are unprefixated. Both stems are imperfective. The meaning contrast persists when both stems derive prefixed perfectives. In this view, a prefixed determined stem represents the perfectivization of a determined action, while a prefixed nondetermined stem designates perfected nondetermined action. The meaning difference is retained and discernible in the two perfectives (see Foote 1967:11). The two derivational–semantic processes are brought out both in dictionary definitions and in the logic of phraseology, cf. *zapolzat'* 'načat' polzat'; *pobresti* 'pojti kuda, bredja'; *šel . . . xodil i isxodil . . .* Note that this view contradicts the teaching of Isačenko (1960) and other scholars, that the determination distinction is lost with prefixation.¹

Here below are examples of the two stems for each verb of motion:²

TABLE 1.

<i>bežat, bégat': pribežat' (pribegát') ~ *výbegat' (vybegivat')</i> 'run to many places'
<i>bresti, brodit': sbrestis' (sbredat'sja) 'bredja, sojtis', pobresti</i> 'pojti, medlenno bredja' ~ <i>pobrodit'</i> 'poxodit' . . . bez celi'
<i>vezti, vozit': navezti (navozit') ~ navozit'</i> 'haul enough . . .'
<i>vesti, vodit': vyvesti (vyvodít') ~ vývodit' (vyvaživat')</i> 'cool down horse, leading . . .'
<i>gnat', gonjat': nagnat' (nagonjat') 'chase and herd to one place' ~ *nagonjat' (naganivat')</i> 'train (dogs) to chase'
<i>exat', ezdit': vyexat' (vyezžat') ~ raz" ezdit' (raz" ezživat')</i> 'spoil by driving'
<i>idti, xodit', (xaživat'): zajti (zaxodit') (zaxaživat') ~ zaxodit'</i>
<i>katiť, katat': perekatiť (perekatyvat') 'roll from A to B' ~ perekatat' (perekatyvat')</i> 'idem in several gestures'
<i>lezt', lazat'/lazit': slezt' (slezat') 'climb down ~ slazit' 'climb and be someplace awhile'</i>

letet', letat': obletet' (obletat') ~ obletat' (obletyvat') 'fly to various places'
nesti, nosit': vynesti (vynosit') ~ vynosit' (vynašivat') 'bring to term, deliver
 (child)'

*plyt', plavat': zaplyt' (zaplyvat') ~ *zaplavat' 'vyučivšis, načat' —*

polzti, polzat': zapolzti (zapolzát') ~ zapólzat'

taščit', taskat': staščit' (staskivat') 'drag off . . .' ~ *staskat' (staskivat')* 'idem in
 several gestures'

Other verbs also show two perfective stems with similar contrasting meanings. Some of these verbs are quite like verbs of motion in other respects, while others are less similar, but they all share this trait — two contrasting derived perfectives which seem to contrast in the same way, i.e., as the perfectives of two kinds of action. In this paper it is suggested that this is a major productive characteristic of Russian verb morphology, with the determined–nondetermined distinction being a secondary tangential manifestation of this broad feature.³

Among the many verbs that share this feature, some are very close to the verbs of motion. These verbs also have two imperfective stems. They have greater semantic divergence among the stems than is found in most verbs of motion, but there is no clear demarcation between the two groups. In reality the verbs of motion are a conventional set whose membership can be decreased (as was done by Isačenko in deleting *bresti, brodit'*) or augmented by adjusting the definition of the set. Below are verbs belonging to this group of putative verbs of motion:

TABLE 2.

valit' 'knock over'; 'idti (NB!) massoj', *valjat'* 'katak' (NB)!: *perevalit' (perevalivat')* 'shift . . . knocking over' ~ *perevaljat' (perevalivat')* 'tumble, toss all (in series)'
vesit' 'weigh', *vešat'* 'determine weight on scales; place in hanging position': *zavesit' (zavešivat')* 'cover with a curtain' ~ *zavešat' (zavešivat')* 'hang over a whole surface'
visnut' 'descend into hanging position', *viset'* 'hang from (intr.): *otvisnut' (otvisat')* 'sag' ~ *otviset'sja* 'hang out (wrinkles)'
vorotit' 'turn back, away (trans.)', *voročat'* 'turning (over), disturb': *razvorotit' (razvoročivat')* 'knock down' ~ *razvoročat'* 'turning over, create disorder'
lomit' 'press on with force', *lomat'* 'apply force and break': *prolomit' (prolamyvat')* 'prodat', 'probit' ~ *prolomat' (prolamyvat')* 'lomaja, probit'
mesit' 'knead', *mešat'* 'stir': *peremesit' (peremešivat')* 'mix to homogeneity' ~ *peremešat' (peremešivat')* 'mix (jumble up)'
rodit' (pf. and impf.), *rožat': zarodit' (zaroždat')* 'awaken (feelings in someone)', *narodit'* 'bear in quantity' ~ *pererožat'* 'bear many one after another'
sadit' (can designate any energetic action, cf. Engl. *plant a kiss*), *sažat'* 'situate; put bread in oven' (shared meanings: 'seat, plant . . .') *prosadit' (prosaživat')* 'pierce through' ~ **prosažat' (prosaživat')* 'plant for X time'; *peresadit' (peresaživat')* 'shift to another seat', *peresažat'* 'posadit' vsex, vse'

tjanut 'pull, stretch', *tjagat* 'dergat' . . .': *natjanut* (*natjagivat*) 'tighten by pulling' ~ **natjagat* 'collect, pulling out (nails)'

Although some of these verbs are really close to being verbs of motion (*valjat*/*valit*), others are quite remote in this meaning. The semantic parallelism can only be approximate due to the widely varying stem meanings.

Still other verbs show the same contrast in derivation, based on a contrast of two unprefixated stems, but one stem is perfective or semelfactive.⁴ Below is a list of these verbs with examples of the two prefixed perfective stems:

TABLE 3.

blesnut (semel.), *blestet*: *problesnut* (*probleskivat*) ~ 'flash, gleam through'
zablestet

brosit, *brosat*: *zabrosit* (*zabrasyvat*) ~ *zabrosat* (*zabrasyvat*) 'cover by throwing'

bryznut (semel.), *bryzgat*: *sbryznut* (*sbryzgivat*) 'smočit bryzgami' ~ *obryzgat* (*obryzgivat*) (*obryznut* semel.) 'obdat bryzgami'

buxnut (semel.), *buxat*: *razbuxnut* (*razbuxat*) 'swell' ~ *vbuxat* 'dump in (three spoons . . .)'

vernut 'give back', *vertet* 'cause to turn, roll': *perevernut* (*perevertyvat*/*perevoračivat*) 'turn (page)' ~ *perevertet* (*perevertyvat*/*pereverčivat*) 'rewind . . .'

****vizgnut** (semel.), *vizžat*: *vzviznut* (*vzvīgivat*) 'emit squeal' ~ **povizžat* (*povizgivat*)

viľnut (semel.), *viljat* 'wag': *uviľnut* (*uvilivat*) 'dodge' ~ **poviljat* (*povilivat*) 'be evasive', **zaviljat*

glotnut (semel.), *glotat*: *otglotnut* (*otglatyvat*) 'otpit, glotnuv nemnogo', *oglotit* (*pogloščat*) 'swallow, eat up' ~ **pereglotat* 'proglotit mnogoe v neskoľko priemov'

gljanut (semel.), *gljadet*: *prigljanut'sja* 'ponravits'sja s vidu' ~ *prigljadet'sja* (*prigljadyvat'sja*) 'get used to seeing'

dat, *davat*, (*davyvat*): *peredat* (*peredavat*) ~ **peredavat* 'často davaja, nadavat mnogo čego-to . . .'

dvinut, *dvigat*: **peredvinut* (*peredvigát*) ~ *peredvigat* 'move large quantity from A to B'; *podvinut* (*podvigat*) 'move slightly' ~ *podvigat* 'set in motion for some time'

dernut, *dergat*: *razdernut* (*razdergivat*) 'tug and separate' ~ *razdergat* (*razdergivat*) 'pick apart'

doxnut 'sdelat vydox', *dyšat* (*dyxnut*): *vdoxnut* (*vdyxat*) 'inhale' ~ *nadyšat* 'make air stuffy, breathing'

drognut (semel.), *drožat*: *prodrognut* 'become chilled to shakes' ~ *prodrožat*

kačnut (semel.), *kačat*: *otkačnut* 'kačaja, otklonit' . . . v storonu' ~ *otkačat* (*otkačivat*) 'resuscitate by rocking'

kašljanut (semel.), *kašljat*: *otkašljanut* (*otkašlivat*) 'cough up' ~ *otkašljat'sja* (*otkašlivat'sja*) 'coughing, clear throat'

- kinuť, kidať: skinuť (skidyvat) ~ skidať (skidyvat)* 'throw together'
kljunuť (semel.), *klevať: prokljunuť (proklevyvat)* 'peck through with one blow' ~ *proklevať (proklevyvat)* 'peck through with several blows'
kolupnuť (semel.), *kolupať* 'work a hole in something': *vykolupnuť* ((semel.) < following verb) ~ *vykolupať (vykolupyvat)* 'kolupaja, vynuť'
kolyxnuť (semel.), *kolyxať* 'lightly rock': *vscolyxnuť* 'zastaviť kolyxaťsja ~ **raskolyxať (raskolyxivat)* 'zastaviť siľno —'
kriknuť (semel.), *kričať: vskriknuť (vskrikivat)* 'emit shriek' ~ *vskričať* 'loudly exclaim'
kusnuť (semel.), *kusať: prokusiť (prokusyvat) ~ prokusať* 'prokusiť vo mnogix mestax'
leč, ležať (leživat): sleč 'become bedridden' ~ *sležaťsja (sleživat'sja)* 'uplotniťsja ot dolgoho ležanja'
liznuť (semel.), *lizať: uliznuť* 'slip away' ~ *slizať (slizyvat)* 'lick off'
maknuť (semel.), *makať* 'dip': **primaknuť (primakivat)* 'lower into liquid . . .' ~ **pomakať*
maxnuť (semel.), *maxať: razmaxnuť* 'sdelat' siľnyj vzmax' ~ *razmaxaťsja* 'begin to wave without stopping' (~ *razmaxivat* 'wave now one side, now the other')
mignuť (semel.), *migať: smignuťsja (smigivat'sja)* 'exchange winks of agreement' ~ *promigať*
nyrnuť (semel.), *nyrjať: podnyrnuť (podnyrivat) ~ iznyrjať* 'dive all over, in many places'
pať, pádať: napasť (napadát) 'come upon' ~ *napádať (napadát)* 'falling, pile up'
pixnuť (semel.), *pixať* 'shove': *propixnuť (propixivat)* 'push through with force', *propixnuťsja* (prost.) = *propixat'sja ~ propixat'* 'propixnuť v neskoľko priemov', *propixat'sja (propixivat'sja)* 'shoving, pass through crowd'
pljnuť (semel.), *plevať: vypljnuť (vyplevyvat) ~ zaplevať (zaplevyvat)* 'zapačkať plevkami'
plesnuť (semel.), *pleskať: zaplesnuť (zapleskivat)* 'zaliť vodoj, vspleskom' ~ *zapleskať* 'cover by splashing'
prygnuť (semel.), *prygať: otprygnuť (otprygivat)* 'otskočit' ~ **otprygať (otprygivat)* 'hop off, away in several hops'
prysnuť (semel.), *pryskať: vprysnuť (vpryskivat)* 'inject' ~ *opryskať (opryskivat)* 'spray' (*oprysnuť* – (semel.))
pugnuť (semel.), *pugať: spugnuť (spugivat)* 'scare off' ~ *raspugať (raspugivat)* 'napugav, razognat' (ptic)
pyxnuť (semel.), *pyxať* 'radiate': *vspyxnuť (vspyxivat)* 'flare up' ~ *zapyxaťsja* 'begin panting from activity'
rygnuť (semel.), *rygať: srygnuť (srygivat)* 'partly throw up . . .' ~ **otrygať* 'končit' rygať'
skol'znuť, skol'ziť: proskol'znuť (proskal'zyvat) 'slip somewhere unnoticed' ~ **zaskol'ziť* 'načať —'
stuknuť, stukať 'strike', (*stučať* 'knock, beat . . .'): *pristuknuť (pristukivat)* 'tap; kill with strong blow . . .' ~ *nastukať (nastukivat)* 'reveal by knocking', **obstučať (obstukivat)* 'proxodja . . . postučať vezde'

- sunut', sovat': prosunut' (prosovyvat') ~ nasovat' (nasovyvat')* 'stuff . . .'
stegnut' (semel.), stegat' 'lash; stitch': pristegnut' (pristegivat') 'fasten button to'
 ~ *pristegat' (pristegivat')* 'stitch on'
tisnut' (semel.), tiskat': vtisnut' (vtiskivat') 'squeeze in . . .' ~ *vtiskat' 'idem in*
several gestures', protisnut' 'push, squeeze through narrow . . .' ~ protis-
kat'sja 'make way through crowd'
tolknut', tolkat': vtolknut' (vtalkivat') ~ vtolkat' 'idem in several gestures', za-
tolknut' (zatakivat') 'push in deeply' ~ *zatolkat' 'pushing, injure'*
tknut', tykat': natknut' (natykat') 'stick on (something sharp)' ~ *natykat' (naty-*
kat') 'votknut' mnogo čego-to . . .'
tresnut' 'emit crack', treskat'sja 'form cracks (on surface)', treščat' 'crack':
 **natresnut' 'crack slightly on edge' ~ rastreskat'sja (rastreskivat'sja) 'crack*
a lot', zatreščat' 'načat' —'
tronut', trogat' 'touch': zatronut' 'touch on in passing' ~ potrogat'
trjaxnut' (semel.), trjasti: strjaxnut' (strjaxivat') 'trjaxnuv, sbrosit' ~ *utrjasti*
(utrjasat' 'trjasja, umenšit' ob"em'
xarknut' (semel.), xarkat': otxarknut' (otxarkivat') 'cough, spit up' ~ *otxarkat'*
'idem in several gestures'
xvatiť, xvatať: zaxvatiť (zaxvatyvat') 'seize' ~ *zaxvatať 'dirty by handling'*
xlebnut' (semel.), xlebat' 'slurp': zaxlebnut' (zaxlebyvat') 'xlebnuv, proglotit' ~
sxlebat' (sxlebyvat') 'diminish by slurping from top'
xlestnut' (semel.), xlestat' 'lash': podxlestnut' (podxlestyvat') 'lash to make run
 faster' ~ *zaxlestat' (zaxlestyvat')*
xlopnut' (semel.), xlopateľ: zaxlopnut' (zaxlopyvat') 'slam shut' ~ *zaxlopateľ*
čerknut' (semel.), čerkateľ: otčerknut' (otčerkivat') 'separate out with line' ~
načerkateľ 'mess up with lines'
čmoknut', čmokateľ: pričmoknut' (pričmokivat') 'smack (lips) open and shut' ~
počmokateľ
šagnut' (semel.), šagateľ: perešagnut' (perešagivat') 'šagnuv, perejti' ~ *otšagateľ*
'walk X distance, finish striding'
*šatnut' (semel.), šatať: *otšatnut' 'separate with a shake' ~ rasšatať (rasšaty-*
vat') 'loosen, weaken by rocking'
švyrnut', švyrjať: zašvyrnut' (zašvyrivat') 'zabrosit' švyrjaja' ~ *zašvyrjať (zašvy-*
rivat') 'zabrosat' . . .'
šmygnut' (semel.), šmygať 'rub': prošmygnut' (prošmygivat') 'bystro i neza-
*metno projti kuda . . .' ~ *našmygať 'make appear by rubbing'*
ščelknut' (semel.), ščelkať: zaščelknut' (zaščelkivat') 'snap shut' ~ *zaščelkať*
'načat' —'
ščipnut' (semel.), ščipať: zaščipnut' (zaščipyvat') 'take, pinching' ~ *zaščipať*
'torment by pinching'⁵

One may speculate that the difference between these verbs and those in tables 1 and 2 is that for these verbs the simplest complete gesture is short enough to become perfective, while for the former that is impossible. Unprefixed perfectives basically designate "natural" gestures. Gallant (1979b) also has noted the parallelism between these perfectives and the determined verbs of motion.

Perhaps some might want to exclude all verbs for which the “determined” stem is always a *-nut'* semelfactive, preferring to treat these separately. In fact such verbs cannot be clearly and consistently distinguished from verbs whose derivations obviously demonstrate a “determined” ~ “nondetermined” contrast.

Still other verbs show the same contrast in derivation, but only one unprefixated stem — imperfective — is found. For this reason these verbs can be called “defective three-stem verbs”:

TABLE 4.

menjat': *obmenit'* (*obmenivat'*) ‘take someone else’s by mistake’ ~ *obmenjat'* (*obmenivat'*) ‘exchange’, *smenit'* (*smenjat'*) ‘change, replace’ ~ *smenjat'* ‘exchange, trade’

paxat': *raspaxnut'* (*raspaxivat'*) ‘open widely (gate)’ ~ *raspaxat'* (*raspaxivat'*) ‘break topsoil’, *zapaxnut'* (*zapaxivat'*) ‘throw one side (clothing) over another’ ~ *zapaxat'* ‘plowing up, cover (with dirt)’

poloskat' ‘rinse’: *zapolosknut'* (*zapolaskivat'*) ‘rinse off’ ~ **perepoloskat'* (*perepolaskivat'*) ‘rerinse’

streljat' (*strelnut'*): *pristrelit'* (*pristrelivat'*) ‘kill with shot’ ~ *pristreljat'* (*pristrelivat'*) ‘shooting, find target’

skakat' (*skaknut'*): *naskočit'* (*naskakivat'*) ‘run into . . .’ ~ *naskakat'* (*naskakivat'*) ‘galloping, crash into’, *otskočit'* (*otskakivat'*) ‘udaličsja skačkom’ ~ *priskakat'* ‘približit'sja skačkami’

klokotať ‘burble, boil noisily’: *vsklokočit'* (*vsklokočivat'*) ‘tousle’ ~ **zaklokotať*

končit' (pf!): *okončit'* (*okančivat'*) ‘finish’ ~ **pokončat'* ‘končit' v neskol'ko priemov, v raznye vremena’

lgat': **prilgnut'* (semel.) < **prilgat'* (*prilygat'*) ‘embroider a tale . . .’

lepetat' ‘babble’: *ulepetnut'* (semel.) < (*ulepetyvat'*) ‘pospešno uxodit', ubegat'’ ~ *zalepetat'*

stirat': *prostirat'* (*prostiryvat'*) ‘carefully wash . . .’ *prostirnut'* ‘vystirat' nemnogo čego-to, naspex'; cf. *prosteret'* ‘stretch, extend’ (*prostirat'*)

xvorat' ‘bolet’: *prixvornut'* ‘zabolet' nesifno . . .’ *zaxvorat'* ‘zabolet'

There are no rigid boundaries between these groups, or between three-stem verbs and other verbs. At the borderline we have arbitrarily (unavoidably) included or excluded very similar examples. Among curious borderline cases are *dat'*, *klokotať*, *končit'*, *lgat'*, *stirat'*; *streljat'* is a defective stem with a semelfactive that does not participate in derivation; *skakat'* falls between the cracks — basically defective, its unprefixated semelfactive *skaknut'* is found (rarely — not in Ožegov) as a prefixed semelfactive for either stem: **uskaknut'* < *uskakat'*, < *pereskočit'*.

Such cases do not detract from or diminish this analysis, since we specifically reject an approach (the assignment of +/- values to a discrete set of features) that leads to well-defined classes/categories. Such an organization of signs would not efficiently satisfy the demands made on it by the universe of signata. Anomalies in lexical structure have their counterpart in anomalies in the latter.

The meaning of the stem contrast.

Gallant has treated aspects of stem contrast (1979a, 1979b). But he posits not a contrast of two stems, but a contrast of three semantic/grammatical features inherent in (all?) verb stems: activity, action, and act. He opposes activity to action/act, then splits the latter. All Russian verb stems are then classified in terms of these features. He demonstrates the three kinds of verb meaning in specific syntagms, but there is no consistent morphological correlate.

Perhaps operating from a different theoretical viewpoint, I am not convinced of the need for such a three-way distinction to explain verbal morphology. I find no convincing examples of a three-way morphological contrast manifesting these meanings (unless one takes the marked imperfectives in *-yvat'* as representing "activity," which Gallant does not do). Gallant's examples, and others, can perhaps be accounted for by assuming that verbs only contrast two stems — a marked stem designating activity contrasted with an ambiguous action/act stem, or an ambiguous activity/action stem opposed to a marked stem designating act. This means that Russian marks morphologically two meanings — activity and act (as well as iterativity with *(-yvat')*).

For verbs in which act is marked, activity and action are neutralized and ambiguous. These verbs include those in table 3 with unprefixated perfectives or semelfactives. For verbs in which activity is marked (nondetermined imperfectives), action/act are neutralized and ambiguous. These constitute the two imperfective stem verbs (including the verbs of motion).

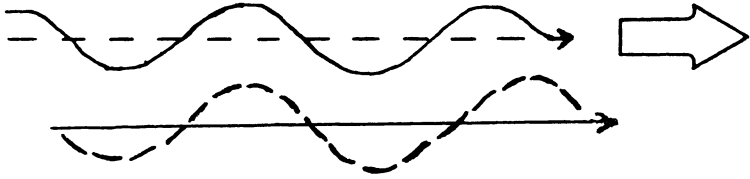
Actually, not every prefixed perfective contrast can be explained by an activity ~ act opposition. I have noticed other meaning contrasts:

1. Intensity: "determined" are less intense, "nondetermined" are more intense, cf. *potrjasti* 'silno trjaxnut' . . . /*potrjasat'* (Impf.), *vscolyxnut'* 'zastavit' kolyxat'sja' ~ *raskolyxat'* 'zastavit' silno kolyxat'sja', *prixvornut'* 'zabolet' nesilno' ~ *zaxvorat'* 'zabolet'. (Of course the prefix seems to provide the appropriate meaning, but compare the contrasting stem choices.)

2. Linear saturation: The prefixed "determined" stem designates a directionally-focused change of state (in the object?). Compare "determined"

qua “unidirectional”: *peremesit* ‘mix to homogeneity’ ~ *peremešat* ‘jumble up’, *perečerknut* ‘cross out completely . . .’ ~ *perečerkat* ‘isčerkat’, *začerknut* ‘mnoгое . . .’, *prodrognut* ‘become chilled to point of shivers’ ~ *prodrožat* ‘shiver through *n* time’, *sbryznut* ‘smočit bryzgami’ ~ *obryzgat* ‘obdat bryzgami’.

Other complex semantic–conceptual restructurings can take place. *Zaplyt* in the meaning ‘plyvja, udaliti’sja za . . .’ exemplifies the perfectivization of a determined action (~ *plyt* za . . .) but in the meaning ‘plavaja, uplyt’ daleko . . .’ a nondetermined action (*plavat*) is reconceptualized as a determined action:



We can even find neutralization of the meaning contrast where external reality facilitates ambiguity: *otrjaxnut*/*otrjaxivat* = *otrjasti*/*otrjasat* ‘shake off (snow from collar)’. (Here the action is unclear — with other prefixes these stems are clearly distinct. See list above.)

In the last analysis every verb (the verb stem, including all derivations) is unique in its internal semantic relationships, and most of the commonest verbs are also unique in their internal morphological — formal — relationships (cf. *streljat*, *xodit*, *maxat*). Note also that several verbs use more than three stems — *exat*, *-ezžat*, *ezdit*, *-ezživat*; *trjaxnut*, *trjasti*, *trjasat*, *-trjaxivat*’.

Activity/act is of course not equivalent to imperfective/perfective. Recall that the distinction is found both within perfective verbs and within imperfectives. We cannot discuss aspect here, except to observe that the view of verbal morphology developed here leads us to the position most recently defended by Avilova (1976:28–31, 36–41), and earlier advanced by such scholars as Durnovo, Karcevski, and Meillet, that all aspect pairs are related derivationally (lexically), not grammatically.

Prefix meaning.

The problem of prefix meaning is really separate from the question of three-stem verbs. However, traditional treatments have seemed unsatisfactory in handling these verbs. By necessity we have developed an appropriate perspective on prefix (and suffix!) meaning, without making this perspective a central theme. We claim no originality.

There are a large number of prefix meanings for each prefix in traditional descriptions of Russian. This treatment has been justifiably criticized by Flier and Gallant. Flier has proposed a single set of +/- features for each prefix, with specific meanings manifested according to the +/- semantic features inhering in the verb stem (Flier 1975). This is a great step forward, in that it recognizes internal coherence in the range of meanings assigned to a prefix, and the crucial role of the stem in determining specific meaning. In other words, it is not the two contrasting meanings of the prefix *za-* ("cover," "beyond") that determine the difference between *zabrosat'* and *zabrosit'*. Rather, as several scholars have noted, it is the different meanings of the contrasting stems *brosit'* and *brosat'* and the context that determine the correct interpretation of the prefixed forms.

Many have written about two types of prefixation, lexical and subaspectual. Isačenko (1960:309ff.), for example, distinguishes lexical prefixation, and "mode of action" (Aktionsart) prefixation. Gallant (1979b) rejects this distinction, however, and I myself have found in my ten-year study of the multi-stem verbs that there is no justification for the distinction.⁶ Gallant suggests that Aktionsart meanings are associated with activities. Actually, the apparent distinction is motivated by the semantics of the stem, suffix, and external reality, but most if not all prefix meanings, whether abstract or concrete (the bifurcation is itself a fiction), can be found with either of the two perfectivized stems where the sense of the action permits it. Even the "concrete" prefix *v-* is found with "activity" stems where the sense allows "in-ness" in several gestures. (Derivations of the type *včitat'sja* are simple metaphors of the concrete prefixal meaning.) Note the examples:

1. Activity verbs with directional prefixes:

vbuxat' 'dump in (3 spoons of sugar)'

vtolkat' 'vtolknut' v neskoľko priemov'

(Although these clearly designate iterated gestures, they cannot be excluded; even a classic Aktionsart verb like *sxodit'* 'make a round trip' can be analyzed as an iteration of *idti* in the opposite direction.)

vtreskat'sja 'vljubiťsja', by analogy from *tresnut'sja* 'crack (head against. . .)'

vynosit' 'carry to term (give birth)'

vymaxat' 'maxaja, udalit' (mux)'

našmygat' 'make appear by rubbing' (action performed on surface)

prostučat' 'proexat' so stukom'

zavešat' 'hang over a surface . . .' (cf. *zavesit'* 'cover with curtain')

2. Act verbs with Aktionsart prefix meanings:

nakljunut'sja 'peck out of egg' (if *na-* here means 'do in quantity', this example also shows the importance of linearity in the "determined" stem, even in verbs as unlike verbs of motion as *kljunut'*)

obleter' 'fall (leaves)' cf. *idem* 'fly around', *obletat'* 'fly to . . . places' (*ob-*

with both stems indicates action directed over/around an area, but for *obletet'* the action is also linear.) Cf. also *obdergat'* 'pluck off from around', *obdernut'* 'pull (garment) down adjusting' (again, the contrast is in linearity.)

The skewed distribution is accounted for by the extra-linguistic contrast, the nature of the signatum. For example, *v-* is not often used with activity stems to form perfectives, because there are few unitary actions requiring more than one act of "in" direction that don't involve a reversal — a reversal destroys the unity (one must go out before going in again), and the possibility of a prefixed perfective.

We assume that all the prefixes have inherent concrete spatial meanings that we would not necessarily interpret solely in terms of vertical and horizontal planes and lines. For example, *za-* (preposition and prefix) refers to a situation where some contrast is noted in the distance of two objects of attention within a singly perceived field, relative to the observer. This is the basic meaning — the starting point — and there is no hard evidence that this meaning is broken down and stored in a binary code. Lacking such evidence, and lacking a preconceived conviction that binarism is a universal organizing principle in cognition or language, we do not analyze the semantics of prefixes binarily.

No two speakers can understand and store the lexicon of their native language in the same way (as no two dictionaries of Russian can agree on the status of verbs — whether a verb is perfective or semelfactive). How then can speakers learn common sets of +/- binary semantic features for each form, except in some idiosyncratic way? And if the latter is true, how can this represent a general theory of language? Where can one demonstrate such a principle (in identifying acoustic signals with phonemic segments?); it presumably exists, but to assume that it is pervasive (i.e., including semantics) is only an hypothesis, lacking independent proof. Thus a binary +/- feature analysis of meaning for prefixes and verb stems starts with an implied condition: If the theory of binary features has any applicability in semantics, then we can do this. The argument from simplicity is, of course, an appeal to descriptive validity only. We cannot separate semantics/meaning from perception and cognition, and this means that we cannot exclude the role of field, pattern, and gestalt in semantics. It is possible to show the gradual development of prefix meanings such that widely divergent meanings (*nabit'* . . . *nagovorit'*) are all part of a single large semantic field. It cannot be shown, however, that some or most speakers do not break up this large pattern into two or more discrete and even opposed meanings.

Children acquire concrete primitive meanings easily, rooted as they are in

everyday experience. All other meanings have developed and are built up as metaphoric extensions of these concrete meanings. The metaphor is not a feature of abstraction present in either the prefix or the stem, since every prefix can be used concretely (literally) or abstractly (metaphorically, but rather exists in the speaker's conceptual framework.⁷ (We exclude the borrowed morphemes of learned vocabulary.) It is possible to suggest the chain of metaphors that have built up the many so-called abstract (Aktionsart) prefix meanings from a few concrete meanings.⁸

To illustrate with *za-*

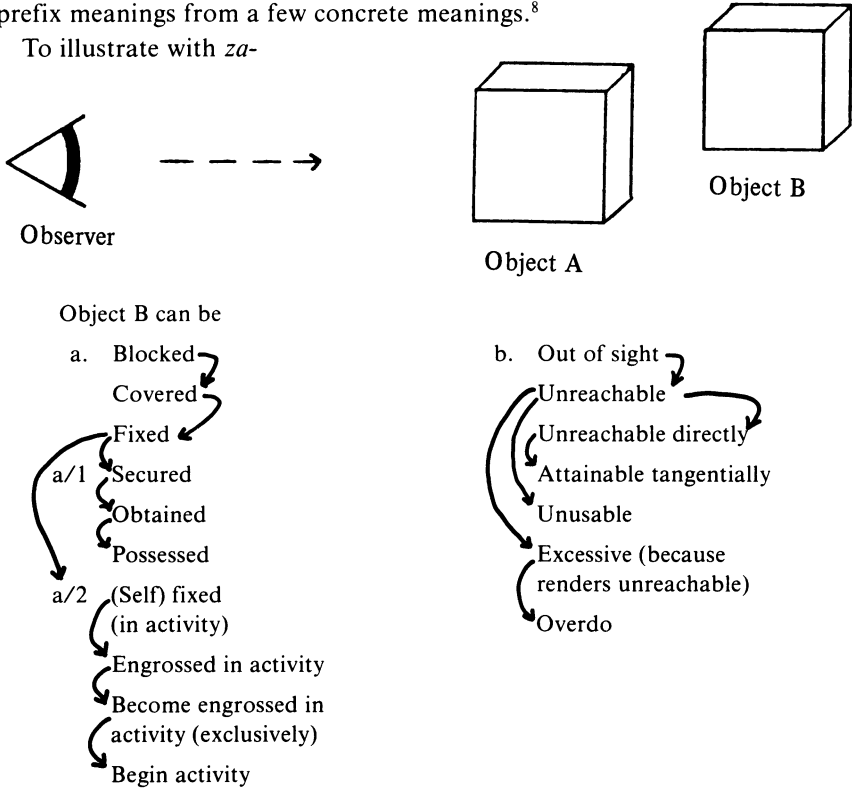


FIGURE 1.

This model does not need or predict a hypothetical distinction between lexical and Aktionsart derivation, and we deny its linguistic reality.⁹

Of course, the problem is that no two speakers can acquire this vocabulary and these meanings the same way. Some speakers conceivably could grasp intuitively all the chains of association (in the metaphor) but others may store even closely connected derived verbs only as discrete unanalyzed lexicon. In our view all the lexicon is stored at some level as *gestalts* — the degree to which it is also broken down into meaningful components

(morphemes) is an individual variable with great and unpredictable range. Hard evidence for this latter level is the creation of nonce words and new vocabulary, which may be an infrequent event in the linguistic behavior of some speakers. (Not to be confused with the spontaneous creation of regularized inflected forms, relatively common due to the absence of rule-limiting devices in human language.) At this level the prefixes function together with stems and suffixes as building blocks with inherent approximate concrete meanings. In combination with existing stems, they provide models for analogical metaphoric extensions of these meanings. A binary/operational type morphological model cannot successfully predict or account for these extensions, thus not offering even this heuristic value. An example of an unpredictable form would be *vtreskat'sja* 'vljubit'sja', presumably arising at the juncture of the latter and *tresnut'sja* 'crack one's head'. The reason for this metaphoric extension is not found in any semantics inhering in the morphemes, but in extralinguistic feelings about what falling in love is like.

Conclusions.

The data base used in this paper is not, as I would like it to be, the language incorporated in speakers' heads. By necessity the paper is an attempt to make sense of dictionary entries, and since no two dictionaries agree, it is clear that no one speaker has in his head all the lexicon exactly as represented in a given dictionary. I do not believe that speakers produce a complex lexicon by processing roots through a linear word-building machine, e.g., *brosi* → *brosi* + *a* → *za* + *brosi* + *a* → *za* + *brosi* + *a* + *yva*, etc., applying the necessary P-rules along the way. There is really little evidence that speakers have much talent for linguistics. I doubt that they can reconstruct lines of derivation in any consistent way. Thus, for speakers of Russian, neither *-nut'* verb stems nor *-yvat'* verb stems stand in a linear derivational relation with each other, but only a semantically contrastive relationship. It is hard to believe that speakers "know" in any sense that *brosat'* is derived from *brosit'* while *kinut'* is derived from *kidat'*, especially considering their close semantic parallelism.

Like the prefixes, the suffixal elements — *-at'*, *-nut'*, *-yvat'*, etc., are also semi-independent semantic building blocks. This building-block, achronological concept of word formation would predict a great many words that are disconnected from a linear chain of derivation, and that is precisely what we find. The many detached secondary imperfectives are good examples. Words such as *nadsmatrvat'* 'nadzirat' and *okolačivat'sja* 'xodit' . . . bez dela, zrja' are assembled from the building blocks of prefix, stem, and

-*yvat'* suffix to match up directly with the external reference. As Avilova points out (1976:158ff.), almost every common suffixal aspect pair offers meanings that are exclusively perfective or imperfective. The traditional association of perfective and imperfective in pairs contrasting along a single aspectual axis, fractured by Isačenko as regards prefix-contrasting sets, is wobbly even for suffix-contrasting sets.

Historically the lexicon is built up through the metaphoric extensions of prefix, stem, and suffix meanings, and through analogy, but it is difficult to believe that individuals acquire this vocabulary in a recapitulatory manner. Both the gestalt perception of the word as an unanalyzed unity and its breakdown into constituent elements are important but the determination of the exact role and relative importance of these opposite points is an unborn science. Consider a verb like *stirat'*. Is this a secondary imperfective from *steret'*, itself a prefixed derivation from *teret'*? Perhaps so, but speakers who created the pair *vystirat'/vystiryvať* have probably lost the derivation process. Of course extralinguistic reality plays a key role: *stiraľnaja mašina ne tret!* The same brain can one moment conceive this action and its signans as an unanalyzable simplex (launder), and the next see it as a complex of simpler meanings (like looking at an object close up first with one eye, then with another). The two different apperceptions of the sign must apply not only to derived lexicon, always at risk of collapse into gestalt, but to simplexes, always subject to folk etymologizing and segment association (*groan . . . grumble*).

We conclude that stems with the general meaning of 'activity' or 'act' coexist for many verbal meanings in Russian and combine in complex and open-ended ways with prefixes to form perfectives which preserve this underlying distinction. The contrast is usually, but not always, neutralized in secondary imperfectives. The particular specific meaning pertaining to each prefixed stem is a conventional association that speakers learn unpredictably as a construct or as a gestalt. New forms, new meanings, can be created by analogy with existing forms, but not necessarily in predictable ways, i.e., not predictable by applying combinatory rules to already existing bundles of semantic features.

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NOTES

* I would like to express my gratitude to the Research Committee, University of California, Riverside, for their patient continuing support.

1. This is not strictly accurate. Isačenko recognizes that a perfectivized nondeterminate (*proxodit' vsju noč'*) preserves the character of action of its base verb (338), but he argues that verbs like *projiti* are no longer verbs of motion, i.e., *projiti* does not preserve the "determined" character of its base, especially in peripheral meanings. (Needless to say, we disagree, as does Gallant.)

2. The ninety-odd verbs in these lists are mostly from Ožegov. Verbs preceded by * are from Ušakov. There is one example (marked **) from the seventeen-volume Academy dictionary. Sometimes definitions are given in Russian to clarify the stem meaning. Note the conventions used in these lists: secondary imperfectives and the rare unprefixated semelfactive are contained in parentheses. Otherwise all prefixed verbs are perfective. Common derivations are usually undefined — *za-* + "nondetermined" stem means 'begin —', *po-* + "nondetermined" stem, 'do for a time', and *pro-* + "nondetermined stem, 'do for *n* time'.

3. This is a view reached independently by Gallant. The particulars and context of our treatments differ somewhat.

4. The difference is not determined by a *-nut'* suffix. The latter can be labelled as either perfective or semelfactive in the dictionaries without consistency, and for a given root, a *-nut'* stem can be semelfactive with one prefix and perfective with another.

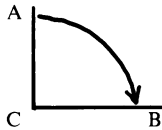
5. A continuing search would yield additional examples. Furthermore, most of these verb stems offer other examples with different prefixes.

6. Townsend (1968) sets up three classes of prefixation. However, he concedes the problems of rigid classification (118–122).

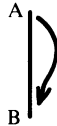
7. Cf. Lakoff and Johnson 1980. My views on the role and nature of metaphor are based on this work.

8. Schupbach (1974) assumes the gradual development of meanings from the concrete to "Aktionsart"; see his discussions of *za-*, *pere-* etc. He implies a drift rather than metaphoric leaps.

9. One can mention other examples of how so-called abstract Aktionsart meanings are really simple metaphors of the concrete spatial meaning. Consider the prefix *s-* 'off': one copies by pulling off a sheet (B) from a mold or press (A), hence *spisat'*, *snimat'*, *sfotografirovat'*:



CB replicates AC. A single performance is a copy of an ideal model; cf. Engl. *take-off*, *to pull off* (a stunt), Russ. *spet'*, *stancevat'*. A round-trip (*sxodit'*) replicates a one-way trip in reverse:



AB replicates BA. Consider also *na-* 'on', which is used when one object is put on another. It is associated with stems where the perfective is a natural accumulation (*nakopit'*). Thus, 'do, putting one thing on another' → 'do, accumulating' (cf. *napuxnut'* 'swell', a linear surface accumulation) → 'do, accumulating to excess', hence *nagovorit'sja*. Note how Engl. *pile it on* is used as a metaphor of excess.

It should be emphasized that the metaphor is not in the prefix, which retains its spatial meaning, but in the conceptualization of activities as objects that can be manipulated in perceptual space — replicated, accumulated, etc.

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The Grammatical Marking of Theme in Literary Russian*

Johanna Nichols

This paper presents a schematic grammar of themehood and its formal marking in contemporary Russian narrative prose. Although it aims at accuracy and completeness, its main purpose is not to analyze themehood in Russian fully but rather to provide an example of how such an analysis might profitably be performed. In other words, the reader is invited to view not Russian themehood but the descriptive approach to Russian themehood as the primary goal of inquiry. This approach is necessitated by the present state of research on notions such as theme. It is now possible to distinguish theme from topic, point of view, empathy focus, and other discourse-pragmatic notions. It is also possible to analyze not only grammar but approaches to grammar and ask how the approach dictates the solution and indeed the selection of data. This paper offers no originality of approach or interpretation, but seeks simply to incorporate these two advances into our understanding of Russian themehood.

Although I know of no explicit distinction of theme from topic in the literature on Russian grammar, the following definitions seem to be “in the air” and hence uncontroversial at the present moment. Theme is a discourse function: the theme is the participant that a text or subtext is about. Themes are found only in narrative. Although it is a discourse function, theme in Russian is grammaticalized at the sentence level. (Below I will occasionally use the term “subtheme” when a participant which is not the theme of the entire text is set up as theme for a short stretch of the text. A subtheme is a type of theme, and the same rules for grammatical form apply to both.) In contrast to theme, topic is a strictly sentence-level unit. Hence it is not limited to narrative but found in all discourse types. Its formal marking is clear: it involves word order and intonation. The function of topic in Russian, however, is far from clear; it evidently represents the grammaticalization of several functions such as focus of contrast and other operators, old information of various sorts, and others, possibly including theme itself. Topic bears the generalization of being “what the sentence is about,” a generalization explored in Gundel 1974. Topic, incidentally, is *tema* in Russian; theme is *isxodnaja točka* (*predloženiya*, *abzaca*, etc.).

Along with several other authors in this volume, I assume that grammar consists of form-function pairings, and that two provisos must be made for the study of these pairings: there is no necessary isomorphism between form and function (i.e., we cannot assume invariance in advance); and it is often a mistake for the linguist to work from form to function. On the whole, the literature on themehood (especially, but not exclusively, Russian themehood) has two shortcomings. First, it lumps theme with other elements of grammar, notably (in the case of Russian) topic. Second, it is analytic, working from form to function. The analytic approach can be highly successful where it investigates a formal contrast, as Gundel (1975) does for Russian *tože* and *takže*, for example. It is not successful, however, where it looks at a formal element like sentence-initial position or zero and asks what its basic meaning or function is. This is the approach found in such works as Kovtunova 1976, and Krylova and Xavronina 1976. These works, despite their rich factual material and systematicity, fail to present a teachable or heuristically valuable account of theme, topic, etc., and their formal marking. I believe this is primarily due to their analyticity, although their leanings toward invariance and lumping of theme with topic also play a role.

This paper is synthetic, working from function to form. (It might be called functional, except that the term is so often applied to radical functionalism, which disregards form, and to reductionist functionalism, which claims that form necessarily follows function.) It asks how the discourse function of theme is mapped onto grammatical form in Russian. By taking this approach it avoids one of the pitfalls of the analytic approach, the assumption that since we are given form, the goal of linguistic inquiry is to define functions. This can be a pitfall since the discourse function of theme is easy to characterize roughly but very difficult to define completely; and, as shown here, it has a variety of surface forms. The synthetic approach, however, is able to assume the working definition given above for a discourse function of theme, and make progress in description on the basis of this working definition. I assume that there is a great deal more to be said about the function of theme than can now be said, but that we can all identify an instance of it in a text and can therefore begin to ask how it is formally marked. In assuming the reality of functional elements, denying the necessity of form-function isomorphism, and asking empirical questions about the mapping of function onto form, this paper is much like most of those on aspect in this volume.

A last preliminary: The grammar of themehood in Russian turns out to be straightforward and — once we can see it as straightforward — not

particularly interesting in itself. The literary uses to which that grammar can be put, however, are extremely interesting. The question of the type of description is also interesting because the study of themehood, once understood, promises to shed light on the study of topic in Russian. And topic in Russian is extremely interesting, primarily because topic is analogous to aspect in that the formal distinctions are clear but the functional basis is far from clear. In other words, it is the meta-issues that offer the most promise for further research.

This grammar of Russian themehood takes the following form. The preferred marking of theme in Russian is anaphoric zero in the syntactic relation of subject. However, there are various contextual factors that necessitate overt marking. This is undoubtedly because a zero cannot unambiguously identify its (co)referent (since, being non-overt, it cannot grammatically agree with anything), and an overt form must be used where reference might be unclear. The contextual factors which necessitate overt marking all involve one or another kind of discontinuity in the text structure or in perspective. The present grammar documents some of those contextual factors and accounts for the types of non-zero marking available and the reasons for choosing one or another.

This study is based on a survey of prose texts, primarily by V. Belov, E. Nosov, K. Paustovskij, V. Rasputin, and V. Shukshin, with occasional examples from other sources. The examples cited below are largely restricted to one story by Belov and two by Shukshin. There are two restrictions on the corpus. First, only narrative was considered. Second, there is a deliberate slant toward works reflecting colloquial Russian, and the optimal marking of theme as established here is in fact typical of only the most extreme styles. This means that stylistic level can be viewed as another condition determining the form of themes: a more formal style favors overt marking, a spoken style favors zero marking. My decision to use style as a selecting feature for the corpus rather than adding it to the list of conditions was based on the practical consideration of keeping the corpus as small as possible while aiming for a maximum number of distinctions. But this decision incidentally implies a particular stance on the issue of defining contemporary Russian: it implicitly takes the style based on spoken Russian as representing the norm or the prototype of modern literary Russian, and views the style of a writer like Shukshin as extreme in its approximation to a norm, not in its departure from one.

Only finite main clauses have been considered here. Themehood can be established for subordinate clauses as well, but it follows that of the main clause and is not particularly interesting.

The examples cited below use the following conventions. Anaphoric zero themes are marked in the Russian text by \emptyset . Some of these passages contain other zeroes as well, but those are not marked (except in the final two examples). Zeroes represent nominatives unless otherwise stated; the notation \emptyset (*dat*) means 'zero whose overt form would have been dative.' Wherever possible, English translations are parallel to the Russian texts as regards theme marking; where they differ, the Russian form is indicated in the translation. Thus a notation *He* (\emptyset) shows that Russian uses an anaphoric zero, not a personal pronoun. Themes appear in boldface in both the Russian and English texts. Paragraphing of the originals is preserved (with some adaptation in example (21)). Unparenthesized ellipses are in the text; parenthesized ones are mine.

Uninterrupted theme is anaphoric zero. Once a theme has been set up, it remains theme until a different theme (or, most often, a subtheme) is set up. The theme is overtly marked on its first occurrence. Thereafter it is marked with anaphoric zeroes for as long as it continues to be theme, and as long as no text discontinuities force its overt marking. In (1), Ivan is set up as theme in the first sentence. (Ivan is theme of the entire story, but this paragraph follows an episode break which necessitates overt marking of the theme on its resumption.) In the following three sentences Ivan is pronominalized to zero.

- (1) Dva dnja **Ivan** ne naxodil sebe mesta. \emptyset proboval napit'sja, no ešče xuže stalo — protivno. \emptyset brosil. Na tretij den' \emptyset sel pisat' rasskaz v rajonnuju gazetu.

'For two days **Ivan** was beside himself. **He** (\emptyset) tried to drink, but that only made things worse — it was repulsive. **He** (\emptyset) gave it up. The next day **he** (\emptyset) sat down to write a story for the regional newspaper.'

(Sh 84)

Non-overt marking of themes is particularly frequent when the clauses sharing the theme are coordinated, as in (2):

- (2) **Ženščina** vošla v kabinet redaktora, \emptyset vyšla i \emptyset skazala: . . .

'The **woman** went into the editor's office, \emptyset came out, and \emptyset said: . . .'

(Sh 86)

Such examples might be better analyzed as VP coordination, in which case there would be no zeroes with the second and third verbs because all three verbs would share the single subject *ženščina*. However, even if we opt for the analysis as VP coordination and lose the anaphoric zeroes, we can still claim that examples like (2) represent non-overt marking of themes.

Uninterrupted theme is subject. Most of the examples cited here show themes in the syntactic relation of subject, as do (1) and (2). Dative subjects of inverse predicates — henceforth *inverse subjects* — are fairly common; examples below are (8), (9), (19) with overt dative and (6), (10), (18) with zero. Thematic objects are rare in this corpus, occurring only in the instance of transitive impersonal verbs:

- (3) **Sašku** zatrjaslo, no **on** sobral vse sily i \emptyset xotel byt' spokojnym.
 'Saška was shaken (lit. '(it) shook Saška'), but he collected all his strength and \emptyset tried to be calm.' (Sh OŽ 86)

and in passages involving the interaction of two themes, or a theme and a subtheme. In (4) Ivan is theme of the whole text and the editor a local subtheme. The editor is overt in the first sentence, zero subject of the second. Ivan appears as object there, switching to subject in the third sentence, where the editor appears as object. (In this example the theme — Ivan — appears in boldface italics, the subtheme in boldface roman.)

- (4) **Redaktor** polistal ee . . . \emptyset posmotrel na *Ivana*. *Tot* seřezno i mračnovato smotrel na **nego**.
 'The editor leafed through it. He (\emptyset) looked at *Ivan*. He ('that one') looked at him seriously and somewhat gloomily.' (Sh 87)

Types of interruption

Intervening (potential) theme. When the name of another participant intervenes between two occurrences of the theme, the occurrence following the intervening name must be overt. (4) above is an example. (5) shows that the theme can continue to be a zero if the intervening name is an adnominal modifier (as in *vešči Nasreddina* 'Nasreddin's things'):

- (5) K Nasreddinu v dom zabralsja **vor**. **On** razostlal po polu svoe vetxoe odejalo, čtoby svjazat' v uzal vešči Nasreddina, i \emptyset stal šarit' po komnate, no tak ničego \emptyset i ne našel.
 '(One night) a thief got into Nasreddin's house. He spread his ancient blanket on the floor in order to bundle Nasreddin's things up, and \emptyset began rummaging around the room, but \emptyset found nothing.' (MN 202)

It is intervening subjects and objects that necessitate overt marking. (Although this example comes from a translation, its theme marking is normal for Russian.)

Change of syntactic relations. The ideal thematic configuration is a chain of anaphoric zero subjects, as stated. When theme tokens include nonsubjects, overt marking is favored. Although a complete survey of possible sequences of syntactic relations is beyond the scope of this paper, some

tendencies can be documented. After a (nominative) subject, a (dative) inverse subject may still be zero:

- (6) \emptyset čut' ne zaplakal. \emptyset xotel kak-nibud' dumat' i \emptyset ne mog — \emptyset (dat) ne dumalos' (. . .)
 'He (\emptyset) almost started crying. He (\emptyset) wanted to think somehow and \emptyset couldn't — he (\emptyset for dative) couldn't think (. . .)' (Sh 83)

but it is frequently overt:

- (7) Ivan ostanovil raskalennoe pero, \emptyset vstal, \emptyset poxodil po izbe. Emu nrazilos', kak on pišet (. . .)
 'Ivan stopped his white-hot pen, \emptyset got up, \emptyset started walking around the hut. He (dat) liked how he wrote (. . .)' (Sh 84)

After a dative inverse subject, however, a nominative subject tends to be overt, as in the last clause of (7) and:

- (8) Emu nrazilos' idti s nej po ulice, on gordilsja krasivoj ženoi.
 'He (dat) liked walking along the street with her, he (nom) was proud of his pretty wife.' (Sh 86)
- (9) Emu ešče čto-to xotelos' skazať, čto-to očen' nužnoe, no on kak-to stal stranno smotret' po storonam, \emptyset kak-to nexorošo zabespokoilsja . . .
 'He (dat) wanted to say something more, something very important, but he began to look around strangely, \emptyset somehow got upset . . .'
- (Sh 115)

(3) above shows that a subject theme must be overt after a direct-object theme token.

Counterexamples where theme tokens are zeroes despite various changes in syntactic relations do occur, primarily where the point of view of the theme is taken (see Perspective, below). In (10) all possible thematic zeroes have been restored (they are shown in parentheses):

- (10) Slab on byl davno už, s mesjac (. . .) Ne to čtob strašno sdelalos' \emptyset (emu), a udiviteľno: takoj slabosti nikogda ne bylo \emptyset (u nego). To kazalos' \emptyset (emu), čto otnjalis' nogi \emptyset (u nego) . . . Poševalit \emptyset pafcami — net, ševaljatsja. To načinala terpnuť levaja ruka, \emptyset ševalil eju — vrode ničego.
 'He had been weak for a long time already, about a month (. . .) This was not so much frightening \emptyset (to him — dat) as surprising: he (\emptyset — u nego 'at him') had never had such weakness. First it felt \emptyset (dat — to him) as though \emptyset (at him) legs were gone . . . He (\emptyset) moved his toes — no, they moved. Then his left arm started to go numb, he \emptyset moved it — nothing really wrong.' (Sh 111)

If all of these zeroes are to be regarded as actually present in the text (which is difficult to argue for the prepositional phrases, since they are not verb-governed), then the theme switches from subject to inverse subject to non-governed prepositional phrase back to subject, retaining its zero form.

Topic shift. If a theme is subject of a presentative sentence, it cannot appear as zero in the next sentence. The first two sentences of (5) illustrate this principle, as does (11).

- (11) Na skamejke, u vorot, sidel **starik**. On takoj že ustalyj, tusklyj, kak ètot teplyj den' k večeru.
'On a bench by the gate sat an **old man**. He (was) as tired and dim as this warm evening.'

(Zero marking is, of course, possible where the two clauses are coordinated. There are no examples in these texts, but constructions like (12) are frequent in Russian prose:

- (12) Na skamejke sidel **starik** i \emptyset kuril.
Lit. 'On the bench sat an old man and smoked', i.e., 'An old man sat on the bench smoking')

The overt marking of subjects following presentative sentences follows from perspective (discussed below), since the function of such sentences is to present participants from the point of view of another participant or of the narrator or reader.

Narrative boundaries. The most important of the various types of discontinuity is divisions in the actual narrative structure of the text. I have found three types:

Change of episode. When themehood extends over more than one episode, the theme taken must nevertheless be overtly marked at the beginning of each new episode. In (13), Ivan is theme of the entire text, but overt because this sentence is preceded by the text of a story Ivan has written.

- (13) **Ivan** vzjal svoj 'raskas' i pošel v redakciju, kotoraja byla nepodaleku.
'**Ivan** took his story and went to the editorial office, which was nearby.'
(Sh 86)

In (14), Ivan's themehood resumes in the last line after an inserted explanatory episode.

- (14) Potom uznal **Ivan**, kak vse slučilos'.
Priexalo v selo nebojšoe voinskoe podrazdelenie s oficerom — pomoč' smontirovat' v sovxoze èlektropodstanciju. Pobyli-to vsego s nedelju! . . . Smontirovali i uexali. A oficer ešče i sem'ju tut sebe 'smontiroval'.
Dva dnja **Ivan** ne naxodil sebe mesto.

'Afterward **Ivan** found out how it had all happened.

A small military subdivision with an officer had come to the village to help set up an electrical substation in the sovkhos. They had only stayed about a week! They set it up and left. And here the officer had "set up" a family for himself at the same time.

For two days **Ivan** was beside himself.' (Sh 84)

Direct speech. The theme must be re-marked after direct speech. In (15) the theme (actually a subtheme) is identified with *on* 'he', although the zero of the preceding clause shows that thematicity was optimal before the direct speech. (16) has an identical configuration.

(15) **∅** vstal navstreču iz-za stola.

— A?! — voskliknul **on** i pokazal na okno.

'**He** (**∅**) got up from behind the desk.

"A?!" **he** cried and pointed to the window.' (Sh 87)

(16) Potom **∅** ponjal: èto smert'.

— Mat' . . . A mat'! — pozval **on** staruxu svoju.

'Then **he** (**∅**) understood: This was death.

"Mother! Mother!" **he** called his wife.' (Sh 111)

In (15) the direct speech consists of a single interjection. Since this interjection obviously contains no intervening potential themes and no internal narrative boundaries, (15) shows that the presence of direct speech itself, rather than boundaries within the direct speech, is responsible for the overt marking of the theme.

Since both episode boundaries and direct speech are marked with new paragraphs in Russian, these two constraints have the effect of guaranteeing that paragraph-initial sentences will usually contain overt themes.

Time reference. Even within episodes, a change — however subtle — in temporal reference necessitates overt marking of the theme. In (17), **Ivan** is theme of the first sentence, which is a plot event. The second sentence is a background statement, whose past-tense verbs refer not to the narrative time frame but to **Ivan's** whole life. Overt *on* marks the theme in the first clause of this sentence, and the second clause uses zero because it has the same (indefinite) time reference.

(17) **Ivan** tščateľno vyter sapogi o zamusolennyj polovičok na kryľce redakcii i **∅** vošel. V redakcii **on** nikogda ne byl, no **∅** redaktora znal: vstrečališ' na rybalke.

'**Ivan** carefully wiped his boots on the stained floorboard on the porch to the editorial office and **∅** went in. **He** had never been in the editorial office, but **∅** knew the editor: they had met while fishing.' (Sh 86)

(18) shows anaphoric zero marking of the theme in a series of plot clauses, followed by a switch to overt marking in a clause whose time reference is indefinite but prior to the narrative time frame. In the last sentence we again have overt marking, because the time reference of this verb is the same as that of the first few clauses and different from that of the immediately preceding one.

- (18) Dva dnja **Ivan** ne naxodil sebe mesta. \emptyset proboval napit'sja, no \emptyset (dat) ešče xuže stalo — protivno. \emptyset brosil. Na tretij den' \emptyset sel pisat' rasskaz v rajonnuju gazetu. **On** časten'ko čital v gazetax rasskazy ljudej, kotoryx obideli ni za čto. **Emu** tože xotelos' sprosit' vsex: kak že tak možno?!
 'For two days **Ivan** was beside himself. **He** (\emptyset) tried to drink, but \emptyset (to him) it just made things worse — (it was) repulsive. **He** (\emptyset) gave it up. The next day **he** (\emptyset) sat down to write a story for the regional newspaper. **He** had often read in newspapers stories of people who had been hurt for no reason. **He** also wanted to ask everyone: How can you do such things?' (Sh 84)

Perspective. I use this as a cover term for point of view and empathy, which usually coincide but can be factored out in some instances (see discussion at the end of this section). Where zero marking of themes is possible by the above criteria, the author may still elect to use overt marking to convey perspective. Zero is favored when the point of view is that of the theme; overt marking indicates nonthematic viewpoint. In (19) the viewpoint is that of Ivan, not that of the editor (as is clear from the wider context, and also — as argued below — from the use of the description *redaktor* instead of a name); and the editor, although subtheme in this paragraph, is always overtly pronominalized.

- (19) **Redaktor** opjat' utknulsja v tetradku. **On** bošše ne smejsjsja, no vidno bylo, čto **on** izumlen i **emu** vse-taki smešno. I čtob skryt' èto, **on** xmuril brovi i ponimajuščè delal guby 'trubočkoj'. **On** dočital.
 'The **editor** buried himself in the notebook again. **He** was no longer laughing, but (Ivan) could see that **he** was amazed and **he** still found it amusing. And in order to hide this **he** knit his brows and pursed his lips understandingly. **He** read through to the end.' (Sh 87)

In (20) we take an external perspective on the old man, as indicated by the description of his external appearance; and an overt pronoun rather than zero is used in the second sentence.

- (20) **Starik** zakryl glaza i medlenno, tixo dyšal. **On** pravda poxodil na mertveca: kakaja-to otrešennosť, nezdešnj kakoj-to pokoj byli na lice ego.

'The **old man** closed his eyes and breathed slowly, quietly. **He** really did look like a corpse: there was some kind of surrender, an unearthly sort of peace on his face.'

(Sh 114)

Examples above where zero marking coincides with thematic viewpoint are (1), (6), (10). Examples showing thematic viewpoint but overt theme tokens due to grammatical or textual constraints are (8), (16), (17), the second half of (18), and possibly (9). (11), as mentioned, shows overt marking of a theme just presented from external perspective.

The form of the overt theme. Overtly marked themes, as we have seen, can take three basic forms: personal pronoun, name, or description (e.g., *starik* 'old man', *redaktor* 'editor'). The choice of these three forms is motivated by perspective and narrative structure. Personal pronouns are the unmarked overt form: in (11), (15)–(20) we see that pronouns are used where grammatical or narrative structure or external viewpoint preclude the use of anaphoric zeroes in contiguous clauses. Full nouns — names and descriptions — are used after major episode breaks, as in (13)–(14). They are also used where pronouns might cause ambiguity, as in (3) and (5), where there are two participants, each a potential theme, which are both masculine and would thus take the same personal pronoun. They are also constrained by general restrictions on control of anaphora, which cannot be gone into here.

The choice of name vs. description follows from empathy and viewpoint: a name is used where the narrator assumes thematic viewpoint or empathizes with the theme, and descriptions signal external viewpoint and/or non-empathy. For instance, in the story represented in most of the examples above, Ivan is theme of the entire text, the story is told from his viewpoint, and we empathize with him; he is either named or pronominalized. The other characters in the story are the editor and his receptionist, who are never named; we know them only as *redaktor* 'the editor' and *ženščina* 'the woman'. An example from another source is (21). Here the participants are Ivan Timofeevič and his horse Sverbexa. This passage shows subtle alternations of the name *Sverbexa* with the description *lošad'* 'the horse', and of the name *Ivan Timofeevič* with the description *starik* 'the old man'. The passage is a paragraph, which I have segmented according to viewpoint.

- (21) **Sverbexa**, nesmotrja na tjažesť voza, s trevožnym ržaniem brosilas' po doroge, i **starik** ele uspel prygnuť na voz.

Toroplivo vytaskivaja iz-za remnja topor, **Ivan Timofeevič** videl, kak odin volk legko peremaxnul čerez valežinu, drugoj obognal pervogo, i po nastu oni v četyre pryžka okazalis' rjadom. **Lošad'** poneslas'

vskač'. "Toľko by ne lopnula zavertka", — meľknula \emptyset (dat) v golove. Vse èto proizošlo za neskoľko sekund i ploxo zapomnilos' **Ivanu Timofeeviču**.

Perednij volk dvaždy prygal k gorlu **Sverbexi** i každyj raz, kuvyrkajas', otletal, otbrošennyj zaprjagom. V èto vremja vtoroj volk, vidimo, trusil.

No vdrug na kakoj-to mig **Ivan Timofeevič** uvidel rjadom tonkie lapy i zverinuju mordú i udaril po ètoj morde obuxom. Zver' vzvizgnul i ot-skočil. Pervyj ešče neskoľko raz prygal k **lošadi**, no **Sverbexa** galopom neslas' uže po polju, i nevdaleke beleli vysokie stolby pečnogo dyma.

'**Sverbexa**, despite the weight of the load, with an alarmed neigh tore off along the road, and the **old man** barely managed to jump onto the load.

Hastily pulling the axe from the strap, **Ivan Timofeevič** saw one wolf jump lightly across the brush, a second overtake the first, and both of them come abreast in four jumps over the snow crust. The **horse** raced along. "Let's just hope the binding doesn't break," flashed into **his** (\emptyset) head. All this happened in the course of a few seconds and **Ivan Timofeevič** could not recall it exactly.

The first wolf jumped at **Sverbexa's** throat twice and each time tumbled off, repulsed by the harness. Meanwhile the second wolf had apparently gotten scared.

But then **Ivan Timofeevič** got a glimpse of thin paws and an animal's muzzle alongside and struck this muzzle with the butt of the axe. The animal whined and jumped away. The first one jumped a few more times at the **horse**, but **Sverbexa** was already galloping across the field, and close ahead the tall columns of smoke from the stove showed white.' (B 225)

In the first segment we see things from the horse's point of view: we are told of the heavy weight it is pulling, and reference is made, in *s trevožnym ržaniem* 'with an alarmed neigh', to its mental state. In this section the horse is named and the man is only described as *starik* 'the old man'. In the second section we assume the viewpoint of Ivan Timofeevič: we see the part of the action that affects him, and we share his thoughts. He is named, and the horse is only described as *lošad'* 'the horse'. The third section shows the action affecting the horse, who is named. In the fourth section we return to the man's perspective; he is named, and the horse is simply *lošad'* 'horse'. Only the last sentence presents a counterexample to this pattern: this

sentence still appears to represent the man's perspective, but after an instance of the description *lošad* 'horse' we have the name Sverbexa. The name is apparently used here not to convey viewpoint but to avoid inelegant repetition of the word *lošad*. A pronoun cannot be used here because the antecedent is an adverbial prepositional phrase *k lošadi* 'at the horse' and hence a poor controller for pronominalization; thus the only alternatives are the name and the repeated description.

The wolves are, of course, external to our point of view and do not elicit our empathy; they are consistently described as *volk* 'wolf' or *zver* 'animal, beast'.

Another example from the same story shows pure point of view without admixture of empathy:

- (22) . . . i **Ivan Timofeevič** podxlestnul **Sverbexu**. **Ona** motnula v otvet sivoj repicej i zaperestupala skoree. Vsja **kobyła** da i sam **starik** davno zaindeveli do poslednego voloska.
 ' . . . and **Ivan Timofeevič** lightly whipped **Sverbexa**. **She** shook her gray rump in answer and moved ahead faster. The **mare** and the **old man** were long since both frosted over to the last hair.' (B 224)

The first two sentences could represent the point of view of either the man or the horse; they are probably best described as neutral in viewpoint. But the last sentence clearly involves external perspective: the appearance of the two participants, rather than their attitudes or actions, is described. And in this sentence we have descriptions — *kobyła* 'mare' and *starik* 'old man' — instead of names or pronouns.

Russian prose makes frequent use of descriptions such as *starik* 'old man', *staruxa* 'old woman', where English prose would probably use a pronoun or a name. These Russian descriptions seem to be systematically associated with external viewpoint. They are apparently not, however, associated with lack of empathy. In the story from which examples (9), (16), and (20) are taken the protagonist is always referred to as *starik* 'the old man'; yet throughout the story we clearly empathize with him, without actually assuming his viewpoint. Other descriptions, however (e.g., *ženščina* 'woman', *redaktor* 'editor'), usually suggest lack of empathy. Of the various forms of names available in Russian, it is my impression that first names alone (*Ivan*), in full or diminutive form, and first name plus patronymic (*Ivan Timofeevič*) suggest empathy and/or that character's viewpoint, while patronymics used alone may be associated with empathy but are always associated with external viewpoint. For instance, in the story from which (21)–(22) are taken Ivan Timofeevič's wife is a secondary personage who is

always seen from external perspective; and she is always called Mixajlovna. A clearer example is provided by Rasputin's *Živi i Pomni*, where all the narrative is from the point of view of either Andrej or his wife Nastena. Andrej's parents figure prominently in the story, but their viewpoint is not taken; and they are called Mixeič and Semenovna. Of these two externally viewed characters, we generally empathize with Mixeič but not with Semenovna. These strategies show that patronymics without names indicate external viewpoint but are neutral with regard to empathy.

Some uses of theme marking. The above principles constitute a grammar of themehood in Russian. That grammar appears to be more or less uniform for postwar prose writers. The uses to which it can be put, however, offer considerable variety and serve to differentiate authors. To take just one example, Paustovskij uses a less colloquial style than the authors quoted here, and therefore uses few anaphoric zeroes. His works have normal themes, of course; but the absence of zero marking of those themes gives an overall effect of an even, unshifting, somewhat detached point of view coupled with an unshifting, more or less universal empathy. Shukshin, in contrast, uses many zeroes and exploits them to signal viewpoint and empathy, and his works contain many shifts in perspective.

One example of a literary effect that can be achieved by theme marking comes from the final paragraph of the Shukshin story that provided most of the examples quoted above.

- (23) **On** napravilsja prjamikom v čajnuju. Tam **Ø** vzjal "polkilo" vodki, **Ø** vypil srazu, ne zakusyvaja, i **Ø** pošel domoj — v mrak i pustotu. **Ø** šel, zasunuv ruki v karmany, **Ø** ne gljadel po storonam. Vse kak-to ne nastupalo želannoe ravnovesie v duše **ego**. **On** šel i molča plakal. Vstrečnye ljudi udivlenno smotreli na **nego** . . . A **on** šel i plakal. I **emu** bylo ne stydno. **On** ustal.

'He went straight to the teahouse. There **he** (**Ø**) got a half-kilo bottle of vodka, **Ø** drank it all at once without eating, and **Ø** set off for home — to gloom and emptiness. **He** (**Ø**) walked with his hands in his pockets, **he** (**Ø**) didn't look to either side. Still the hoped-for balance didn't come to **his** soul. **He** walked and silently cried. People looked at **him** in surprise. But **he** walked along and cried. And **he** was not ashamed. **He** was tired.' (Sh 88)

The subject here is Ivan, who has been theme, protagonist, and empathy focus throughout this story. In the first sentences of this paragraph the point of view is clearly his, and he is thematized to zero. But in the last sentences we have overt pronouns, which insist on external point of view. There is no reason in the text or the context to expect a shift in perspective;

we have only the formal evidence to signal it. This shift to external perspective closes the story by pulling the reader back out of the action, as it were. The result is a fadeout effect: the story closes on a scene in which we view our character walking along, rather than participating in his actions and thoughts.

Another example of a literary use to which theme marking can be put appears in the immediately preceding section of this same story. In this section Ivan continues to be theme and protagonist of the whole story; he is named, and this section is a dialogue with the editor, who is not named but only described as *redaktor* 'the editor'. Throughout the dialogue, many of the editor's utterances are explicitly attributed to him, while Ivan's name is not mentioned after his utterances, for example:

(24) — Da net, ne v ètom delo! — Redaktor vstal i prošelsja po kabinetu. (. . .) Čto, ona opomnitsja i vernetsja k vam?

— Im sovestno stanet.

— Da net! — voskliknul redaktor.

“But that's not the point.” The editor got up and started walking around the room. “(. . .) Do you think this will make her come to her senses and come back to you?”

“They'll be ashamed.”

“No!” exclaimed the editor.

(Sh 88)

The recurrence of *redaktor* 'editor' and the infrequency with which Ivan is overtly mentioned, together with the choice of description vs. name, contributes to an interpretation of this section as viewed through Ivan's eyes: on the evidence of the formal marking of themehood, he is the expected locus of viewpoint and empathy. But the content of the passage belies the form: the editor sympathizes with Ivan, gives him advice, offers to help, makes constructive suggestions, while Ivan refuses his offers, is oblivious to his sympathy, withdraws, and leaves. Since the reader sympathizes with Ivan, s/he shares the editor's attitude. The formal marking thus makes us assume Ivan's viewpoint, while the content makes us assume the editor's. This conflict between form and content underscores the basic point of the story: Ivan cannot and will not communicate normally and thus deprives himself of human company. It also reiterates a recurrent motif of Shukshin's work: communication breakdown and the failure to understand or even see the breakdown.

Conclusions. A grammar of themehood in Russian literary narrative reflecting spoken style takes the following schematic form:

The preferred marking of theme is an anaphoric-zero subject.

Overt marking is caused by the following factors:

Narrative discontinuities:

- Intervening potential theme
- Change in syntactic relations
- Topic shift

Narrative boundaries:

- Episode break
- Direct speech
- Change in time reference

External perspective

The marking of overt theme is:

- Full noun after major episode break
- Full noun in case of possible ambiguity
- Full noun in case of poor control by antecedent
- Personal pronoun elsewhere

Full nouns include:

- Names, for internal perspective
- Patronymics, for external perspective
- Descriptions, for external perspective

A number of empirical issues remain to be settled. First, every one of the points made here needs to be more thoroughly documented, and documented for texts other than postwar prose. There are additional factors which surely influence the marking of themes: the effect of indirect speech, for example, has not been explored here at all. Typological comparisons to other languages should prove interesting: to take one example, direct speech does not disrupt themehood in Aguacatec (Mayan) texts (Larsen 1981), while it does in Russian, a contrast plausibly due to the fact that the Mayan marker of continued thematicity is overt, not zero. Finally, these results have implications for the study of subjecthood and thus voice: since themes are preferably subjects, we can ask whether passivization is used to achieve the preferred alignment of syntactic relations for themes (as it is known to do in English).

One concrete advantage of the function-to-form approach can now be pointed out. (25) repeats a sentence from (23):

- (25) Tam \emptyset vzjal "polkilo" vødki, \emptyset vypil \emptyset srazu, (. . .)
 'There **he** (\emptyset) ordered a half-kilo bottle of vodka, \emptyset drank it (\emptyset) up all
 at once (. . .)' (Sh 88)

The final clause contains two zeroes, one representing the thematic subject, the other the object. If we were to take the analytic, form-to-function

approach, we would have to explain both zeroes. There is little we could say about the use of anaphoric zero in that instance, except that old information is involved; to preserve the generalization that zero marks themes, on an analytic approach, we would have to broaden the definition of theme to include aforementioned objects, thus making it equivalent to “givenness,” or old information. But on a function-to-form approach we do not have to make a generalization over all anaphoric zeroes in Russian: we only have to point out that anaphoric zero is one of the surface markers of themehood. We are thus spared the temptation to seek an invariant category definition for anaphoric zero in Russian, and by avoiding invariance we avoid watering down our functional units.

Another example appears in the final clause of (17):

- (17) V redakcii on nikogda ne byl, no \emptyset redaktora znal: \emptyset vstrečalis' na rybalke.
 'He had never been in the editorial office, but \emptyset knew the editor: they (\emptyset) had met fishing.'
 (Sh 86)

The zero subject of the last clause includes the reference of the preceding zero; but it also includes the editor. On a form-to-function approach this zero would have to be accounted for. On this paper's approach it is not a theme token and does not have to be accounted for. The clause is indirect speech, not narrative; and the subject is a zero not because of narrative thematicity but because its reference includes the speaker. A form-to-function approach could, of course, in principle restrict itself to narrative clauses and thus exclude this example; but it would be unlikely to, since it would not define its functional units in advance and thus would presumably be unable to distinguish narrative and non-narrative. A function-to-form approach will be forced to make the distinction, since it must establish its functional units in advance.

The function-to-form approach also frees us from the need to determine how long themehood can continue in Russian texts. The functional element of theme has no upper limit, at least if we can distinguish themes from subthemes: in principle one participant can be theme throughout an entire novel, with a risk of monotony but not of bad form. The grammar of themehood, in other words, contains no restrictions on continuity, although literary convention may. Also, the grammar of themehood may well have no restrictions on the number of successive clauses containing anaphoric zero subjects. However, literary convention precludes the construction of lengthy texts without internal narrative structure and with no changes in

subject reference. In principle, then, both the form and the function of themehood are unbounded; in practice, they are restricted to short stretches of narrative.

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*After this paper had gone to press I found that Lee (1982), using Korean data, has come to conclusions on themehood which are highly compatible with the analysis of Russian given here.

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A Diversified Approach to Russian Word Order

Olga T. Yokoyama

0. Introduction.

Russian word order (RWO) is treated in this paper as a function of several variables: intonation, lexical semantics, context-dependency, and syntax. Section 1 provides a short critical survey of the history of the subject; in section 2, I analyze old and new data in sentences (Ss) with so-called “neutral” intonation; in section 3, I briefly illustrate how this approach can explain some new data in Ss with “nonneutral” intonation.

1. Historical background of the problem.

In early conceptions of transformational-generative grammar, certain “optional” movement transformations were considered to be inappropriate objects of linguistic study (Chomsky 1965:126): WO inversions represented such an inappropriate object. In time, however, generative syntacticians began to approach optional rules involving movement with increased interest. A number of seminal works examined linguistic phenomena from a multiaspectual point of view, and therefore such rules began to be described in terms of the interaction of syntactic, semantic, and pragmatic factors.¹ While most of these rules involved more than just movement, their R equivalents often seemed to consist of mere WO inversions; hence RWO was relegated to a catch-all rule of Scrambling (Ross 1967:40–44), which continued to remain outside the purview of generative linguists.²

Partially responsible for this lack of interest in RWO was perhaps an impression that the problem seemed already to have been largely solved by the Prague School theory of Thema/Rhema, and other ideas associated with the Functionalists of the Prague School.³ Indeed, interest in WO in Slavic countries, especially in Czechoslovakia, has a long and significant history. Building upon the impressionistic but insightful ideas of Henri Weil’s pioneering study of WO (1844), it was Mathesius who laid the foundation for the modern Czech theory of WO (1929, 1939, 1941, 1942). His concept of Thema/Rhema was developed and modified in turn by a number of more recent Czech linguists. Dokulil and Daneš (1958), Hořejší (1961), Trnka (1964), Sgall (1967, 1974), Firbas (1974) and Daneš (1976) have examined the position of WO organization (whose principles are subsumed under the term “Functional Sentence Perspective”) within a general theory of the structure of language. Several new concepts, such as that of

“Transition” (between Thema and Rhema), and “Communicative Dynamism” (Firbas 1961, 1965, 1971), were introduced to account for certain facts which could not be explained by the original dichotomy of Thema and Rhema. The relevance of intonation was also noticed, as seen, for example, in the concept of “intonation center,” introduced by Daneš (1957).⁴ In 1966, the Czech linguist Adamec wrote a monograph on RWO, building on concepts developed by Prague School linguists. It was this monograph which seems to have provided the crucial push to what was a slowly reviving interest in WO in Russia—reviving, since there was already a potential for the development of a theory of WO in Russia at the beginning of the century.

In fact, the treatment of WO in the two-hundred-year history of R grammatical thought finds interesting parallels in the development of Discourse Grammar in this country over the past twenty years. At the beginning of the modern grammatical tradition in Russia, Lomonosov pointed to the existence of WO inversions in R (1755:419). He did not, however, pursue the matter beyond the traditional stance he inherited from Greco-Latin grammar, according to which such variants were considered to be part of “rhetoric.” This association of WO with style, similar to the treatment by some of the first American transformationalists, continued in Russia until the end of the nineteenth century (Greč 1830, Vostokov 1831, Buslaev 1858). By the turn of the century, the psychologizing trends of Western Europe (Paul 1880, Von der Gabelenz 1891) found their way to Russia via Fortunatov (1903). He referred to the difference between two Ss which varied only with respect to WO as “psychological” and proposed a distinction between the “grammatical” subject and predicate versus the “psychological” subject and predicate of a S. This explicit recognition of the distinction between grammatical notions and what later came to be called the Functional Dichotomy (Subject/Predicate versus Topic/Focus) was in itself an important step forward. Nevertheless, since the Functional Dichotomy was termed “psychological” it was discarded as an object of linguistic study.

It was Šaxmatov (1925) who first recognized a *system* in the “psychological” level of S structure. A student of Fortunatov, he was influenced not only by Gabelenz and Paul, but also by ideas from Wundt’s *Völkerpsychologie* (1900). Šaxmatov’s contribution in this area was his attention to the communicative function of language. Best known as the great historian of the R language, Šaxmatov turned to syntax toward the end of his life. He came to view the S as a product of two sorts of processes: grammatical and contextual. Grammatical processes—i.e., rules of grammar, or grammatical

relations—are based on what might be called “deep” semantic roles (Agent, Patient, etc.) in current terminology. The WO dictated by these rules is taken as basic. Contextual processes, on the other hand, depend on the “then and there” state of mind of a given speaker. The WO dictated by contextual conditions is also a legitimate one, and can be given a systematic explanation (1925:19–25). Here Šaxmatov arrived, although somewhat speculatively, at a position equivalent, in essential respects, to that held by current Discourse Grammar: namely the recognition of regularity in the contextually dependent phenomena of language, which leads to a conception of language that incorporates both a grammatical core and a theory of utterance (i.e., the context-dependent gray area between syntax proper and performance, in terms of the Standard Theory). Unfortunately, Šaxmatov did not live to pursue the implications of his general theory of S structure.

Another important contribution was Peškovskij's pioneering work on R S intonation (1914). Peškovskij's studies, which are both perceptive and systematic, sought to characterize the grammatical significance of S intonation. In identifying the intonational center of a S with the grammatical predicate, Peškovskij at one point went so far as to ascribe a purely grammatical status to S intonation. Attempts such as Peškovskij's, however, were doomed from the start, since intonation is not grammatical in the narrow sense of the term: it belongs, rather, to the communicative function, i.e., to the sphere of context-dependent phenomena, which Peškovskij himself excluded from grammar. Furthermore Peškovskij was inconsistent in recognizing only one of two closely related communicational phenomena—namely, intonation—while neglecting the other, WO. His work, however, represented a significant step towards a systematic description of Russian S intonation, and therefore toward the analysis of RWO, since S intonation, as I shall claim below, is the key diagnostic tool for approaching RWO objectively.

Between Peškovskij's work on intonation and the resurgence of interest in WO inversions due to Prague School influence, there is one work on Russian intonation which deserves special mention. This is Čičagov's posthumously published paper (1959) on the intonational center of Ss. The paper is unique for its time in that it extracts that part of S intonation which seems to correspond to amplitude, and offers a careful and extremely insightful, non-instrumental description of amplitude curves in R Ss.

In the twenty years since the reintroduction of WO as an object of linguistic study in Russia, the number of works on the subject has increased dramatically,⁵ and certain theoretical and terminological issues have been resolved. Nevertheless, Soviet linguists agree that the problem is still far


from solution. One can point to two factors which seem to be responsible for this slow rate of progress: the traditional restriction of data to literary citations, and the underutilization of intonation in the analysis. While the use of literary examples for linguistic analysis should not be overlooked,⁶ it nevertheless precludes experimentation with language. For example, relevant classes of ungrammatical Ss are excluded, thus depriving the linguist of data which may be of crucial importance in determining what makes Ss ungrammatical or unacceptable.⁷ Restricting the data to literary examples also disallows the possibility of examining all of the possible and impossible permutations, of which, in a S with, say, five major constituents, there should in theory be 120 altogether.

As for intonation, a number of studies have pointed to a relationship between WO and intonation; moreover, all students of WO admit a need for the concept of "normal" intonational center of a S (see Daneš 1957, 1976, Hajičová 1975, Krylova and Xavronina 1976, among others). Nevertheless, no attempt has been made to investigate, in any systematic way, the nature of the relationship between WO inversions and the changes in intonation associated with them. The existing authoritative work on R intonation (Bryzgunova 1967, 1969) provides an extensive classification of R intonational contours, but there is no attempt to tie this classification to the S-structure of declarative Ss. In general, all intonations except "neutral" are considered to be "expressive" and so labeled (Bivon 1971, Gundel 1975, Krylova and Xavronina 1976, and others): this has the effect of lumping together both dramatic intonation (sad, doubtful, admiring, etc.), and nondramatic but linguistically relevant "nonneutral" intonation, which may accompany a shift from WO associated with "neutral" intonation.⁸ In the West, with the exception of one attempt to incorporate intonation into S-generation (Gladney 1971), I know of no investigation of RWO inversions in relation to intonation, beyond studies which adopt the Soviet classifications (e.g., Lake 1975, Gundel 1975, 1977, Jaksche 1978)⁹.

Below I propose an analysis which elucidates the relationship between intonation and WO. This analysis is based on an acoustic characterization of declarative Ss in terms of "neutral/nondramatic" as opposed to "non-neutral/nondramatic" intonation. This dichotomy, I suggest, is of crucial methodological importance for disentangling the complex network of factors involved in RWO. My central hypothesis, then, is that RWO is sensitive to several diverse factors: the basic order of constituents (if such in fact exists), discourse factors such as deixis or situational anaphoricity, the lexical and semantic complexity of S elements, and intonation.¹⁰ Since all of these factors interact in one and the same S, the situation is usually

obscured by the mere fact of their multiplicity. This complexity has hitherto not been sufficiently appreciated, and so typical attempts at analysis are of necessity fragmentary. Most linguists have analyzed a given set of facts while considering only one out of the entire set of factors actually involved. Such an analysis may succeed for the set of facts in question, but it often does not survive the introduction of some change in the factors that had not been considered. In the analysis of a complex phenomenon, it is a commonplace to begin by isolating the relevant variables. Once this has been done, the nature of each variable can then be studied under controlled conditions, i.e., with minimal interference from other variables.

2. *WO in Ss with "level" intonation.*

Because an appropriately placed intonational center can render any order of constituents acceptable, the first variable to be controlled is intonation. I hypothesize that there are two types of intonation relevant to RWO, which I will call "level" and "nonlevel" (informally referred to above as "neutral" and "nonneutral," respectively). First, I will discuss WO rules for Ss with "level" intonation. By "level" intonation I refer to an intonation contour which looks approximately like the following: []. (The height of the lines indicates relative pitch, and the thickness relative amplitude.)¹¹

The fundamental principle of WO for intonationally level Ss is that in simple declarative Ss the more informative elements go to the end of the S and the less informative elements go to the beginning of the S. This is essentially the familiar rule of Thema/Rhema. In itself, it is not very helpful. The first question that naturally arises is: what is meant by elements that are more informative? The general answer is that informative elements are those which provide more information for the hearer, i.e., those elements which are unknown to him and which he cannot supply without the speaker's input.¹²

The clearest (and most widely discussed) example of informativeness involves answers to questions, and particularly Wh-questions. A question, in effect, is a request to supply information to replace the Wh-slot. This information is therefore the most "informative" part of the answer S. Consider (1) and (2):¹³

- (1) Q. Kto napisal "Annu Kareninu"?
 who wrote A. K. (acc.)
 'Who wrote *Anna Karenina*?'
 A. "Annu Kareninu" napisal Tolstoj.
 A. K. (acc.) wrote Tolstoj (nom.)
 'Tolstoj wrote *Anna Karenina*.'

- (2) Q. Čto tam?
 what there
 'What's over there?'
 A. Tam kniga.
 there book
 'A book is over there.'

As far as the hearer is concerned, the most informative part of the answer is what is unpredictable, and we find it at the end of the S. Notice that this principle accounts for the position of *Tolstoj* at the end of (1A), but it does not account for the relative order of *Anna Karenina* and *napisal*. Traditional accounts do not address the question of the order of *Anna Karenina* and *napisal* in cases like this. It appears, however, that the WO in the answer to the question in (1) depends on the WO in the question. Thus, if the question had had *Annu Kareninu napisal*, in that order (instead of the order in (1Q)), the answer would have been *Napisal "Annu Kareninu"* . . . This gambit, of course, seems only to push the problem back a step, towards the problem of WO in questions. But this need not be the case; if it is true that the WO of (1A) depends on that of (1Q), then an explanation may be at hand. The difference between the two possible orderings of the object and the verb (and both are possible, in appropriate contexts) seems related to certain facts observed by Kuno (1980), which he explains by means of what he calls the "Pecking Order of Deletion Principle." According to Kuno, the focus of a question constitutes important information which cannot be deleted in an answer when the non-focus part remains. In the case of (1Q), *Anna Karenina* is the focus of the question, in Kuno's terms, and it seems that in R, this item must occupy S-initial position in the answer. Thus, although deletion *per se* is not involved here, this ordering relationship (and perhaps others) may depend on essentially the same principles which are needed for the analysis of discourse deletions. This question requires further research and must be addressed by anyone dealing with RWO.¹⁴

Before turning to other Ss in which part of the information is dependent on the context (but in ways different from the dependence of (1A) and (2A) on (1Q) and (2Q)), we should consider declarative Ss which consist entirely of unpredictable information, which I will call "all-unpredictable" Ss. Such Ss occur after a change of topic in conversation, in out-of-context situations, or at the beginning of a narrative, as exemplified by (3):

- (3) Žil-był car'
 lived was king
 'There lived a king.'

As is well known, Ss of this type are often found at the beginning of fairy tales and folk tales. It has also been noticed that they correspond to English There-insertion Ss. As with English There-insertion, these Ss usually have existential verbs like *live*, *be*, *exist*, or verbs of 'appearing on the scene'; the subject is most often an indefinite NP; and the position of the subject (for English, the deep subject, if *There* is considered to be the surface subject) is at the end of the S. Since Ss like (3) appear at the absolute beginning of a text, WO in (3) and similar Ss cannot be determined on the basis of predictable/unpredictable or old/new feature marking. It was, therefore, cases like (3) that led Firbas (1971) to posit, within the theory of Functional Sentence Perspective, the concept of Communicative Dynamism, which is conceived of as a scale. Firbas proposed that in Ss of this type, the communicative power of the verb is much weaker than the communicative power of the NP. He concluded that there must be a principle which requires the element with the strongest communicative power to be located at the end of the S.

There seems to be some independent evidence that verbs of existence are semantically the least informative, perhaps because existence is presupposed in all other verbs. In terms of Bolinger's theory of linear modification (1952), one could say that verbs of existence "limit" subjects to a much less significant degree than subjects "limit" verbs of existence. Thus, for Ss with verbs of existence and verbs of appearing on the scene,¹⁵ it is still possible to speak in terms of varying degrees of informativeness among what is equally new information. With this in mind, observe that the rule stating that the more informative material appears at the end of the S appears to be valid here as well.

Note that the category of semantically uninformative (or "light") verbs can be expanded beyond the restricted verbal types just mentioned in at least one way. In R, the verbs in (4) and (5) are semantically "light" when used with the subjects occurring in these Ss:

- (4) Idet dožd'.
 goes rain
 'It's raining.'
- (5) Gudit gudok.
 whines siren
 'I hear a siren.'

Despite the English translations, the Ss contain the non-existential verbs 'go' and 'whine'. In R, however, rain exists by 'going', and sirens exist by 'whining'; these verbs, then, are essentially equivalents of verbs of existence when used with the subjects *dožd'* 'rain' and *gudok* 'siren'. Hence the WO of (4) and (5). It

is this lexical peculiarity that accounts for many other verbs which precede certain subjects in R.¹⁶

Although English There-insertion does not ordinarily occur with definite nouns, R presentational Ss allow for a wider range of NPs in subject position:

- (6) Vošla Maša.
 came-in M.
 'Masha came in.'

Proper nouns and other definite nouns are admitted in S-final position, as in (6), provided that the S is presentational. (Cf. some similar facts from English, as discussed recently in Green 1980.) Here again, the same basic principle accounts for the WO of Ss like (6), under the assumption that such Ss can be defined as presentational in at least some circumstances. It appears, then, that just as Ss like (4) and (5) call for an extension of the category of "existential" Ss, examples like (6) call for an extension of the category of "presentational" Ss.

An all-unpredictable S may contain verbs other than "light" verbs of existence and appearing-on-the-scene verbs. Such Ss may predicate a relation between various types of NPs: NPs unknown to the hearer, NPs that the hearer can infer, NPs that the hearer knows, and others.¹⁷ Note, however, that all the constituents in such Ss contribute to the informativeness of the predication to the same degree, i.e., they are equally informative. Therefore, the rule of "more informative elements go to the end" can apply in such Ss only vacuously. What then determines the WO in such cases? Consider the following Ss when used in response to the question *Nu, čto novogo?* 'What's new?':

- (7) Kolja pobil Sanju.
 K. hit. S.
 'Kolya hit Sanya.'
- (8) Deti isportili u Petrovyx xolodil'nik.
 kids broke at P. refrigerator
 'The kids broke the Petrovs' refrigerator.'
- (9) Petrovy uexali v Ameriku.
 P. went to A.
 'The Petrovs went to America.'

In (7)–(9), the verbs make predications about NPs which are known to the hearer or inferable by him. Yet none of the constituents is less informative than the others, since none would be recoverable if garbled with noise or deleted. It is perhaps in sentences like (7), where all of the NPs involved are

equivalent with respect to their discourse features (both NPs are proper nouns, both diminutives), that it is conceivable to look for a “basic” WO, and to hypothesize that this “basic” WO is SVO.¹⁸ It should be noted, however, that Ss like (7)–(9), i.e., all-unpredictable Ss which contain only NPs comparable with respect to their discourse features, are rather hard to produce. When asked a question like ‘What’s new?’, for example, the natural impulse is to include NPs which differ with respect to their discourse features. Consider the following Ss, uttered by a person appearing in the doorway of your office (10), a police station (11), and a garage (12):

- (10) Vas sprašivaet kakaja-to ženščina.
 you (acc) asks some woman (nom)
 ‘Some woman is asking for you.’
- (11) Menja ograbili.
 me (acc) robbed-they
 ‘I’ve been robbed.’
- (12) U nas isportilsja motor.
 at us broke-down motor
 ‘Our motor broke down.’

Even though all of the information in these Ss is unpredictable to the hearer, the WO of these Ss is entirely different from that of (7)–(9). In (10)–(12), highly anaphoric NPs like *you*, *me*, and *we* are placed in S-initial position, despite their oblique cases, while the nominative subjects show up in S-final position, in (10) and (12), or the subject does not show up at all, as in (11).¹⁹ I will claim, then, that for all-unpredictable Ss incorporating both non-“light” verbs and NPs whose discourse features are not equivalent, WO is determined on the basis of the discourse features of the NPs.

A further possibility is that all-unpredictable Ss can contain only non-anaphoric NPs, as in (13)–(15):

- (13) (Tam) kakoj-to student sprašivaet kakogo-to professora.
 there some student asks-for some professor
 ‘Some student is asking for some professor (there).’
- (14) (Tam) kto-to kogo-to sprašivaet.
 there someone(nom) someone(acc) asks-for
 ‘Someone is asking for someone (there).’
- (15) (Tam) kto-to komu-to čto-to dal.
 there someone(nom) to-smn smthg gave
 ‘Someone gave something to somebody (there).’

Such cases show certain properties which support the hypothesis just outlined. In (13), which corresponds to (10), the WO is the same as in (7). Unlike (10), in which the NPs differed with respect to their discourse features, the NPs in (13) are equivalently indefinite. The WO in (13), therefore, as might be expected, is the same as that of (7), where the NPs were also equivalent, albeit equivalently anaphoric. In (14) and (15), however, the situation is somewhat different. Here, the participant NPs are equivalent with respect to their discourse features; nevertheless, they are also much “lighter” informationally than the verbs in (14) and (15). All these NPs do, in effect, is fill in the slots needed for the subcategorization of the verbs. In other words, they convey no more information than is already presupposed by the verbs themselves by virtue of their lexical meaning. As expected, therefore, the verb appears at the end in (14) and (15), since the verb is the most informative element in these Ss.²⁰

In (1) and (2), the slot filled by the unpredictable information was minimally small: one constituent (represented by a single word) in each case. In actual discourse, however, Wh-questions often require longer slots to be filled; in fact, the slot to be filled by the answering party may be larger than the frame provided by the questioning party. Consider, for example, (16)–(17):

- (16) Q. Vot tut vetka. A čto tut na vetke?
 lo here branch and what here on branch
 ‘Here’s a branch. And what’s (this) here on the branch?’
- A. (Na vetke) cvetut cvety.
 on branch blossom flowers
 ‘There are blossoms (on the branch).’
- (17) Q. Čto slučilos’ včera v parke?
 what happened yesterday in park
 ‘What happened in the park yesterday?’
- A1. Kolja pobil Sanju.
 K. hit S.
 ‘Kolya hit Sanya.’
- A2. Menja ograbili.
 me(acc) robbed-they
 ‘I was robbed.’
- A3. U nas isportilsja motor.
 at us broke down motor
 ‘Our motor broke down.’
- A4. Kto-to komu-to čto-to dal.
 s.one to-s.one s.th. gave
 ‘Someone gave something to somebody.’

In these Ss the unpredictable part is an entire proposition. In (16) the frame provided by the questioning party is a locative phrase. The answering party may omit it in the answer, which otherwise consists of a subject and a verb in the order VS. Notice that (16A) is similar in its discourse composition to (5), and that its WO is identical to that of (5). In (17), each of the answers may (or may not) be introduced by *Včera v parke*, which is a frame provided by the question. The WO of the constituents in the answer proper, however, is the same as that of (7), (11), (12), and (15). Thus, the presence of a frame does not affect the WO in all-unpredictable Ss, except that the frame itself may occupy S-initial position, if it appears at all.

We have so far discussed all-unpredictable Ss, as in (3), or Ss which answer explicit questions, as in (16). There are, however, certain areas of interface between the two types, which suggest, in particular, an extension of the category of answer Ss. This can be seen from (18):

- (18) Žil-był car'. U carja byl dvor. Na dvore byl kol. Na kole byla močala.
 lived-was king at king's was court in court was stake on stake was bast
 'There lived a king. The king had a court. In the court there was a
 stake. On the stake there was a bast.'

This is an actual continuation of (3). If we observe Ss two through four of (18), we find the following pattern of NP succession: A-B, B-C, C-D. The WO in these Ss is organized so that the NP which immediately precedes each S takes S-initial position, and the rest of the S is ordered according to the scheme "light" *V* plus "heavy" *subject*. What is particularly clear in these Ss is that the S-initial NP in each case represents anaphoric information. The WO in these Ss, therefore, follows the same organizational principles as in (16A), i.e., *the frame* plus *V* plus *S*. The anaphoric information that appears in the beginning of both (16A) and the non-initial Ss of (18) is context anaphoric; the anaphoric NPs appear in the context immediately preceding the Ss in which they appear in initial position. Thus the interlocking structure of (18) is in fact functionally equivalent to the structure described for the question-and-answer situation in (16).

Occupying a middle ground between Ss like (18), with context anaphoric elements in S-initial position, and all-unpredictable Ss like (7)–(15), are Ss with less explicitly anaphoric material in S-initial position. Consider, for example, the narrative in (19):

- (19) Ja vyšel na ulicu. Bylo moroznoe zimnee utro. Po nebu šli tuči.
 I went to street was chilly winter a.m. on sky went clouds
 V vozduxe paxlo gar'ju. Gde-to za lesom slyšalis' redkie vystrely.
 in air smelled of-burn s.where beyond forest were heard rare shots.

3. *WO in Ss with "nonlevel" intonation*

The characteristic features of "nonlevel" intonation are as follows: the most informative element, which has been displaced from S-final position, receives the most prominence in terms of amplitude; the pitch drops abruptly on the stressed syllable of the displaced word; and all words following the displaced word are pronounced with low pitch, low amplitude, and—perhaps most characteristically—with syllables of relatively short duration. This last observation concerning the duration of post-sentential-stress syllables in Ss with "nonlevel" intonation may prove to be especially interesting. This factor has never been discussed before, so far as I know, with respect to WO inversions. It may, however, reflect a significant perceptual cue (or at least a useful—i.e., quantifiable—acoustic index) for localizing the "displacement site" of shifted elements.

The "nonlevel" contour is observable when the most informative material is moved from the end of the S toward the front. This intonation, and its corresponding WO, are used in more spontaneous, more subjective situations than "level" intonation (and its corresponding WO). WO associated with "nonlevel" intonation is in fact more common than "level" intonation in oral speech (Zemskaja 1973). When displacement occurs, it very often does not affect the "anchor" (in the sense of the term as described above). The intonation contour of such Ss, interestingly, clearly combines features of both "level" and "nonlevel" intonations.

Displacement is possible only when the "level" variant appears to have a history of movement in its derivation. This is supported by the following facts. Examples (1A), (2A), (3)–(6), (10)–(15), and (16A), which are all "level" Ss, can undergo the displacement of the S-final constituent, with an accompanying shift to "nonlevel" intonation. (7)–(9), on the contrary, seem to resist displacement. If this hypothesis proves to be correct, significant limitations can be placed on the number of mathematically possible permutations of constituents in a S, depending on the discourse features of its NPs, and on the semantic features of its verb. Limitations of this sort would constitute an important step in the study of WO inversions. It is clear that the total number of mathematically possible permutations for any S containing more than, say, three constituents must be beyond the capability of humans to differentiate. Nevertheless, as noted above, no one thus far has provided a principled basis for excluding the great majority of non-occurring types, which is a prime desideratum for a comprehensive theory of WO.

Unstressed pronouns occupy a special position with respect to WO. Generally, R pronouns can occur under sentential stress and/or after an unstressed or weakly stressed word (when they represent the most informative constituent),

or S-initially (when they act as “anchors”). In all other positions, pronouns are unstressed, and do not occur after weakly stressed elements. Thus in addition to being highly anaphoric NPs, unstressed pronouns also act like clitics. This double characterization relegates unstressed pronouns, then, to a separate class as far as WO inversion processes are concerned. Although the behavior of pronouns requires much more research for this reason, the following observation can be made at this time.

The clitic-like behavior of pronouns provides a solution for certain cases in which the normal principles of WO appear to be violated, resulting in Ss with unexpected orderings, as in (21):

- (21) V parke Sanja uvidel Petju i okliknul ego.
 in park S. saw P. and called him
 ‘In the park, Sanya saw Petya, and called out to him.’

In (21), *ego* is S-final. Note, moreover, that *ego* is coreferent with *Petju* in the first clause, and is therefore anaphoric. The second verb, however, is unpredictable. Thus, according to the principles outlined in section 2, the WO of (21) is unexpected: *ego* should be placed before the second verb *okliknul* ‘accosted’, and after the conjunction *i* ‘and’. In this event, however, a conflict would arise, since *ego*, being weakly stressed, tends not to follow *i*, which is also weakly stressed. The conflict is resolved in favor of the clitic-like properties of *ego*, by shifting it to the position after *okliknul*. It appears, then, that the behavior of *ego* in this case can be explained as a principled deviation, on the basis of its phonological properties, which serves, in fact, to support the analysis presented in section 2.

Perhaps the most subtle semantic condition which seems to call for “non-level” intonation is the semantic chargedness of some verbs. Within a set of near-synonyms, such as *nrvajtsja* ‘like’, *ljublju* ‘love’, *obožaju* ‘adore’, the more charged verbs are found with “nonlevel” intonation. The result, of course, is that such verbs become displaced from S-final position:

- (22) Q. Kak vam nrvajtsja ananasy?
 how to-you appeal pineapples
 ‘How do you like pineapples?’
- A1. Oni mne nrvajtsja.
 they to-me appeal
 ‘I like them all right.’
- A2. Ja ix ljublju.
 I them love
 ‘I like them.’

- A3. Ja očen' ljublju ix!
I very love them
'I like them a lot!'
- A4. Ja obožaju ix!
I adore them
'I adore them!'

Thus, for more charged verbs, the unmarked position is actually the displaced one, and the unmarked intonation is the "nonlevel" one. This is perhaps natural, in certain senses; but such facts have important implications for the very concept of "unmarked" or "neutral" intonation. It now becomes clear why a descriptive term such as "level" is preferable to a designation such as "neutral," since in some cases, "level" intonation can actually constitute a marked usage.

The above presentation provides a preliminary framework for a multi-aspectual analysis of RWO. A comprehensive "solution" to the problem of RWO is of course still far from having been reached; my goal was to describe what I believe to be a systematic and potentially promising approach toward the solution of this complex problem of R grammar.

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NOTES

1. One can discern two general trends among such works. On the one hand, formal syntax began to incorporate semantics and the notion of Topic into its formalism. The main concern of linguists approaching the issue from this perspective is how the generative mechanism is to be accommodated, modified, or reinterpreted so as to generate movement transformations in various languages (Baltin 1978, Chomsky 1975, 1976, 1977, Drescher and Hornstein 1979, Fiengo 1974, Hale 1973, Hale, La Verne Masayeva, and Platero 1977, Pullum 1977, Rivero 1980, to name some recent representative examples). On the other hand, other works tend to emphasize, in a less formal way, the relevance of semantic and pragmatic factors; their main concern, then, is to determine under what semantic or discourse conditions such transformations occur (Barratt 1979, Bolinger 1977a,b,c, Chafe 1970, 1972, 1976, Donnellan 1978, Evans 1980, Green 1976, Gundel 1974, 1977, Hawkins 1978, Hooper and Thompson 1973, 1980, Inoue 1979, Kuno 1972, 1976, 1978, 1979, 1980, Kuno and Kaburaki 1977, Li 1976, Li and Thompson 1976, Prince 1978a,b, 1979, Schmerling 1978, Sugioka and Faarlund 1980, among recent studies of this sort.)

2. Conversely, Chvany (1973) has shown that from the standpoint of Russian, the status of certain classes of movement rules is questionable. (Her arguments refer to Emonds' "root transformations"; see Emonds 1969, 1972a,b, 1976.)

3. This is the positin of Bivon (1971), Lake (1975), Thompson (1977), and, for the most part, Gundel (1974).

4. The significance of intonation for the old/new distinction (see n. 12 below) was noticed by Dobiaš as early as 1897.

5. To mention only monograph-length treatments, see, for example, Sirotinina 1965, Raspopov 1970, Kovtunova 1976, Krylova and Xavronina 1976.

6. Gross (1979) has trenchantly (and justly, I think) characterized the dangers of reliance on made-up examples in syntactic analysis.

7. The importance of this point has been applied to R mostly outside of the Soviet Union (Worth 1958, 1963, Růžička 1963, 1965, 1966, 1980, Adamec 1977).

8. The only Slavist known to me who systematically distinguishes between grammatically (or rather, functionally) significant nonneutral intonation and other kinds of nonneutral emphatic intonation is Svedstedt, whose detailed study on the relative order of the pattern V plus pronominal direct object (1976) is of great interest.

9. Western studies of intonation *per se*, and even of the grammatical relevance of intonation, have of course been extensive and need not be cited here. Within the latter category, however, it is interesting to note a bipartite development rather similar to that pointed out in n. 1 above. Thus, for important "formalistic" approaches one can mention Chomsky 1970, 1976, Bresnan 1972, Akmajian and Jackendoff 1970, Liberman 1975, and the numerous studies inspired by Liberman and Prince 1977. For various "functional/pragmatic" approaches, see Bolinger 1958, 1964, 1972, Halliday 1967a,b, Chafe 1974, Guise 1975, Ladd 1978.

10. More factors may well emerge in the course of research. There is reason to believe, for example, that such verbal categories as aspect and tense are also relevant for RWO, but the evidence is too fragmentary to be presented at this time. What is essential, however, is that RWO be treated in terms of a complex network of interaction among factors belonging to different components of language. For a similarly multi-level approach, see Guéron's recent study of PP extrapositions (1980).

11. The informal characterization of intonation provided in this paper is currently being subjected to instrumental verification.

12. More specifically, such elements have been described in terms of several dichotomies: old/new, predictable/unpredictable, light/heavy (see Prince 1979 for an insightful discussion of these terms). The profusion of ill-defined terminology in discourse grammar enjoys a well-deserved notoriety, and preoccupation with terminological problems seems to be counterproductive at this point. In my exposition I will not hesitate to use certain well-known (but ill-defined) terms, to the extent that they represent useful working concepts; otherwise, I will attempt to define my own terms in maximally descriptive ways.

13. Due to lack of space, I will usually adduce only acceptable Ss in the following discussion. The implication is that WO other than the one adduced is unacceptable for a given intonation: for example, *Tolstoj napisal "Annu Kareninu"* would be an unacceptable S if produced with "level" intonation as an answer to (IQ).

14. Restan's (1968) study of R questions provides some evidence in support of the "focal" (in Kuno's terms) role of S-final position in yes-no questions. Restan observes that when the subject of a yes-no question is pronominal, it is not usually found in S-final position; but when the subject is not pronominal, it usually occupies S-final position. If we take into account the fact that pronouns tend to be more predictable, and therefore less "heavy," it becomes clear that the S-final position of nominal subjects is a function (at least in part) of their semantic weight.

15. Vs of appearing on the scene are not as presupposed as Vs of existence; they are, nevertheless, semantically "light." It may be possible, in fact, to establish a hierarchy of "lightness" along the following lines (lightest first): Vs of existence < Vs of motion < other intransitive Vs < . . . < effective transitive Vs < affective transitive Vs < emotionally charged transitive Vs.

16. Significantly, as Babby (1978b, 1980) has demonstrated, these and similar verbs behave as a class with respect to at least one syntactic process, namely, formation of Negative Existential Ss in R.

17. These and similar attributes of NPs have been described by Karttunen (1971), and developed by Prince (1979). See also Yokoyama 1980 for discussion of the influence of these factors on the controllers of participial subject deletion. It is important to note, in addition, that

speaker/hearer orientation, orientation of the speaker towards the message, and other semantico-pragmatic factors of significance here owe much to Jakobson's conception of language as communication (1957, 1960).

18. Recent trends in the treatment of "basic WO" in American linguistics seem to be moving toward an unordered base, at least for a great part of the languages of the world. Compare the claims of McCawley 1970, Ross 1973 and Greenberg 1978 with those of relational grammar in this respect (Bell 1976, Anderson and Chung 1977). Hale's distinction between "configurational" and "non-configurational" languages represents another attempt to account for "free WO" languages by means of allowing the base to generate unordered strings (1973). For R, basicWO has

been questioned by Kilby (1976) and Babby (1978). See also Whitman 1979 for evidence from Japanese against Scrambling and in favor of an unordered case formative in the base. More traditional claims (still promulgated in recent grammars, such as Nakhimovsky and Leed 1980) that the unmarked surface WO of R is SVO, particularly in expository prose, require serious qualification in light of studies such as Lehiste's statistical analysis of RWO in scientific expository prose (1957). For the extensive body of texts she surveyed, only 44% of the Ss showed SV order.

19. The deletion of the subject in (11) may seem somewhat peculiar; but this kind of deletion is very common in R when the subject is judged to be irrelevant by the speaker. (This construction corresponds to the English Passive construction with a deleted by-agentive NP, or to the English deletion in *They say . . .* type constructions, where *they* does not refer to any specific referent.)

20. The order Dat Acc in (15) is significant. Since clitics are equivalent with respect to their discourse features, their relative order must be determined on the basis of other factors. In fact, among languages of the world the clitic order Dat Acc is extremely common (cf. Browne 1966 and Wanner 1974). This, together with the evidence of Ss like (15), suggests that the basic order Dat Acc is quite possible, despite Keenan and Comrie 1977.

21. Not infrequently, other constituents, especially thematic pronouns, serve as "anchors." What elements are eligible to serve as "anchors," as well as how competition between eligible candidates for "anchorship" is resolved, are issues which require further investigation.

22. Such combinations probably do not arise in natural languages generally (except with nonneutral intonation); note the English translations of (20).

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