

Slavica 50th Anniversary Reissue

Morphosyntax in Slavic

Edited by

Catherine V. Chvany and Richard D. Brecht

Contributions by

Henry Kučera | G. G. Corbett | Emily Klenin | Robert A. Rothstein
Bernard Comrie | Robert Channon | Gerald P. Berent
Roland Sussex | Ernest A. Scalton | Leonard H. Babby
Alan Timberlake | Olga T. Yokoyama | Gilbert Rappaport

From the Publisher

This book represents the tenth 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.

Morphosyntax in Slavic was the first of three major collections of articles on Slavic morphosyntax which helped define the research agendas of Slavic linguists during the period when syntactic theory was becoming more highly constrained and therefore more complex than it had been during the first two decades of Chomskyan theory. When I teach Russian syntax to beginning graduate students, I still have them read four or five of these articles; even today they are splendid examples of linguistic argumentation and valid generalizations. Richard D. Brecht served as co-editor of all three collections, while both Leonard H. Babby and Alan Timberlake had articles in all three books, so together these scholars constitute a connecting thread running through the three volumes. The remaining two collections (*Issues in Russian Morphosyntax*, *Case in Slavic*) will round out this golden anniversary celebration of Slavica's *мюорпечество*.

Slavica would like to express its sincere thanks to Catherine Chvany 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
Bloomington, Indiana
5 October 2016

MORPHOSYNTAX IN SLAVIC

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Edited by

CATHERINE V. CHVANY

and

RICHARD D. BRECHT

1980

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EDITORS' PREFACE AND ACKNOWLEDGMENTS

This volume appears, over three years after conception, under its fourth title. We thank the patient authors, who, in some cases, listed their articles as "to appear" successively in Slavic Syntax II, then in Through a Syntactic Prism, in Forms and Meaning, and now finally in Morphosyntax in Slavic, titles reflecting the gradually changing emphasis and composition of the volume. Special thanks are due to Professor Ladislav Matejka of the University of Michigan, publisher of our 1974 collection Slavic Transformational Syntax, who persuaded us, late in 1976, to undertake a second volume of syntax papers. The volume was to be dedicated to the Eighth International Congress of Slavists, which was held in Zagreb and Ljubljana in September 1978. The proposed collection was to complement the Congress contributions both in content and in prospective audience. Although this book now appears under a different title, with a different publisher, and over a year after the Congress, it has benefited from our early discussions with Ladislav Matejka. Our unchanging goal has been to help bridge communication gaps between scholars working primarily on Slavic and linguists developing theory without much access to Slavic data or Slavistic scholarly traditions.

During the Fall semester 1977, several of the papers submitted to us were presented and discussed at a weekly Colloquium on Slavic Syntax organized by Richard Brecht at Harvard University. The authors' desire to rewrite or to substitute a new paper meant that the deadline for a pre-Congress publication came

and went without a sufficient number of finished works on hand. The Colloquium continued to meet during the Spring as the emphasis of discussion shifted more and more away from strictly syntactic problems to related questions of semantics and morphology. Regular and occasional members included the editors and half of the authors: Leonard Babby, Gerald Berent, Emily Klenin, Henry Kučera, Gilbert Rappaport, Alan Timberlake and Olga Yokoyama, plus John Barnstead, Michael Bourke, Catherine Scarborough, Bronislava Volek and occasional visitors. We would like to thank those who read papers--some in installments--and all who participated in the editorial task by giving and accepting criticism. Since the evolving volume had less and less connection with the Congress or with the original plan, new plans were made with Slavica Publishers, Inc. for a later publication. Competition from other collections led to further delays, for three of the papers we had edited were released for prompter publication elsewhere while their authors submitted new papers to us. Fitting production schedules around our own work and Slavica's commitments stretched the process well into 1980.

In the years between the preparation of our first collection and the present one, work on syntax in general and on Slavic syntax in particular was evolving in new directions, continuing for the most part to affirm the goals of generative (but not necessarily transformational) grammar. These goals include explicitness and testability in linguistic descriptions. Linguistic theory should also account for the learnability of languages, and a hoped-for goal is a convergence of linguistics with theories

of cognition. At the same time, the new work in generative grammar reaches more and more often beyond formal analyses of syntactic structures, with less reliance on transformational solutions. The syntax centered work of the past decade has led to renewed interest in the questions raised in earlier structuralist theories, so that today the concerns of the Prague School are again in the foreground and are being reexamined and reinterpreted in light of the new perspectives gained via syntactic analysis. The focus of attention is on the relation of syntax to inflectional morphology, as well as on the relation of syntax and inflection to the lexicon. Classical problems of inflectional and derivational morphology are now seen through a syntactic prism.

Our introductory essay sketches a minimal historical and bibliographical background for the major theoretical issues addressed in the papers, but the information explosion in linguistics has put even a representative bibliographical survey beyond the scope of this book. We also provide Indexes which reveal certain patterns of current research. According to the Bibliographical Index, the two authors cited most widely and for the greatest range of their works are Roman Jakobson and Noam Chomsky—further evidence of convergence on the morphosyntactic front. The two traditions had a joint evolution in phonology through the work of Chomsky and Halle, but they have been slower to converge in morphology and syntax. The fifteen papers, twelve of them new, are divided into four broad groups reflecting what we consider to be their major emphases, but many theoretical issues cut across these rather arbitrary group boundaries.

For instance, the all-pervading question of co-reference or "control phenomena" is found in several papers besides the three which actually concentrate on such matters. The question of grammatical relations—of subject and object—also pervades several papers, though it is not the major focus of any of them. The *Topical Index* provides a theory-independent guide to these and other theoretical issues. The *Index of Languages* lists the major and minor mentions of Slavic and non-Slavic languages. The large proportion of papers on Russian reflects the composition of the profession in the United States and the United Kingdom, where the research of Slavists is supported in large part by programs in Russian language. Polish is the major focus of two papers, Bulgarian, Czech and Macedonian are featured in one each; Serbo-Croatian and Slovenian data are discussed briefly in one paper whose major focus is on Russian. Ukrainian and Belorussian data are also limited to brief allusions. We hope that these papers will stimulate work on the under-represented members of the Slavic language family. The references to work on non-Slavic languages reflect another characteristic of current linguistic research: relevant theoretical work may be developed in studies of distant language families, while relevant data may be found in Slavic scholarship using quite different approaches.

We gratefully acknowledge permission from the Chicago Linguistic Society to reprint Bernard Comrie's "Clause Structure and Movement Constraints in Russian," and from *Specimina Philologiae Slavicae* to print the translation of his paper "Nominalisations in Russian: Lexical Noun phrases or Transformed

Sentences?" Finally, we would like to express appreciation for clerical or financial help with the preparation of camera ready copy to the Departments of Slavic Languages and Literatures of The State University of New York at Albany, of Brown University, of the University of California at Los Angeles and its Center for Russian and East European Studies, of Harvard University and the Harvard Russian Research Center; and to the Department of Humanities of the Massachusetts Institute of Technology.

Catherine V. Chvany

Richard D. Brecht

MORPHOSYNTAX: FORMS AND MEANING
THROUGH A SYNTACTIC PRISM

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The aim of this essay is to sketch the historical context of the theoretical issues addressed in this volume. In our survey article for the Eighth International Congress of Slavists we chronicled some of the recent trends in syntactic research,¹ including the renewed interest on the part of the first generations of Slavic transformationalists² in the traditional concerns of the field, such as diachronic studies, inflectional and derivational morphology, and especially the Prague School concepts that were and still are part of the training of every Slavist.³ This "return to structuralism" on the part of syntacticians is not a retreat to structuralism-as-it-was, but it is rather a new development which has grown directly out of the fruitful syntax centered work of the preceding decade. That work showed that while there are indeed problems that one can call purely syntactic, just as one can speak of strictly phonological or morphological problems, some of the most interesting theoretical questions today involve matters that lie at the borderline of syntax and morphology, or that appear to be transitional between inflection and the lexicon. In current work on morphosyntax, borderline matters have moved to center stage.

On another front, the study of forms and of formal syntax as autonomous systems led to new insights into semantics by providing non-circular explanations of semantic correspondences among sentences with shared lexical material. While there is of course a great deal of predictable co-variation between forms and meanings in both syntax and morphology, the autonomy of the syntactic and semantic components of language has been confirmed.

1. Paradigmatic and Syntagmatic Relations.

In the new approach to morphosyntax, Prague School concepts are viewed from a syntactic perspective, with more attention to syntagmatic relations, while earlier structuralist studies tended to be more concerned with paradigmatic relations. The paradigmatic approach focused on analyzing the network

of oppositions in closed sets of service words or grammatical morphemes--most often the bound inflectional morphemes that force obligatory choices.⁴ Most of the earlier paradigmatic studies assumed that these closed sets are structured into oppositions which may be analyzed in binary terms and that linguistic analysis must uncover some invariant semantic distinctive feature associated with the marked or more informative member of each opposition.⁵ Syntactic contexts were examined mainly for their diagnostic value. Kučera's paper on Czech verbs of motion discusses the traditional Prague School criteria for assigning marked value and shows that the assignment of marked value in morphology must be contextually determined in a way parallel to the contextual assignment of markedness in phonology (where, for example, voicing is marked in consonants, unmarked in vowels). The failure of Czech motion verbs to meet certain tests for privative oppositions and the solution proposed by Kučera raise, to our minds, further questions on the nature of oppositions in structured sets of lexical items and how such sets may differ from more fully "grammaticalized" categories, and, indeed, on the process of "grammaticalization" itself.

The other three papers in the first section also deal with traditional "grammatical categories," those linguistic signs often represented in generative grammars by syntactic and/or semantic features. Corbett presents field tests of animacy marking in pronouns in the modern Slavic languages. He tests the syntagmatic relations of the pronouns within a generative-transformational framework which assumes sets of discrete features like those assumed in structuralist studies as well. Formal rules for case assignment in Russian object nouns correctly predict inflections, but Corbett shows that speakers display variation or uncertainty in assigning syntactic animacy to pronouns with inanimate antecedents. Klenin provides a historical background for the situation described by Corbett in the modern languages. She traces the development of the extension of genitive-accusative case marking in East Slavic to inanimate object pronouns and offers an account of the tension between the semantically motivated genitive case marking with quantifiers and the use of the same case marking for individuated objects--even though quantification and individua-

tion are at opposite ends of a semantic hierarchy. She proposes a functional rather than a semantic explanation for the formal convergence of semantically distinct case uses. This supports the contention that a theory which tries to account for case marking exclusively in terms of invariant semantic features (or syntactic features with an invariant meaning) is an oversimplification. As Klenin shows, a particular case inflection may have more than one source. Although many case uses are indeed semantically motivated (a feature of "quantification" does account for many uses of the genitive case), this is not true in all instances. Still, it is not an accident that the genitive (rather than the dative, locative, or instrumental) is chosen for marking direct objects. The choice of the genitive is undoubtedly related to its being the only oblique case which is not also "peripheral" in Jakobson's term.

A continuum similar to Klenin's individuation hierarchy is posited in Rothstein's paper, which examines the interaction of gender markings with noun phrases used referentially and attributively. Rothstein shows that certain sociolinguistic and other continua, segmented differently in different languages, affect the distribution of gender markings as well as the assignment of marked value in Polish and Russian lexical items.

These and other recent studies of markedness show that when one takes into account a broader range of syntagmatic relations, the term "invariance" becomes more precise and viable within a theory of grammar. One must speak of "marked value" within a specified domain, just as one does in phonology. These four studies amend and complement the Prague School claims by establishing limits to their application and by showing the interaction of scalar properties with discrete features. Corbett shows that the interaction can vary from speaker to speaker, Rothstein that it can vary from language to language.

2. *Transformations Old and New.*

It has been rumored that transformations are nearly dead but, as Tom Sawyer might have said, that is an exaggeration. What has happened is this: As syntactic research progressed, rising standards for justifying transformations and the discovery of new generalizations reduced the number of separate rules.

Moreover, the introduction of syntactic features into transformational theory provided alternative ways of accounting for relations between sentences, and such venerable transformations as Nominalization and Passive, among others, were called into question or replaced by lexical specifications.⁶ Several of the early transformations involving co-reference relations were replaced by interpretive rules, while the concept of deep structure as it had been formulated in the 1965 theory was gradually abandoned. In the more recent versions of transformational theory, the underlying structure is only slightly more abstract than that of occurring sentences. The remaining movement transformations have been generalized into one basic trace-leaving movement (Berent, in this volume, illustrates this framework).

Our second group contains four papers in which transformations play a major role. Two of them--Comrie's and Klenin's--date from 1973 and represent versions of the 1965 "standard theory," with the original concept of deep structure, but the issues addressed in these papers are as timely today as they were when the papers were written. The other two papers in this group represent two of the youngest descendants of transformational grammar: trace theory (part of the "extended standard theory") in Berent's paper, and Relational Grammar in Channon's, a theory with abstract underlying structures analogous to the "standard theory's" deep structure, but where the tree metaphor and movement transformations have been replaced by another formalism with "relational networks" and advancements and demotions along a scale of grammatical relations.

Comrie's paper on movement constraints uses data from Soviet research on Colloquial Russian. In this variant of Standard Russian, word order turns out to be much freer than even native speakers had thought possible, but certain rules cannot operate across clause boundaries even in this freest style. This opacity to rules involves not only movements but also feature-marking rules. Whether or not one believes that the relations among sentences are best expressed in terms of transformations, the question of opacity (or "islands") must be addressed.⁷ No matter what the theory, it must account for the fact that certain word order variations are possible, others not; clause boundaries in all languages block the operation of some rules, whether those rules are

viewed as syntactic processes or as statements of semantic (e.g., co-reference) relations. Comrie argues that the S-pruning convention accounts better than the Tensed-S condition for the transparency of certain putative S-boundaries and the opacity of others. Research in constraints on rules has developed along with research in universal grammar, but Comrie points out that the domain of a particular constraint may be language-specific: Russian participial phrases, with no clause boundaries in sight, are still opaque to reflexivization (*sc.* the assignment of co-reference), while the corresponding construction in Polish is transparent.

Channon studies PLACE arguments (locative or directional adverbials) of certain sentences which have paraphrases in which the PLACE argument is direct object or subject. He argues that the more informative oblique case marking represents the underlying PLACE relation while the synonymous direct object or subject is derived via advancement rules. In Relational Grammar, advancements and demotions replace the movements of arboreal transformational grammar without commitment to word order. As with earlier transformational syntax, actual word order is to be accounted for by yet-to-be-developed rules of functional structure. Relational Grammar has been influenced, perhaps indirectly, by the research on linguistic typology of the Leningrad linguists (cf. Xolodovič, ed. 1974; Xrakovskij, ed. 1978), and has found many adherents, particularly among scholars working on Indonesian languages, some of whom (e.g., Bell, Chung) have worked on Slavic as well.

Channon, who pioneered the treatment of Russian *-sja* as a trace of a moved object, also suggests a trace-like account of certain verbal prefixes as "registration markers" whose appearance is concomitant with an advancement. Ironically, the relation between the prefixed and the unprefixed verb and their respective valences would be handled by lexical rules in the version of trace theory presented in Berent's paper. It remains for future investigators to explore the empirical differences, if any, between a relational and a lexicalist account of these constructions.⁸

Another trace-like phenomenon that has not yet tested trace theory is analyzed in Klenin's brief paper, which is concerned with the linkage between syntactic relations such as "subject" and "object"

and semantic functions such as "agent." Unlike the ordinary reflexives which are co-referent with a subject and alternate with non-reflexives (for which Klenin's 1974 thesis proposed a lexical-interpretive analysis), the "shadow reflexives," as they have come to be known, are redundant and optional--they alternate with zero rather than with a non-reflexive --and they are, in fact, preferably omitted in good written style. For these reflexives, which redundantly specify the underlying role of the surface subject, Klenin proposes a transformational derivation which offers a unitary account of this type of oblique reflexive, the trace *-sja*, and the modern descendant of the Old Russian Ethical Dative. Recent work by Relational Grammarians has uncovered similar optional reflexives in other languages. It remains to be seen whether Klenin's analysis of the Russian shadow reflexives can be improved upon in a relational framework--or in a lexicalist one. The transformational account in this 1973 paper has yet to be superseded.

The most recent version of transformational generative theory is illustrated in Berent's paper, which offers a generalization relating clitic movements to the generalized movement rule. This paper offers empirical support from Macedonian for the abstract traces which, according to trace theory, are left by movement transformations. The behavior of Macedonian clitics also sheds light on the nature of subjects and topics as well as on related typological questions. The concept of "realized trace" also prompts a reexamination of Klenin's shadow reflexives in this framework, a task that could help decide among the competing theories.

3. *Borderline Cases.*

While the Macedonian clitic pronouns are clearly a syntactic problem--they are not bound forms, they take part in well-established syntactic processes and are discussed in light of syntactic theory--there are other morphs whose status is not so clear, which lie on the borderline between the lexicon and inflection. The Polish "ubiquitous affixes" of Sussex's paper are of this kind, and so are the Bulgarian articles of Scatton's paper. Sussex's paper, like those of the preceding group, assumes a transformational framework and argues for a movement

rather than a copying rule to account for these clitic-affixes. Scatton's paper is tacitly transformational, but its focus is on the form of the article rather than on its behavior. He shows how a phonological argument can decide a morphosyntactic question, preserving the integrity and consistency of the article stem as the carrier of the deictic category "definiteness" while the inflectional ending carries the agreement features. These two papers raise important questions about the boundary if any between syntax and morphology. When does a word become a clitic, when does a clitic become an affix? The history of languages is full of such changes: verb fades to auxiliary, auxiliary or pronoun reduces to clitic, then to bound morph, then to inflection. How and why does this "grammaticalization" take place? Why are certain lexical classes and certain grammatical categories particularly susceptible to this development? What is the range of this susceptibility? These are, we believe, among the crucial questions for which answers will be sought in the next decade.

Comrie's paper on Russian verbal noun phrases lies on another borderline, that of syntax and derivational or lexical morphology. This paper appeared in Germany in 1974 but was based on work done a few years earlier. It is interesting to note that when this paper was first written, the transformational account's ability to capture the similarities between nominalizations and sentential complements had an appeal that transcended the differences that Comrie also noted. In the years since this paper was written, linguistic theory has developed other ways of capturing the same generalizations (e.g., with syntactic features); today, the focus has shifted to the different distribution of grammatical categories in the sentence and the corresponding nominalization. The next task is to explain the differences in verbal aspect and tense marking, in the distribution of noun phrases and their case inflections, and in the behavior under negation. In spite of the differences in Russian, which have prompted other investigators to assume a lexical derivation for Russian verbal noun phrases, Comrie chooses a transformational account over a lexicalist treatment because of a desire to unify the relation between sentence and nominalization in Russian with the corresponding relation in languages where the differ-

ences are fewer, and where the relation is a more productive, more transparently syntactic process. This approach illustrates the motivation among many generativists to search for a universal set of rules which could be related to language typology; the set of universal rules would have a range of possible modifications or would admit a range of possible deviations which would define languages of different types. A similar motivation to search for a universal account of certain correspondences is found in Relational Grammar as illustrated in Channon's paper.

4. *Beyond Transformations.*

The final group of four papers features problems of scope and control that were brought to the forefront of linguistics in transformational studies, though it was soon apparent that an adequate account must go beyond purely syntactic solutions. All these papers build on earlier generative (transformational or interpretive) analyses.

Babby extends earlier syntactic work on existential sentences with a functional explanation of the relation of word order to case marking in terms of the scope of assertion and negation. He also cites evidence that the concepts of "theme" and "rheme" (or "topic" and "comment") are distinct from the carriers of "new" and "old" information, with which they often overlap. Timberlake challenges assumptions made about subjects in earlier accounts of reflexives, which had relied on the traditional grammar view that reflexives refer to subjects, hence the antecedent of a reflexive must be, or must have been, in some sense a subject. Timberlake's critique is addressed primarily to the Relational Grammar account by which oblique antecedents are former subjects demoted by a rule called "Inversion." This paper, like the others in this group, deals with the problems posed when the properties normally associated with a subject, such as thematic status, nominative case, control of verb agreement and reflexivization, semantic functions such as "agent" or "experiencer," are either absent or else are distributed to two or more noun phrases in one sentence. Yokoyama traces the development of gerund subject deletion (*sc.* interpretation) in Russian and its control by the theme (topic) rather than by the subject of the main clause. The confusion in the previous

literature on the gerund is due to the fact that subjects are most often themes as well. Rappaport focuses on subtle problems of scope and control in gerund phrases with and without syntactic detachment (*obosoblenie*). Both Yokoyama and Rappaport build on Babby's earlier transformational account, which related the syntax of gerund phrases to other embedded structures.

It should now be evident that morphosyntactic studies deal with the traditional concerns of grammatical categories and their morphological expression as well as with the purely syntactic problems brought to light in the past twenty years. Morphosyntax is in fact a point of convergence between the structuralist and generativist schools, as well as between East and West. In the East we now see much more attention being paid to problems of autonomous syntax and their semantic correlates, while in the West the classical problems of tense, aspect, case, etc., are being investigated with a renewed vigor due in no small measure to the perspectives supplied by the earlier preoccupation with syntactic transformations.

NOTES

¹ That paper (Chvany and Brecht 1978) examined recent trends in U.S. and British work on Slavic syntax, with a 30-item bibliography. A complementary survey of trends in theoretical linguistics in the U.S. and the U.S.S.R. is found in Nichols (1979), which contrasts the generative tradition with Russian structuralism, broadly construed. Nichols traces the treatment of certain problems in both schools and concludes that both made stronger claims in their early stages than they do today. She sees this as a sign of maturity, and as another instance of convergence rather than confrontation, paralleling convergence over specific linguistic questions. The bibliography lists some 80 items. A useful guide to Soviet and Western work on semantics is Raskin (1979). Among several new journals and collections devoted to the meeting of East and West are the Canadian *International Review of Slavic Linguistics*, edited by A. L. Vanek, and the Polish *Linguistica Silesiana*, edited by K. Polański; Girke and Jachnow (1976) contains eleven articles including M. Ivić's survey of linguistics in Yugoslavia. Differences in theory and method can no longer be related to geography. Exchange programs have produced scholars in both East and West who are familiar with both tradi-

tions and have access to linguistic data from the Slavic countries. Today Western Slavists find most useful bibliographies on theory in Eastern publications such as Šaumjan (1965), Adamec (1966), Apresjan (1966, tr. 1973), Arutjunova (1976), Padučeva (1974), or the many collections and journals of reviews and abstracts published in the Slavic countries. Recent examples of integration of Eastern and Western approaches include Rugaleva (1977) and the work on lexical functions by Leed and Nakhimovsky (1979).

² See the survey by Sussex in our 1974 collection. The transformational methodology is no longer a suitable common denominator for a bibliography. Moreover, the information explosion has put an updated bibliography of Slavic generative syntax beyond the scope of this volume. The *British Year's Work in Modern Language Studies* provides annual updates on individual languages, though recent papers are increasingly difficult to fit into the traditional pigeonholes of "Phonology," "Morphology," "Syntax," etc. Some 10% of the abstracts for the Eighth Congress appear to be on theoretical syntax, semantics, and related topics. Scandinavian publications with copious bibliographies include Dahl (1969) and Thelin (1978), among many others. As just one indicator for North America alone, Whistler (1977), an Index to volumes published 1968-76 by the Berkeley, Chicago, and Northeast Linguistic Societies, lists 50 articles devoted primarily to Slavic languages, and some 50 more with substantial mentions of Slavic material, an interest that has continued unabated in the dozen volumes published since 1976. The CLS parasessions devoted each year since 1972 to a particular trend or topic serve as reliable milestones for developments in theoretical linguistics, including work on Slavic.

³ Recent examples and bibliographical sources on Prague School linguistics include Fontaine (1974) and Matejka, ed. (1976), in addition to many works by and about Roman Jakobson. See also Kučera, this volume.

⁴ See Jakobson (1959[1971]) for an explicit statement of the obligatoriness of grammatical categories. On the basis of recent research, it is clear that the distinction between "lexical" and "grammatical" must be expressed in terms of a continuum from maximally lexical (optional, least predictable, single-valued features) to maximally grammatical (obligatory choice from paradigms consisting of bound morphs and perhaps zero). It is of course possible to represent scalar processes in discrete or binary terms, but linguistic theory must still distinguish degrees of grammaticalization. Halle's 1973 proposal eliminates the distinction between derivation and inflection: whole paradigms are stored in the lexicon, and "filters" then account for the choice of the correct form. An even more extreme lexicalist position is the new theory of Bresnan (to

appear), with lexical storage of paradigms and no transformations, only rules relating lexical items of different valences with their functions in sentences. A first application of this theory to Russian is found in Neidle (ms). The trend toward greater reliance on lexical storage is a natural development as the hope of relating linguistic theory to cognitive theory becomes more realistic: there is more convincing evidence for the human brain's capacity for lexical storage than there is for neural processes analogous to transformational derivations. For an enlightening discussion see Bolinger (1976).

⁵ The Prague School view of invariance, which sees the immutable semantic core in each token of a morpheme or lexeme is by no means universally accepted (cf. Weinreich 1966, Brecht 1979b and Brecht ms, with references therein), nor is it necessarily the central notion in a semantic study (cf. Timberlake 1979).

⁶ Syntactic features were introduced by Chomsky in 1965, the lexicalist hypothesis in 1970. On Nominalizations in Russian, see Comrie's second paper, this volume. Babby, in Comrie (1978), argues that the Russian past passive participle must be a lexical stative adjective.

⁷ In the early bootstrap days of transformational grammar, when attention was focused on the major recursive processes of conjunction, complementation and relativization, linguists assumed other processes as given in traditional grammar. Among these were Reflexivization and Agreement, which were heavily used as diagnostics. These gift horses were examined in later work: Reflexives by Klenin and Timberlake (see this volume and references in their papers), and Agreement by Crockett (1976) and Corbett (1979). Transformations which were assumed to relate cognitively synonymous sentences with shared lexical material were given tentative names, even though they had not been worked out in detail, while the relations they represented were used as diagnostics. Today one would not speak so sanguinely of "Scrambling" or "*Ni*-Distribution" rules--the continued use of such names is merely shorthand for a relation of near-synonymy between transforms. Instead of a Scrambling rule, word order is studied in relation to the communicative function of discourse (as in Babby, this volume). As for *Ni*-Distribution, whether or not it is a transformation, the facts related to the constraint remain: *Ni*-*K* and *ne*-Verb must be in the same clause, while *K-libo* can be related to a V in another clause: clause (S-) boundaries are opaque to *ni*-*K*, transparent to *K-libo*.

⁸ Bell (1976) proved that there are empirical differences between transformational and relational grammar, i.e. that they are not merely notational variants.

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MARKEDNESS IN MOTION

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This article presents the partial results of a larger study which is still in progress and which has as its aim a critical reexamination of the semantics of the Slavic verbal system, with particular attention to aspect and related phenomena. Since Slavic linguists have analyzed these problems predominantly in terms of the so-called morphological markedness theory, my paper will first address some questions raised by this kind of analysis. Following this, I will argue that—at least with respect to the problem at hand—the conventional markedness theory fails to provide a sufficiently insightful analysis of the relevant grammatical contrasts. In conclusion, I will outline an alternative approach which, in my view, makes it possible to account adequately for the facts discussed in this paper, as well as for other problems of the Slavic verbal categories.

The discussion here will be largely focused on a limited but important subset of grammatical oppositions: the so-called determinate vs. indeterminate contrast manifested in the verbs of motion. My arguments and conclusions will be based primarily on examples from Czech, a language with a particularly complicated and interesting verbal system. An analysis of evidence from a single Slavic language cannot, of course, lay any claims to a general validity in the study of the verbal systems of the Slavic languages. In spite of this necessary disclaimer, it seems to me that the Czech facts and the conclusions which I shall draw from them have broader theoretical implications. While some counterexamples to my hypothesis may conceivably emerge from the study of other Slavic languages, my proposals will provide, it is hoped, a stimulus for a reevaluation of the semantics of Slavic verbal categories in general, and of the markedness theory in its treatment of grammatical categories in particular.

As is well known, the extension of the markedness theory from phonology to morphological oppositions has been advocated primarily, although not exclusively, by Jakobson and other members of the Prague School. Although the original proposals date back to the early 1930s, the theoretical framework has not changed substantially over the years. A more recent and concise

definition of the principles of morphological correlations can be found in Jakobson's *Shifters* (1957:5 and 1971:136):

The general meaning of a marked category states the presence of a certain (whether positive or negative) property A; the general meaning of the corresponding unmarked category states nothing about the presence of A, and is used chiefly, but not exclusively, to indicate the absence of A. The unmarked term is always the negative of the marked term, but on the level of general meaning the opposition of the contradictories may be interpreted as "statement of A" vs. "no statement of A", whereas on the level of "narrowed", nuclear meanings, we encounter the opposition "statement of A" vs. "statement of non-A."

Although the Jakobsonian position has found many supporters, it has not been universally accepted. The various arguments are summarized in Dokulil (1958) who also adds a number of critical observations of his own. As far as Russian aspect is concerned, a reexamination of Jakobson's position was recently undertaken by Bourke (1976) whose theoretical framework is close to that of generative semantics. My intention in this brief article is not to recount the controversy; instead, I shall try to bring out some additional facts and, on the basis of this data, argue that the markedness theory is not, in its present form, logically adequate to give a satisfactory account of the semantics of at least some verbal operations.

As in other Slavic languages, both the Czech determinate and indeterminate verbs (in their simple, nonprefixed form) are aspectually imperfective: *jít* [det.] and *chodit* [indet.] 'to go (on foot)'; *jet* [det.] and *jezdít* [indet.] 'to go (by conveyance)'; *nést* [det.] and *nosit* [indet.] 'to carry (by hand)', etc. The determinate verbs are usually said to signal a motion in a specific direction or to imply a goal to be reached at the end of the process. In contrast to them, indeterminates carry no implication of goal-directedness and, at least in certain contexts, preclude the semantic interpretation of a motion in a single direction. Consequently, *Jde po ulici* 'He is walking down the street' signifies progress in a definite direction and presumably towards some goal, while *Chodí po ulici* 'He is walking up and down the street' does not.

As I will show below, the semantics of determinate and indeterminate verbs turns out to be considerably more complicated than it would appear from the above description. Nevertheless, the basic facts seem clearly to suggest the appropriateness of a markedness analysis. It is thus not surprising that those linguists who subscribe to the theory of morphological markedness consider the determinate verb as the marked member of the opposition and the indeterminate verb as the unmarked member. Such an analysis has been presented by many Slavists with regard to Russian, in which the facts appear—at first glance—to be quite straightforward. Jakobson himself is quite unambiguous on this issue (e.g. 1971:138), seeing the marking of the determinates in their signaling of the integrity, unbrokenness of the narrated event. Isačenko (1968:421) defines the marked determinate verbs as denoting a motion which proceeds in a single direction, while the unmarked indeterminate verbs contain no indication of direction. Forsyth (1970:346) appears to be somewhat more cautious in his formulation but states, nevertheless, that the indeterminate imperfective "can be . . . considered" the unmarked member of the opposition of the determinate and the indeterminate; he justifies his conclusion by arguing that the indeterminate has a wider range of meanings and can, in a couple of contexts, substitute for the determinate—a point which is worth bearing in mind since, later in this article, we will need to return to the whole question of substitutability of one form for another. A somewhat different analysis is given by van Schooneveld (1968) who considers the marking of the Russian determinates to be negative; indeterminate denote a motion in which the point of departure A may or may not coincide with the terminal point of the motion tS , i.e. both $tS = A$ and $tS \neq A$ are possible; in determinates, the alternative $tS = A$ is excluded and, consequently, the determinate category is marked by the fact that $tS \neq A$.

Notice that all the analyses of the determinate vs. indeterminate opposition, presented within the markedness theory, attempt to identify the specific semantic feature of the marked category. This is clearly as it should be since the morphological markedness theory undoubtedly requires that the A—to use Jakobson's notation—have some definable semantic correlates. In view of the role played by directionality and goal-directedness in the meaning of determinates, the interesting question arises what happens if an indeterminate verb occurs in a predication which contains a definite direction or goal. As far

as Russian is concerned, Isačenko (1968:422) considers such situations only as "special meanings" (*Spezialbedeutungen*) of indeterminates; of particular interest is his argument that the "repeated or usual action," signaled by indeterminates in some such constructions (e.g. *On xodit k nam po voskresen'jam* 'He visits us on Sundays', literally 'He goes to our place on Sundays'), is no justification for classifying indeterminates as iterative verbs. For Isačenko, the iterative reading of indeterminates is simply a consequence of the general fact that the unmarked member of the opposition can express the absence of the distinctive marking in various ways and thus assume numerous special meanings.

As I will show below, Isačenko's explanation, if applied to Czech, yields an unsatisfactory analysis. In my opinion, it is not adequate for Russian either, but since I cannot deal here with more than the Czech data, I will not make any specific claims with regard to Russian. It must be emphasized, moreover, that, with regard to the problem at hand, the Czech system is different from the Russian one in several important respects. First of all, the "iterative" reading of Czech indeterminates is more prevalent than it is in Russian: while the Russian *Na prošloj nedele ja ezdil v Berlin* may have the reading 'Last week I was in Berlin, i.e., I went to Berlin and came back', the corresponding Czech *Minulý týden jsem jezdil do Berlína* can have only the iterative reading 'Last week I went (more than once) to Berlin'. Secondly, Czech has a large and productive class of verbs which are generally considered to be iteratives—in contrast to Russian in which the iterative verbs are few and have at best only a marginal status in the present-day standard language. In a markedness analysis, true Czech iteratives are considered to be marked in opposition to the unmarked noniterative imperfectives. Within such a verbal system, the function of the indeterminate verbs of motion thus also appears in a different light. However, before turning to the consideration of concrete examples which bear upon this problem, a few remarks about the relevant characteristics of the Czech aspectual system are necessary.

Among Czech linguists, there is considerable disagreement about the exact status of verbs which designate recurrent or repeated action; nor is there a consensus on terminology. Trávníček (1951), who pays primary attention to the derivational history of verbs, uses the term iterative verbs (interchangeably with the Czech designation *opětovací slovesa* 'recurrent verbs') for deverbatives of various types which

either may or always do signal a recurrent action. A subclass of his iterative category (called "stable iteratives") includes the indeterminate verbs of motion which, according to Trávníček, can never be used to denote a nonrecurrent, single action (Trávníček 1951:1327). On the other hand, deverbatives derived through the suffix *-vat* or *-vávat* are termed by Trávníček frequentatives (or by the Czech equivalent *opakovač* 'repeated') and are again subdivided into subclasses, represented by such verbs as *dávat* 'to give', *brávat* 'to take (repeatedly/at intervals)' and *chodívávat* 'to go on foot (off and on)'. Both the iteratives and frequentatives of Trávníček are, in actuality, highly mixed classes since the verbs within the same class behave syntactically and semantically in diverse ways. However, a detailed critical analysis of Trávníček's classification is well beyond the scope of this study.

More recently, Czech linguists have been using yet another term for verbs which designate either recurrence or repetition of an action: "multiple-action verbs" is perhaps the best translation for the Czech *násobená slovesa*. Although these verbs are sometimes referred to in Czech publications also as iteratives, the equation of the two terms does not strike me as entirely appropriate. Kopečný (1962), for example, includes in the class of "multiple-action verbs" not only imperfective iteratives of the type *psávat* 'to write (repeatedly/off and on)' and the indeterminate verbs of motion, but also perfective distributives of the type *povyhazovat* 'to throw out (one by one/set by set)'. Consequently, we again have a mixed class since syntactically and semantically—as will be shown below—imperfective iteratives, indeterminates and perfective distributives behave in quite distinct ways.

Of greatest interest among the Czech verbs that are said to denote repetition is the large and productive class of verbs derived by the nonterminal suffix *-va-*, i.e., the type *psávat* 'to write repeatedly/off and on' (as well as of a few other verbs of different formal structure). Aside from iterativity, these verbs also have the property of so-called non-actuality (Czech linguists use the term *neaktuálnost*), i.e., they cannot designate an action or a state which is simultaneous with the speech event. So, for example, the sentence *Otec stává před domem* 'Father stands (regularly/off and on) in front of the house' does not include the reading 'Father stands (regularly) and is now standing in front of the house'. The form *stává*, although morphologically a present tense,

simply provides no information about any activity at the moment of speech. For terminological convenience, I shall refer to those verbs which inherently denote iterativity and nonactuality as *true iteratives*. The reader should be cautioned, however, that my use of this term is only a reluctant concession to tradition. Later in this article, I will argue that the Czech iteratives do not really denote iterativity in the usual sense at all.

In recent years, a prolonged discussion took place in Czech linguistic publications about the exact status of iterative verbs and their features. Such questions as whether iteratives constitute a "third aspect," whether nonactuality is a grammatical category in the Czech system, as well as a number of other points have been vigorously discussed. The interested reader can find the principal arguments in the exchange between Kopečný (1948, 1962, 1965, 1966) and Poldauf (1949, 1964, 1966a, 1966b); a brief critique of both scholars' positions and an attempt to untangle the confusion was offered by Trnková (1969).

Fortunately, the arguments which I present in this article do not crucially depend on the resolution of these highly complex controversies. For my purposes it is sufficient to simply assume, at least for now, that certain Czech verbs inherently denote iterativeness and nonactuality (henceforth I/NA) and that other verbs acquire these features in specific contexts.

Returning to the problem of Czech determinate and indeterminate verbs, let us first consider four simple examples:

- (1) Chodí po zahradě 'He is walking / walks
(back and forth) in the garden'
- (2) Chodí do hospody 'He goes to the pub'
- (3) Jezdí po městě 'He is riding / rides
around town'
- (4) Jezdí do Prahy 'He goes (rides) to
Prague'

Notice that in (1) and (3) the adverbial prepositional phrase simply signals the localization of the action, while in (2) and (4) the prepositional phrase specifies a definite goal of the action.

Aside from the notion of indeterminacy, the verbs in (1) and (3) behave like regular unmarked imperfectives: depending on context, they can either denote an action taking place at the moment of speech or can have an iterative reading. Consequently, (1) and (3) can be

further modified either by a time expression denoting simultaneity of the utterance with the speech event, such as *zrovna teď* 'right now', or by a frequency adverbial specifying a nonsingle occurrence of the action, such as *každou sobotu* 'every Saturday'. Sentences (5) through (8), representing such a modification of (1) and (3), are all grammatical:

- (5) *Zrovna teď chodí po zahradě* 'Right now he is walking (back and forth) in the garden'
- (6) *Každou sobotu chodí po zahradě* 'Every Saturday he walks (back and forth) in the garden'
- (7) *Zrovna teď jezdí po městě* 'Right now he is riding around town'
- (8) *Každou sobotu jezdí po městě* 'Every Saturday he rides around town'

The situation is quite different, however, with respect to examples (2) and (4). The indeterminate verbs in these sentences do not behave like other unmarked imperfectives but rather as true iteratives; my claim is that, like iteratives, they also have the I/NA property. Let us test this claim by modifying (2) and (4) in exactly the same way as (1) and (3) had been modified. (Since the English translations are intended to render closely the structure of the Czech sentences, some of them, too, are ungrammatical.

- (9) **Zrovna teď chodí do hospody* 'Right now he goes to the pub'
- (10) *Každou sobotu chodí do hospody* 'Every Saturday he goes to the pub'
- (11) **Zrovna teď jezdí do Prahy* 'Right now he goes (drives) to Prague'
- (12) *Každou sobotu jezdí do Prahy* 'Every Saturday he goes (drives) to Prague'

The ungrammaticality of (9) and (11) is obviously due to the incompatibility of the I/NA property of the indeterminate verbs *chodit/jezdit* in these sentences and the adverbial *zrovna teď* which requires a verb capable of expressing actuality. This is the same situation as encountered in true iteratives, supporting my position that indeterminates in these contexts behave like true iteratives. This can easily be demonstrated by the ungrammaticality of (13) in which the true iterative *sedávat* 'to sit repeatedly/off and on' occurs:

- (13) **Zrovna teď sedává v hospodě* 'Right now he

sits in the pub'

It is my contention that the iterative/nonactual meaning of the indeterminate verbs in (9) through (12) is crucially different from the iterative reading which is possible for other unmarked imperfectives. So, for example, in the sentence *Každý večer mu píšu dopis* 'Every evening I write him a letter', the iterativity is signaled exclusively by the frequency adverbial *každý večer* 'every evening' and is entirely independent of the inherent semantic properties of the verb or of the verb phrase. Consequently, (14) is grammatical:

- (14) *Zrovna teď mu píšu dopis* 'Right now I am writing him a letter'

In contrast to this, the ungrammatical (9) and (11) above do not have their iterative meaning signaled by a frequency adverbial (but rather triggered by the specification of a goal) and, like sentences with true iteratives, they, too, denote nonactuality.

In the framework of the conventional theory of markedness, we now face an obvious complication; the indeterminate *chodit* and *jezdit* are generally considered to be unmarked (in terms of the "integrity/unbrokenness" of the narrated event, to use Jakobson's definition). In terms of iterativity and nonactuality, however, they would appear to be either unmarked (as in (1) and (3)) or marked (as in (2) and (4)). The problem is compounded by the fact that the corresponding determinate verbs of motion, i.e., *jít* and *jet*, which are said to be marked (for integrity/unbrokenness), are always unmarked as to iterativity and nonactuality, i.e., behave in this regard like ordinary unmarked imperfectives. Notice that sentences (15) through (18) are all grammatical:

- (15) *Zrovna teď jde do hospody* 'Right now he is going to the pub'
 (16) *Každou sobotu jde do hospody* 'Every Saturday he goes to the pub'
 (17) *Zrovna teď jede do Prahy* 'Right now he is going (driving) to Prague'
 (18) *Každou sobotu jede do Prahy* 'Every Saturday he goes (drives) to Prague'

Even on the basis of a very small set of verbs, we can now reach at least some preliminary conclusions. First, it is clear that the theory of markedness, if it is to be preserved, must be prepared to

consider more than one semantic property in the analysis of certain, purely binary, morphological oppositions. In the case of the determinate and indeterminate verbs in Czech, the alleged markedness for single directionality does not coincide with the possible markedness for I/NA. It is clear, moreover, that no context-free rules are powerful enough to handle the assignment of markedness in the verbs of motion. In our examples, the indeterminates *chodit* and *jezdit* could be either unmarked or marked for I/NA, depending on context. Although I have given so far only a very sketchy illustration of how context determines the markedness assignment, the procedures for doing so would obviously have to contain context-sensitive rules. For the examples cited so far, these rules, which would be assumed to be *disjunctively* ordered, would have something like the following form:

- (19) Verb [indet] → $\left\{ \begin{array}{l} \text{marked [I/NA] / ---goal/direction} \\ \text{unmarked [I/NA] \quad \quad \quad \text{adverbial}} \end{array} \right\}$

At first glance, the idea that the markedness assignment in the verbs of motion may be accomplished by context-sensitive rules appears quite attractive, since it parallels the context-sensitive markedness assignment in phonology, proposed by Chomsky and Halle (1968:400ff.). Before embracing this solution, however, it may be wise to look at additional evidence.

Other indeterminates which are normally intransitive, such as *lítat* 'to fly' or *běhat* 'to run', behave essentially like *chodit* and *jezdit*. With a directional adverbial they, too, have the I/NA property; consequently, they cannot cooccur with a time adverbial which signals that the narrated action is simultaneous with the speech event, such as *ted' právě* 'right now, at this moment', but can cooccur with a frequency adverbial designating a nonsingle occurrence of the action. Sentences (20) and (21) are ill-formed but (22) and (23) are grammatical:

- (20) **Ted' právě lítá do Kalifornie* 'Right now he flies to California'
 (21) **Ted' právě běhá k doktorovi* 'Right now he runs to the doctor'
 (22) *Často lítá do Kalifornie* 'He often flies to California'
 (23) *Často běhá k doktorovi* 'He often runs to the doctor'

I have intentionally used, in all the examples

given so far, the present tense of the verbs of motion in order to demonstrate the restrictions on the signaling of actions simultaneous with the speech event. Both determinate and indeterminate verbs have, of course, past and future tenses (including the prefixed future form of determinates, e.g., *půjdu* 'I shall go, I shall be going', *ponesu* 'I shall carry, I shall be carrying'). Determinates in these tenses are again unmarked as to iterativity, regardless of environment; indeterminates, as one would expect, appear to be marked for iterativity only in a predication containing the denotation of a specific direction or goal. Kopečný (1962) also points out that the concept of actuality can be "transposed" to the past and to the future. In such instances, of course, actuality needs to be redefined as designating no longer simultaneity with the speech event but rather simultaneity with another single (i.e., noniterative) narrated event (either explicitly stated or implied from the discourse).

Given the above assumptions, we can then predict that, for example, the past tense of the determinate *jet* (even with a specified goal) can freely cooccur with temporal adverbials denoting a nonsingle occurrence of an action (e.g., *každý měsíc* 'every month'), as well as those denoting a single occurrence (e.g., *jen jednou* 'only once') or those specifying simultaneity with another narrated event (e.g., *právě v tu chvíli* 'right at that moment'). On the other hand, the past tense of the indeterminate *jezdít* (with a specified goal) can cooccur only with the first type of temporal adverbials but not with the second or the third. It is for these reasons that (24) through (27) are grammatical but (28) and (29) are not:

- (24) Každý měsíc jel tatínek vlakem do Prahy 'Every month father went by train to Prague'
- (25) Jen jednou jel tatínek vlakem do Prahy 'Only once did father go by train to Prague'
- (26) Právě v tu chvíli (když jsme o něm mluvili) jel tatínek vlakem do Prahy 'Right at that moment (when we were talking about him) father was going by train to Prague'
- (27) Každý měsíc jezdil tatínek vlakem do Prahy 'Every month father went by train to Prague'
- (28) *Jen jednou jezdil tatínek vlakem do Prahy 'Only once father went by train to Prague'
- (29) *Právě v tu chvíli (když jsme o něm mluvili) jezdil tatínek vlakem do Prahy 'Right at that moment (when we were talking about him) father went by train to Prague'

As can be best shown on past-tense examples, indeterminates with the I/NA property and true iteratives are subject to one additional syntactic constraint which presents further complications. While both iteratives and indeterminates "marked" for I/NA can freely cooccur with most frequency adverbials, they *cannot* occur in sentences containing a quantified frequency adverbial (i.e., one designating a definite or indefinite number of repetitions of the event), such as *dvakrát* 'twice', *několikrát* 'several times', etc. (For a semantic taxonomy of frequency adverbials, cf. Kučera and Trnka 1975:67-69). While (30) and (31) are ungrammatical, (32) through (35) are well-formed because they contain the nonquantified frequency adverbial *často* 'often' or *každý měsíc* 'every month'.

- (30) *Dvakrát jezdil do Prahy 'Twice he went to Prague'
 (31) *Dvakrát mi psával z Prahy 'Twice he wrote to me from Prague'
 (32) Často jezdil do Prahy 'He often went to Prague'
 (33) Často mi psával z Prahy 'He often wrote to me from Prague'
 (34) Každý měsíc jezdil do Prahy 'He went to Prague every month'
 (35) Každý měsíc mi psával z Prahy 'He wrote to me from Prague every month'

With regard to these sentences, my analysis, as presented so far, predicts that (30) and (31) should become grammatical if their verb is replaced by a corresponding verb which is unmarked for I/NA. This is, in the case of (30), the determinate *jet* 'to go' and, in the case of (31), the noniterative imperfective *psát* 'to write'. The prediction turns out to be correct as the grammatical (36) and (37) demonstrate:

- (36) Dvakrát jel do Prahy 'Twice he went to Prague'
 (37) Dvakrát mi psal z Prahy 'Twice he wrote to me from Prague'

What is crucial about the above examples, however, is clearly the ungrammaticality of sentences (30) and (31). If indeterminates with a goal adverbial (as in (30)), or true iteratives (as in (31)) indeed denoted a repeated action, there would surely be no reason why the number of repetitions could not be specified for them. Since it cannot, as sentences (30) and (31) demonstrate, we clearly are not dealing here with simple iteration. Instead, what we have in this

case are verbal forms that denote HABITS, not simply a series of activities. Since these habits are representable only as an indefinite number of occurrences of some event or activity, it is obvious that any attempt to impose a definite quantification on them must result in ill-formedness. Vendler (1967:108), in his analysis of English verbal forms, proposed that habits, including descriptions of occupations, dispositions, abilities, etc., belong to the category of states. Vendler distinguishes states from both activities and events, the latter being divided into accomplishments and achievements. These concepts turn out to be useful in the case of Czech verbs as well. The cooccurrence of indeterminate verbs with a goal adverbial—far from being a simple extension of their meaning to indicate repetition—actually shifts these verbs from the class of activities into the class of states. Interestingly enough, the "true" Czech iteratives actually do not denote simple repetition either, as the illformedness of sentences like (31) shows. They, too, represent states, albeit of a special kind, namely quantified states. I have discussed all the relevant arguments for this kind of analysis of Czech iteratives elsewhere (Kučera 1978b and Kučera, in press), where I give a number of examples that support the quantified-state analysis of Czech iteratives.

The distinction between simple repetition and a habit becomes even clearer when we consider sentences like the following:

- (38) Dvakrát týdně jezdil do Prahy 'He used to go to Prague twice a week'
 (39) Z Prahy mi psával dvakrát týdně 'He used to write to me twice a week from Prague'

In contrast to sentences (30) and (31), which were ungrammatical, (38) and (39) are perfectly well formed, in spite of the cooccurrence in them of a quantified frequency adverbial and an indeterminate verb plus goal or a true iterative respectively. The crucial difference is the presence of the adverbial *týdně* 'weekly, per week' which allows the habitual reading. The habit is then specified as a series of two events that occurred weekly for an indefinite number of weeks.

The fact that indeterminates can function to denote states, even without a specified goal, can be also seen in such commonly used expressions as *Dítě už chodí* 'The child already walks', *To auto pěkně jezdí* 'That car runs well', etc. Determinate verbs

do not have this capacity.

The analysis of both indeterminates plus direction adverbial and "true iteratives" as denoting habits also naturally explains what Kopečný has called non-actuality. Clearly, a habit viewed as consisting of an indefinite number of repetitions of an activity or of an event can never be reconciled with any adverbial denoting an atomic moment of time.

In order to obtain a fuller picture of the semantic function of the verbs of motion, I shall consider yet another set of Czech examples of even greater complexity. This is the case of those verbs of motion which are normally transitive, e.g., *nést* (det.) and *nosit* (indet.) 'to carry (by hand)', *vést* (det.) and *vozit* (indet.) 'to carry (by conveyance)'. At first glance it might appear that the indeterminates of such pairs have the I/NA property under the same conditions as intransitive indeterminates (i.e. when co-occurring with a goal or directional adverbial). In contrast to this, corresponding determinate transitives are always unmarked as to I/NA. For these reasons, (40) through (42) are well-formed but (43) is not:

- (40) Každý týden vezu sestru k lékaři 'Every week I drive my sister to the doctor'
 (41) Právě teď vezu sestru k lékaři 'Right now I am driving my sister to the doctor'
 (42) Každý týden vozím sestru k lékaři 'Every week I drive my sister to the doctor'
 (43) *Právě teď vozím sestru k lékaři 'Right now I drive my sister to the doctor'

Additional facts show, however, that this analysis is not quite correct. If the direct object of a transitive indeterminate contains either a plural noun (e.g., *talíře* 'plates') or a mass noun (e.g., *dřevo* 'wood', *jídlo* 'food') and the environment includes an adverbial of goal or direction, the verbs may be assigned a distributive reading which is different from the habitual one in that it does not signal nonactuality. In its distributive meaning, the present tense of indeterminates can, therefore, co-occur with time adverbials denoting simultaneity with the speech event. In contrast to (43) above, sentences (44) through (46) are all grammatical. (46) also illustrates that, when the direct object is elliptically omitted (which happens in some idiomatic expressions), the deleted object is assumed to be either a plural noun or a mass noun.

- (44) Právě teď nosí sestra talíře do jídelny 'Right now my sister is carrying the plates (one by one, set by set) to the dining room'
- (45) Právě teď si vozím dřevo do kůlny 'Right now I am hauling the wood (piece by piece, load by load) to the shed'
- (46) Teď už maminka nosí (jídlo) na stůl 'Now mother is already carrying (the food—dish by dish, tray by tray, etc.) to the table'

Notice again that (44) through (46) are well-formed in spite of the fact that the predication includes a specification of a definite goal of the action, something which results in the impossibility of an actual reading of intransitive determinates (cf. the ungrammatical (9) and (11)) as well as of transitive indeterminates whose direct object contains a singular noun (cf. (43)). The distributive reading (which is triggered by the plural-noun or mass-noun direct object) may thus override the I/NA property (triggered by a goal or direction adverbial). This raises the important question of why this should be the case and what the status of distributiveness is in the Czech verbal system.

Let us first consider once again the basic characteristics of indeterminate verbs in such simple sentences as *Chodí po ulici* 'He is walking up and down the street'. As mentioned previously, this sentence has two possible readings, depending on context: 'He is walking (at this time) up and down the street' and 'He walks (regularly/at intervals) up and down the street'. What both readings have in common is the notion of *complex action* ('up and down'); such *complex action* is characteristic of indeterminates for which a definite direction or goal are not specified, e.g., *jezdít* 'to ride back and forth/round and round/, etc.'; *vozit někoho* 'to carry (drive) someone (by conveyance) here and there/up and down/, etc.'. The notion of complex action can thus be considered to be the basic meaning of indeterminates. However, as I have already shown, this basic meaning may be displaced by habituality. As demonstrated previously, this always happens in Czech in intransitive constructions when a definite goal is specified. In Czech, the sentence *Pavel ten rok jezdil do Prahy* can have only such a habitual reading, i.e., 'That year Paul commuted/used to go to Prague'. As I demonstrated above, the verb phrase in such constructions denotes an indefinite number of events, rather than a particular activity. In nonhabitual meaning of indeterminates, however, the verb denotes a particular

action, although a complex one. For this reason, it is also possible for complex action and habituality to coexist in the same sentence, e.g., *Často chodí po ulici* 'He often walks up and down the street'.

In my view, distributiveness in transitive indeterminate verbs is a special manifestation of complex action: the action is still viewed as single but also as pertaining to a plurality of objects or to several parts of a mass substance. This being the case, a distributive reading of indeterminates is never possible with reference to a direct object containing a singular count noun, while the habitual reading is. This explanation, of course, is also quite consistent with the fact that a direct object NP containing two or more conjoined nouns is not sufficient for a distributive interpretation. *Vozí ženu a sestru do Prahy* 'He drives his wife and his sister to Prague' can have only a habitual reading; (47) is therefore ungrammatical, but (48) is well-formed:

- (47) **Zrovna teď vozí ženu a sestru do Prahy* 'Right now he drives his wife and his sister to Prague'
 (48) *Každý měsíc vozí ženu a sestru do Prahy* 'Every month he drives his wife and his sister to Prague'

I can mention here only briefly that my view of distributiveness also explains the behavior of perfective distributives in Czech: *pozavírat okna* 'to close the windows (one by one)'; *poutírat nádobí* 'to wipe the dishes (one by one)'—the Czech *nádobí* 'dishes' being a mass noun—, etc. These verbs, too, inherently designate a complex action, concretely that of distributiveness, and can thus take only a direct object containing either a count noun in the plural or a mass noun.

One objection to my analysis may be easily anticipated. Since many transitive verbs appear to have a distributive meaning when modified by a direct object containing a plural noun or a mass noun, the claim that distributiveness in indeterminates is a special instance of the complex action signaled by these verbs could seem unjustified. Sentence (49) is grammatical and may have a distributive reading:

- (49) *Teď právě umývám* { *talíře*
 nádobí } 'Right now I am
 washing { the plates
 the dishes } (presumably one by one)'

This objection, however, is not valid. The distribu-

tive reading of (49) is due only to the pragmatics of the situation: one normally does not wash a whole set of plates or dishes all at once, although under special circumstances one certainly may do so, as, for example, in a dishwasher. The possible distributive interpretation of (49) has thus nothing to do with any inherent properties of the verb; the verb *umývat* 'to wash' can equally well have a direct object in the singular:

(50) Ted' právě umývám talíř 'Right now I am washing the plate'

The situation is quite different with regard to both indeterminates and perfectives which signal distributiveness. Neither of them can take a direct object containing a singular noun; both (51) and (52) are ill-formed:

(51) *Ted' právě nosí maminka talíř na stůl 'Right now mother carries the plate to the table'

(52) *Pozavírám okno 'I shall shut the window (distributively)'

The distributiveness of indeterminates and perfectives is thus not simply a matter of pragmatics but rather stems from an inherent property of the verbs themselves, a property which is either permanent (as in perfective distributives) or a special manifestation of a more general meaning (as in indeterminates).

Before we turn to the final question, namely the overall validity of the usual markedness analysis of the verbs of motion, there is still one matter which needs to be mentioned at least briefly. Aside from such pairs as *jít* (det.)/*chodit* (indet.) 'to go (on foot)', Czech also has additional true iteratives, derived from the indeterminate member of the opposition: *chodívat* 'to go (on foot, at intervals)', *jezdívat* 'to go (by conveyance, at intervals)', *vozívat* 'to carry (by conveyance, at intervals)', etc. This fact raises two interesting questions: (a) If indeterminates can, in certain contexts, be "marked" for I/NA, what difference, if any, is there between the type *chodit* and the type *chodívat*? (b) If indeterminates can be "marked" for I/NA why does Czech have corresponding true iteratives (also "marked" for I/NA) as well?

The true iteratives like *chodívat* can be replaced freely by *chodit* without resulting in ungrammatical constructions: the difference between *Chodívá do kina* and *Chodí do kina* 'He goes to the

movies' seems to lie largely in the fact that the first sentence with *chodívá* indicates a sporadic attendance at the movies as opposed to the more regular attendance, signaled by *chodí* in the latter sentence. (For a discussion, cf. Kopečný 1962:20, who also cites the opinions of other Czech linguists). The reverse substitution, however, is not free: *chodívat* cannot replace *chodit* when the indeterminate verb denotes actuality. Consequently, (53) through (55) are well-formed, but (56) is not:

- (53) Chodí do divadla 'He goes to the theatre'
- (54) Chodívá do divadla 'He goes (sporadically) to the theatre'
- (55) Zrovna teď chodí po zahradě 'Right now he is walking in the garden'
- (56) *Zrovna teď chodívá po zahradě 'Right now he walks in the garden'

Consider now, however, sentences (57) and (58):

- (57) Pavel v sobotu chodí do divadla 'On Saturday, Paul goes to the theater', i.e., regularly on every Saturday.
- (58) Pavel v sobotu chodívá do divadla 'On Saturday, Paul usually goes to the theater', i.e., on most Saturdays, but not every Saturday. (This sentence does *not* mean that Paul goes to the theatre more than once on Saturdays.)

What the "iterative" *chodívá* signals, in this case, is thus a quantification over the adverbial *v sobotu*: the sentence now refers to a (large) subset of Saturdays. The same is true of all other "true iteratives" in similar contexts as I have shown in detail in another paper (Kučera, in press). The quantification may be either over an adverbial, as in (58) above or in (59) below, or over other constituents of the sentence, such as a plural subject, as is (60), (61) and (62), the last of which contains a "true iterative" derived from an indeterminate verb of motion. (In the following four examples, iteratives are underlined).

- (59) V neděli sedává v hospodě 'On Sunday he usually sits in the pub', i.e., on most but not all Sundays.
- (60) Ruští generálové umírávají v mladém věku 'Russian generals tend to die young', i.e., most but not all Russian generals.
- (61) Švédové bývají světlolvasí 'Swedes tend to be

- blond'
 (62) Švédové jezdívají na dovolenou na jih 'Swedes
 tend to go south on their vacation'

The reason why Czech has both indeterminates and true iteratives derived from them is thus not difficult to understand. The iteratives of the type *chodívá*, like other verbs derived with the infix *-va-*, inherently denote the special kind of habituality that I have called a quantified state. Verbs of the type *chodit*, on the other hand, denote a complex action which, in certain environments only, is manifested as an unqualified habit (i.e., a nonquantified state).

Let us now turn to the final question: Is the conventional opinion that determinate verbs are marked and indeterminate verbs unmarked really correct, at least as far as Czech is concerned? Recall that I have already demonstrated that it is the indeterminate verbs which, in certain contexts, may be "marked" for I/NA, while determinates always remain unmarked as to I/NA. This very fact already casts doubt on the usual analysis and suggests that a further examination of this problem may be needed.

Dokulil (1958:90ff.) attempts to make a strong case for the argument that the possibility of substitution of the marked morphological category by the unmarked category participating in the opposition "is not only an optional symptom of the unmarked member of the morphological correlation but a necessary condition in order for us to be at all able to judge such a category as unmarked." Dokulil points out that Jakobson, already in his early work (Jakobson 1932), used the substitution criterion—although cautiously—in support of his concept of unmarked categories; Jakobson's claim is that the substituting category will "usually" be the unmarked one. Jakobson's view of the nature of the marked and unmarked categories has, of course, continued to evolve (cf. Jakobson 1939). As I shall show below, the issue is quite complicated; nevertheless Dokulil's argument must be taken seriously: if the pair of morphological categories is indeed to be viewed as a hierarchical correlational opposition, then it logically follows that the unmarked category should be capable of replacing the marked one. As pointed out by Trnková (1969:35), the substitutability requirement appears to hold in Czech for true iterative vs. noniterative (i.e., simple imperfective) verbs: an iterative can, in all context, be replaced by a corresponding noniterative (while the opposite substitution is possible in some but not in all contexts). By this

criterion, the iterative verb is the marked member of the opposition, the noniterative the unmarked one. We must realize, however, that even in this seemingly clear-cut case, the replacement of an iterative by a noniterative imperfective will change the meaning of the sentence. As I demonstrated above, the sentence with the noniterative replacement will not have the special habitual reading (i.e., the quantified-state reading) of the corresponding sentence with an iterative verb. This fact already suggests that a substitutability requirement which contains the condition that the sentence with the unmarked term be a reasonable paraphrase of the sentence containing the marked term is too strong for it to be of much usefulness as a hypothesis-testing procedure.

This observation is clearly reinforced when it comes to the opposition determinate vs. indeterminate verbs. In order to begin with an unbiased view, let us first consider those cases where both the substitution of a determinate by an indeterminate and a substitution of an indeterminate by a determinate appear to be possible: *Jde po ulici* 'He is walking down the street' / *Chodí po ulici* 'He is walking up and down the street'; conversely, *Chodí po ulici* / *Jde po ulici*. In neither case is there any reduction in the grammaticality of the sentence. However, in the case of the first substitution the one-directional concept is replaced by complex action, while in the second substitution the reverse semantic shift takes place. It is thus quite clear that a strict substitutability criterion which includes the paraphrase condition will not yield very useful results in determining the markedness assignment in the verbs of motion. It is thus not surprising that Forsyth (1970:346), in his analysis of Russian, was able to find only one clear case in which the indeterminate (considered by him unmarked) can substitute for the determinate (assumed to be marked), namely in the expression of repeated unidirectional motion. But this case, of course, proves nothing since one can argue equally well that in the same expressions the determinate can substitute for the indeterminate; as a matter of fact, the latter position is a more reasonable one because the use of indeterminates in such constructions is more common. The second possibility of substituting indeterminates, mentioned by Forsyth, occurs in standard Russian only in some very specialized imperative constructions in which the verb *xodit'* is used metaphorically, i.e., *xodi!* 'play, make a move!'. As Forsyth himself admits, this certainly represents a "rather exceptional usage."

Even if one weakens the substitutability criterion, eliminating the paraphrase requirement and taking into consideration only whether the substitution of one verbal form by another still results in a grammatical sentence, the results are hardly supportive of the markedness analysis of the Czech verbs of motion. With some exceptions, it is the replacement of an indeterminate by a determinate that is possible in great many instances without resulting in an ungrammatical sentence. The reverse substitution, however, which the conventional markedness analysis would predict as the usual replacement, is possible only to a limited extent. Without trying to present an exhaustive listing, let me summarize at least the basic evidence for this claim:

(a) In all examples given previously in this article, the substitution of an indeterminate by a determinate verb was possible without resulting in ill-formedness, cf. sentences (10) vs. (16); (12) vs. (18); (27) vs. (24); (42) vs. (40); many additional examples of a similar kind could be constructed. The converse, however, was not the case. The substitution of a determinate by an indeterminate frequently resulted in ungrammaticality, cf. sentences (15) vs. *(9); (17) vs. *(11); (25) vs. *(28); (26) vs. *(29); (36) vs. *(30); (41) vs. *(43).

(b) In Czech—as in many other Slavic and non-Slavic languages—the present tense can be used to designate a "programmed future" if it cooccurs with a time adverbial marked [+Future]. This is the case, for example, in (63):

(63) *Zítřa se stěhujeme* 'Tomorrow we are moving'

Not all syntactic contexts allow this usage of the present tense and not all verbs can be used in this manner. A more detailed discussion of the syntax and semantics of the programmed future can be found in Kučera and Trnka (1975) and in Kučera (1978a). For our present purposes, the important fact is that determinate verbs can and indeterminate ones generally cannot signal such a programmed future. In other words, the substitution in such constructions of, let us say, *jít* (det.) by *chodit* (indet.) 'to go (on foot)', or of *jet* (det.) by *jezdit* (indet.) 'to go (by conveyance)', results in ill-formedness or in a marginal sentence at best.

(64) *Zítřa jedeme autem* 'Tomorrow we are going by car'

- (65) ?*Zítřa jezdíme autem 'Tomorrow we go by car'
 (66) Příští týden jdeme do kina 'Next week we are going to the movies.'
 (67) ?*Příští týden chodíme do kina 'Next week we go to the movies'

(c) In positive imperatives, both a determinate and an indeterminate verb can occur: *Jed' domů vlakem!* 'Go home by train!' and *Jezdi domů vlakem!* 'Go home by train! (generally)'. However, there are certain contexts in which only a determinate verb can occur. Consequently, the substitution of a determinate by an indeterminate may result in an ungrammatical string, while the opposite substitution does not:

- (68) Tak už jdi domů! 'Go home now!' (with a pleading connotation)
 (69) *Tak už chod' domů! 'Go home now!'
 (70) Po této silnici jezdí vždycky opatrně! 'Always drive carefully on this highway!'
 (71) Po této silnici jed' vždycky opatrně! 'Always drive carefully on this highway!'

(d) The most obvious counterexample to the claim that indeterminates can be substituted by determinates are the negative imperatives. In this form, mostly indeterminates occur: *Nechod' ještě!* 'Don't go yet!' is grammatical but **Nejdi ještě!* is not. However, this is not always true since we can have *Nejed' tak rychle!* 'Don't drive so fast!' with a determinate verb.

(e) There are a few other, very specific instances, in which the substitution of an indeterminate by a determinate results in an ungrammatical string. For example, in standard Czech only an indeterminate verb can occur in sentences which contain such adverbials as *pořád* 'all the time' or *neustále* 'continuously'; (72) is grammatical but (73) is not:

- (72) Pořád chodí do kostela 'He goes to church all the time'
 (73) *Pořád jde do kostela 'He goes/is going to church all the time'

It should be noted, however, that in some Moravian dialects of Czech, determinates can occur in such instances as (73). Kopečný (1962:17) cites these examples (quoted from Trávníček) to substantiate his assertion that determinate verbs are not inherently

marked for actuality: *Ona ide furt do pola* 'She goes to the field all the time'; *Nesú pořád z hospody gořalku* 'They bring brandy from the pub all the time'.

Dokulil's substitutability criterion thus gives not only mixed results but—if anything—appears to favor (at least statistically) the conclusion that the indeterminate verb is the marked member of the opposition and the determinate verb the unmarked one. This would, of course, lead to exactly the opposite analysis from that normally given by the adherents of the morphological markedness theory.

Since Dokulil's substitutability hypothesis and the conventional markedness analysis of the verbs of motion cannot both be correct, the question needs to be raised which of the two arguments is valid. If one considers the logical underpinnings of the morphological markedness theory, one cannot but reach the inescapable conclusion that it is Dokulil's argument that is basically sound.

Consider first the fact that the morphological markedness relation is essentially a special case of the relation of hyponymy. The term hyponymy is used by Lyons (1977:291ff.), for example, as a more suitable designation for what, in logic, has been often discussed in terms of class-inclusion. The hyponymy relation can be best illustrated on examples involving the relation of simple lexical items: so the word *rose* is a hyponym of *flower*, for example, with the word *flower* being the superordinate term of the relation. If we consider the extension of the lexeme (in the logical sense of extension), then the superordinate term is more inclusive: *flower* includes not only *rose*, but *daffodil*, *tulip*, etc. In terms of intension (again in the logical sense of intension), the hyponym is more inclusive: roses have all the properties of flowers plus additional properties which distinguish them from tulips, daffodils, etc.

Hyponymy is definable in terms of unilateral implication. So, for example, the verb *waltz* can be established to be a hyponym of *dance* by the virtue of the implication *She waltzed all night* → *She danced all night* (but, of course, not the converse). (This kind of definition of hyponymy by means of a unilateral implication also allows us to define synonymy as bilateral, or symmetrical hyponymy.)

As Lyons also suggests, the Praguean markedness relation is, essentially, a special case of hyponymy. The principal difference is that the unmarked term has two meanings, the general (which gives it the usual status of a superordinate term) and the narrow

or nuclear, which has a more specific sense, depending on context, and puts it in opposition to the marked term. Lyons suggests that the markedness relation may differ from the simple hyponymy relation by its potential of being reflexive: *Is that dog a dog or a bitch?* is meaningful, though rather odd (Lyons, 1977:308). If we recall the early history of the morphological markedness theory, we see that the first example of this relation, given by Jakobson (1932:4), was also lexical and very much similar to Lyons'. It concerned the Russian word *oslička* (female donkey) as the marked member of the opposition, and the word *osěl* (donkey) as the unmarked term. And Jakobson's example also suggests the possibility of a reflexive relation, although he does not explicitly label it as such: "Wenn ich *osěl* sage, bestimme ich nicht, ob es sich um ein Männchen oder ein Weibchen handelt, aber fragt man mich '*èto oslička?*' und ich antworte '*net, osěl*', so wird hier das männliche Geschlecht angekündigt—das Wort ist in verengter Bedeutung angewandt."

The logical basis of the morphological markedness relation thus clearly requires that the unmarked term must have the potential of expressing the "general" meaning. There must therefore be at least some contexts in which the unilateral implication, required by the theory, holds. If we examine certain perfective vs. imperfective aspectual oppositions, this implication does indeed hold. Assuming, for example, that the Czech verbs *napsat* and *psát* 'to write' constitute a perfective-imperfective aspectual pair, then a sentence with the marked perfective *napsat* should entail the corresponding sentence with the unmarked imperfective *psát*. In this particular case, the implication holds as expected: *Jan napsal knihu* 'John wrote a book' → *Jan psal knihu* 'John was writing a book'. It should be noted, however, that even with perfective-imperfective aspectual pairs, the unilateral implication, predicted by the markedness analysis, is not always demonstrable. A full discussion of the entire aspectual system of Czech, which would reveal these complications, is not possible in this brief article. I plan to return to the problem more fully in a subsequent publication.

What is quite clear, however, is that the unilateral implication, predicted by the conventional markedness analysis of the verbs of motion, never holds. Sentences with the allegedly marked determinates do not entail corresponding sentences with the supposedly unmarked indeterminate verbs. So, for example, the Czech *Petr jde po ulici* 'Peter is walking

down the street' does not entail *Petr chodí po ulici* 'Peter is walking up and down the street', *Marta jela do Prahy* 'Martha went to Prague' does not entail *Marta jezdila do Prahy* 'Martha used to go to Prague', *Veze ženu do lázní* 'He is driving his wife to the spa' does not entail *Vozí ženu do lázní* 'He drives his wife to the spa, i.e., habitually', etc. This clear lack of unilateral implication from determinates to indeterminates is also the reason why the substitutability criterion fails to give the results which Dokulil wanted demonstrated in cases of a markedness relation. Forsyth's difficulty in finding examples of substitution of the Russian *xodit'* for the supposedly marked *itti* (cf. above) thus becomes quite understandable, since Forsyth was trying to demonstrate the undemonstrable.

In short then, it is clear what the determinate vs. indeterminate contrast is NOT. It is not a markedness relation, as defined in Jakobson's definition cited above, with the determinate verb being marked and the indeterminate unmarked. It might perhaps be tempting to argue that the opposition in the verbs of motion does, after all, represent a markedness relation if the marking assignments are reversed, and the determinate verbs are viewed as unmarked and the indeterminate as marked. Could one not claim, after all, that the complex action and its special manifestations, which are denoted by the indeterminate verb, always imply the single components, signaled by the corresponding determinate verb? In other words, is it not the case that the sentence *Jan chodil po ulici* 'John walked up and down the street' entails the proposition *Jan šel po ulici* 'John walked down the street'? Or that the sentence *Marta jezdila do Prahy* 'Martha used to go to Prague' entails the sentence *Marta jela do Prahy* 'Martha went to Prague'?

In my view, trying to pursue this kind of analysis would be a mistake. The determinate verbs inherently denote a motion in a definite direction, the indeterminate ones a complex action and its special manifestations. The relation between these two sets of verbs is thus not the relation of hyponymy, of which markedness is a special case, but rather of antonymy. While it is true that determinate verbs, for example, may cooccur with a frequency adverbial and thus convey repeated activities or events, sentences of this kind denote only repetition, not habituality. Such simple iterative constructions, in contrast to habitual ones, are subject to definite quantification. That is then the reason why the sentence *Dvakrát jsem jel do Prahy* 'I went to Prague twice' is

well-formed.

Indeterminate verbs of motion, on the other hand, inherently denote complex action and its special manifestation, determined by syntactic cooccurrences. As I showed earlier in this paper, both distributiveness and habituality are triggered by a goal or direction adverbial, with the distributive reading possible only with a plural or mass object. Determinate verbs never have any of these properties. Recall especially that the habituality expressed by indeterminate constructions is not the same as repetition. Since this habituality is represented as an indefinite series of repeated occurrences, such sentences with indeterminate verbs do not allow definite quantifications: **Dvakrát jsem jezdil do Prahy* 'I used to go to Prague twice' is thus not grammatical.

We can conclude, therefore, that the verbs of motion do not exhibit any markedness relation, i.e., the special (potentially reflexive) case of hyponymy, but rather an antonymous opposition which—if we wanted to use Trubetzkoy's phonological terms—we would have to call equipollent but certainly not privative.¹

Finally, let me mention only briefly that a fuller analysis of the Slavic verbal systems strongly suggests that the basic semantic framework of a tri-chotomous semantic distinction into activities, states and events is a highly promising approach which may well lead to a more insightful view of other grammatical oppositions, including the perfective vs. imperfective contrasts. The reanalysis of the Czech determinate and indeterminate verbs of motion, which I proposed in this article, is thus only one facet of a much larger task.

NOTES

¹Besides the substitutability criterion, a number of other clues for the determination of the marked and unmarked members of an opposition has been suggested in the literature; a summary of these proposals can be found in Greenberg (1966). These additional criteria include such characteristics as greater syncretization evidenced in the marked categories, the "zero expression" of the unmarked category vs. a specific formal marking (e.g., an affix) of the corresponding marked term, a lesser degree of morphological irregularity in marked forms, the lack of certain forms in the marked category in comparison with the paradigm of the unmarked category, etc. In my view, all of these criteria are either clearly inapplicable to the verbs of motion (in which such distinctions cannot be observed) or could be applied only by stretching the interpretation of these clues beyond reasonable limits, e.g., taking into consideration the

different Ablaut grades in such pairs as *nést* vs. *nosit* 'to carry (by hand)'.

The question of whether an analog to the frequency phenomenon in phonology exists for grammatical categories as well has been also raised by Greenberg (1966) who studied some concrete frequency data. If such an analog really holds, then one would expect, in large samples of discourse, the unmarked morphological category to be more frequent than the marked one. The available frequency data point in this direction but are not unambiguous. Moreover, the theoretical foundation for a difference in frequency of unmarked and marked categories is in itself controversial. Nevertheless, the frequency data for determinate and indeterminate verbs in Czech are quite interesting in that they show that determinate verbs, without exception, are more frequent than indeterminate verbs, often by a strikingly large factor. The frequency data thus clearly offer no support whatsoever for the conventional markedness analysis proposed by many Slavic linguists. On the contrary, to put it charitably, the frequency data pose an additional problem for the traditional view.

The following tabulation displays the results of a statistical analysis of contemporary written Czech (Jelínek et al. 1961); the total sample consisted of 1,623,527 running words taken from 75 different sources. The frequency figures, given below, combine the frequency of all inflected forms of a given verb (including those cooccurring with the "reflexive" particle *se*).

<i>Determinate</i>		<i>Indeterminate</i>		<i>Frequency ratio</i>	
<i>jít</i>	3,336	<i>chodit</i>	731	4.56	'to go (on foot)'
<i>jet</i>	486	<i>jezdit</i>	149	3.26	'to go (by conveyance)'
<i>běžet</i>	417	<i>běhat</i>	81	5.15	'to run'
<i>letět</i>	148	<i>létat</i>	59	2.51	'to fly'
<i>nést</i>	348	<i>nosit</i>	168	2.07	'to carry (by hand)'
<i>vézt</i>	48	<i>vozit</i>	31	1.55	'to carry (by conveyance)'
<i>vést</i>	767	<i>vodit</i>	29	26.45	'to lead'
<i>táhnout</i>	306	<i>tahat</i>	71	4.31	'to drag'
<i>hnát</i>	204	<i>honit</i>	63	3.24	'to chase'
TOTAL	6,060		1,382	4.38	

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ANIMACY IN RUSSIAN AND OTHER SLAVONIC
LANGUAGES: WHERE SYNTAX AND SEMANTICS
FAIL TO MATCH*

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0. *Introduction*

The problem of animacy deserves attention both for its inherent interest and for its wider significance. First the relevant data in Russian are described [§1] and a morphological solution is shown to be inadequate [§2]. A solution is proposed using semantic and syntactic features, and copying conventions [§3]. This analysis gains surprising support from the syntax of pronouns [§4]. The constructs justified for Russian are shown not only to be appropriate to other Slavonic languages [§5] but also to be important for linguistic theory [§6].

1. *The Data*

The typical way in which animacy shows up in Slavonic languages is in giving the accusative case of animate nouns the form of the genitive. The definition and range of animacy vary from language to language. In Russian, animate nouns are those denoting living things, including humans, animals and insects but excluding plants. There are various complications with this distinction; these have been considered elsewhere (Corbett 1976:54-56, 76-79) and will be reviewed only briefly here. The exceptions fall into two main categories. The first category consists of nouns which in their basic meaning are animate but which may be used to refer to an inanimate e.g. *slon* 'elephant' may also refer to a bishop in chess; *brat* 'brother' in '*Brat'ja Karamazovy*' refers to a novel. In such cases animacy is retained and the accusative is as the genitive. There are many similar examples and the rule is all but absolute. In contrast, the second category involves items normally inanimate which may in restricted circumstances, even in the usage of particular writers, be treated as animate. *Šar* 'sphere' is normally inanimate but in the context of billiards:

- (1) *položit' šara v luzu*
'to pot a ball'

it may be treated as animate. As an example of the idiosyncratic use of animacy, Gallis (1968:118) quotes:

- (2) *Xoreja vmesto jamba i jamba vmesto xoreja v vol'nyx stixax upotrebljaju ja očen' redko...*

'Trochee instead of iambus and iambus instead of trochee in free verse I use very rarely'

Xorej and *jamb* are, of course, normally inanimate. While the items in the first category are regularly treated as animate, those in the second vary. These exceptions, though interesting in their own right, form a small minority. Our concern with them in this paper will be to ensure that our analysis can cope in principle with exceptions. For this purpose we need not differentiate between the "obligatory" and "optional" exceptions discussed above. We shall use *slon* as our archetypal exception.

So much for the definition of animacy in Russian. Its range is more easily described. Animate nouns (and their modifiers) have the accusative as the genitive if they are masculine singular or masculine, feminine or neuter plural. Examples:

- (3) a. *Ja videl brata* [masc. sing. acc. animate = gen.]
 b. " " *dub* [masc. sing. acc. inanimate = nom.]
 c. " " *sestru* [fem. sing. acc. animate = acc.]
 d. " " *sosnu* [fem. sing. acc. inanimate = acc.]
 e. " " *čudovišče* [neut. sing. acc. animate = nom.]
 f. " " *derevo* [neut. sing. acc. inanimate = nom.]
 g. " " *brat'ev* [masc. pl. acc. animate = gen.]
 h. " " *duby* [masc. pl. acc. inanimate = nom.]
 i. " " *sester* [fem. pl. acc. animate = gen.]
 j. " " *sosny* [fem. pl. acc. inanimate = nom.]
 k. " " *čudovišč* [neut. pl. acc. animate = gen.]
 l. " " *derev'ja* [neut. pl. acc. inanimate = nom.]

(Translation: a. 'I saw the brother'; b. 'oak';

c. 'sister'; d. 'pine'; e. 'monster'; f. 'tree'; g-l are the plurals of a-f.)

2. *The Morphological Analysis*

One way of handling the data is to assign nouns like *brat* and *dub* to different paradigms; the nouns in (3) would in fact be divided into six such paradigms. Each noun would be marked as to its paradigm and this would specify that the accusative of *brat* is *brata* while that of *dub* is *dub*. Our exception, *slon*, would be assigned to the first paradigm.

At first sight this solution is attractively simple. There are, however, various snags. Firstly, the exceptions discussed above are few, compared with the vast majority of nouns where the morphological distinction in animacy corresponds to a genuine semantic distinction. Our grammar ought to capture this regularity. This could be achieved by allowing the morphological component access to semantic features.

However, the number of declensional types is almost doubled to accommodate differences which occur only in the accusative. This is made worse by the fact that there is never a separate ending for the animate accusative: it is either the same as the inanimate accusative [fem. sing.] or as the genitive [masc. sing.] or as the nominative [neuter sing.].

The most serious objection concerns adjectival agreement. If nouns like *brat* have an independent accusative, *brata*, while those like *dub* have *dub*, the adjective must have two declensions and must match them to the noun, to produce

(4) *vysokogo brata* [acc. = gen.]
'tall brother'

(5) *vysokij dub* [acc. = nom.]
'tall oak'

A similar argument holds for the relative *kotoryj*. Clearly this is unacceptable. A much more economical solution will be reached using a syntactic feature. This implies that the accusative (apart from feminine singulars) is not independent but—as is often stated in pedagogical grammars—takes its form from the nominative or genitive.

The role of the morphological component will therefore be to interpret the syntactic features—which will include animacy, number, gender and case—and give the appropriate ending. The following

accusative prediction rules, in approximate form, will hold:

1. If a noun has an independent accusative it is selected.
2. An animate plural noun has its accusative as the genitive.
3. An animate masculine singular has its accusative as the genitive.
4. In all other instances the nominative is selected.

3. *Syntactic and Semantic Features*

It has been suggested that animacy be treated as a syntactic feature, which will in turn allow the morphological shape of the word to be determined. (This is basically the approach adopted by Dingwall (1969, especially 226-29), who illustrates the complexity of the problem.) However, it is clear that animacy must also be part of the semantic characterization of nouns. We shall first consider the mechanisms required to capture these facts and then consider how they help to explain the behaviour of feminine and neuter nouns.

If animacy is considered firstly as a semantic marker it can be copied on to the syntactic characterization of a noun. It is claimed that these two characterizations are separate, and that once this is recognized certain other difficulties, notably the sex/gender problem in Russian, may be resolved. This scheme reflects the fact that in most cases nouns which are animate semantically are also animate syntactically. Exceptions will be labeled in the syntactic characterization. For example:

	<i>brat</i> 'brother'	<i>dub</i> 'oak'	<i>slon</i> 'bishop'
semantic features	+noun +animate -plural +masculine . . .	+noun -animate -plural . . .	+noun -animate -plural . . .

	<i>brat</i> 'brother'	<i>dub</i> 'oak'	<i>slon</i> 'bishop'
syntactic features	+noun +animate -plural +masculine . . .	+noun -animate -plural . . .	+noun +animate -plural . . .
	(all copied)	(all copied, syntactic gender to be added)	(+animate is irregularly marked here, syntactic gender to be added)

It should not be assumed that all features are merely copied. It is claimed that *brat* is marked [+masculine] in its semantic characterization and that this is copied, whereas *dub* is not so marked. It is, however, to be specified as [+masculine] in the syntactic characterization.

In semantic terms it is clear that *sestra* and *čudovišče* are as animate as *brat*. This is shown syntactically in the plural but not in the singular. This irregularity may be expressed in the rule which copies the features from the semantic to the syntactic characterization of a word.

Copying restriction

'Copy [+animate] only with [+masculine] or [+plural]'. Its effect is seen in the following examples:

	<i>sestra</i>	<i>sestry</i>
Semantic features	+noun +animate -plural +feminine . . .	+noun +animate +plural +feminine . . .

	<i>sestra</i>		<i>sestry</i>
syntactic features	+noun -plural +feminine . . .		+noun +animate +plural +feminine . . .

The copying restriction is a necessary complication to the grammar. It is compensated for by a resultant simplification in the prediction rules for obtaining the correct accusative forms. The formulation below is simpler than that in section 2 and it is to this simpler set that reference will be made in future.

Accusative prediction rules

1. If there is an independent accusative it is selected.
2. [+accusative] → [+genitive] / [+animate].
3. [+accusative] → [+nominative].

These are ordered rules; the second may be adopted only if the first does not operate.

The first rule allows us to generate the forms *sestru* and *sosnu*. It might be argued that these should not be included but that the prediction rules should only be invoked to cover morphological gaps. This is shown to be false when we turn to nouns like *djadja* 'uncle' which decline like feminine nouns but are of masculine gender. Consider the sentence

- (6) *ja videl starogo* [masc. acc. = gen.] *djadju* (acc.)
'I saw the old uncle'

In order to obtain the correct adjectival agreement, *djadja* must be marked as animate, as above. If the first prediction rule were omitted, the result would be:

- (7) **ja videl starogo* (masc. acc.-gen.) *djadi* (gen.)

Sentence (7) shows that the syntactic features of the noun are copied on to the adjective, to which the prediction rules are applied separately.

The second prediction rule produces the

accusative-genitive forms: *brata*, *brat'ev*, *sester*, *čudovišč*, and *slona*.

The third prediction rule produces the accusative-nominative forms of the neuters: *čudovišč*, *okno*. It can also cope with feminine nouns of the *-i* declension which appear as irregular in most analyses. These may be animate, *myš* 'mouse', or inanimate, *noč* 'night'; in the singular they have accusative = nominative, while in the plural *myšej* (accusative = genitive) and *noči* (accusative = nominative). If we analyze these as having no independent accusative the copying convention and prediction rules yield the correct results.

The copying convention given above reflects the irregularity in animate singulars which are feminine or neuter. The present position of the feminine is readily comprehensible: most feminines have an independent accusative. The forty or so animates in the *-i* declension may be handled as described above. Neuters are more difficult to understand. In the singular the accusative is as the nominative irrespective of animacy; in the plural, the dozen or so animate neuters have the accusative as the genitive. I suggest that this situation has arisen because gender is no longer distinguished syntactically in the plural:

- (9) *xorošie duby/sosny/okna byli...*
'the good oaks/pines/windows were...'

Thus in the syntactic characterization no gender need be specified, given the feature [+plural].¹ In this situation, rule simplification would naturally lead to the copying of the animacy feature onto all plurals.

4. Pronouns

Let us now consider whether the rules proposed can account for pronouns. While pronouns like *čto* 'that', and *kto* 'who' present few problems, the personal pronouns, especially those of the third person, are much more difficult. How are we to explain:

- (10) *ja videl dub* [acc. = nom.]/*ego* [acc. = gen.]
'I saw the oak/it'

and, more surprisingly:

- (11) *ja videl okno* [acc. = nom.]/*ego* [acc. = gen.]
'I saw the window/it?'

The defeatist solution is to say that the accusative of *on* is *ego*, irrespective of animacy, and so on. Even then, *ego* as the accusative of *ono* seems particularly odd given that no neuter singular has the accusative as the genitive.

It is suggested that personal pronouns are marked syntactically as [+animate]. The rules proposed above will then generate the correct forms. This suggestion is simpler than specifying the accusative in each case as it uses an existing mechanism and accounts for neuter *ego*. There are two further pieces of evidence in favour of this analysis:

1. Perlmutter and Orešnik (1973), to whom the present work owes a great deal, make a similar suggestion for Slovenian. Their analysis is based on purely syntactic criteria, in particular the analysis of the "orphan accusative." They do not use their suggestion to account for the actual forms of the pronouns, nor are their arguments relevant to Russian. However, the fact that a similar analysis can be justified for another Slavonic language lends indirect support to our analysis. We shall return to this point later.
2. As discussed earlier, there are nouns which are irregularly marked [+animate]. Thus the solution proposed for pronouns is not adding to the grammar but using a device required elsewhere.

Given that the morphology of personal pronouns can be accounted for by marking them as [+animate] syntactically, we should now ask whether there is any direct syntactic evidence. Sentences involving agreement with the pronoun provide such evidence as the following informant work shows.

The sentences below were presented to Russian native speakers who were asked to give the appropriate adjectival endings.

1.	<i>Ty videl brata?</i> ²	<i>Da, videl ego, prokljat...</i>
2.	" " <i>dub?</i>	" " <i>ego,</i> "
3.	" " <i>sestru?</i>	" " <i>ee,</i> "
4.	" " <i>sosnu?</i>	" " <i>ee,</i> "
5.	" " <i>čudovišče?</i>	" " <i>ego,</i> "
6.	" " <i>derevo?</i>	" " <i>ego,</i> "
7.	" " <i>brat'ev?</i>	" " <i>ix,</i> "
8.	" " <i>duby?</i>	" " <i>ix,</i> "
9.	" " <i>sester?</i>	" " <i>ix,</i> "
10.	" " <i>sosny?</i>	" " <i>ix,</i> "
11.	" " <i>čudovišč?</i>	" " <i>ix,</i> "

12. *Ty videl derev'ja? Da, videl ix, prokljat...*

(Translation: 1. 'Did you see the brother? [masc. sing. animate] Yes, (I) saw him, the damned' (i.e. 'damn him'); 2. 'oak' [masc. sing. inanimate]; 3. 'sister' [fem. sing. animate]; 4. 'pine' [fem. sing. inanimate]; 5. 'monster' [neuter sing. animate]; 6. 'tree' [neuter sing. inanimate]; 7-12 are the plurals of 1-6.)

This test produced extremely interesting results: the answers may be arranged in three groups as shown in the Table. While the informants were of different ages and origins, some living in the Soviet Union and some in emigration, there is no apparent correlation between these factors and the groups into which the results fall.

Answers: 48 informants

	Type I (maximum genitive)	Type II	Type III (maximum nominative)
1. <i>brata</i>	-ogo	-ogo	-ogo
2. <i>dub</i>	-ogo	-ogo (a)	-yj (d)
3. <i>sestru</i>	-uju	-uju	-uju
4. <i>sosnu</i>	-uju	-uju	-uju
5. <i>čudovišče</i>	-ogo	-oe (b)	-oe (e)
6. <i>derevo</i>	-ogo	-oe	-oe
7. <i>brat'ev</i>	-yx	-yx	-yx
8. <i>duby</i>	-yx	-yx	-ye (f)
9. <i>sester</i>	-yx	-yx (c)	-yx
10. <i>sosny</i>	-yx	-yx	-ye (g)
11. <i>čudovišče</i>	-yx	-yx	-yx
12. <i>derev'ja</i>	-yx	-yx	-ye
Number of standard informants	12	14	4
Variants	none	4 incomplete (a) 3 had <i>yj</i> (b) 3 had <i>ogo</i> 2 specifying 'if animate' (and <i>oe</i> if not)	(d) 1 had <i>ogo</i> , 1 had <i>ogo</i> here and at 5. (e) 1 had <i>ogo</i> . (f) 2 had <i>yx</i> , 1 more had <i>yx</i> with <i>ye</i> as al- ternative. (g) 1 had <i>yx</i> .

(*ogo* and *yx* are genitive endings, *uju* is the accusative feminine, *oe* and *ye* are nominative forms.) The entry "standard informants" refers to those who gave exactly the set of responses listed. Those under

'variants' gave the responses listed except for the variation specified³: thus they are in addition to the standard informants and are all discrete—none of those given as varying under, say, (a) are the same as any under (b). Of the four entered as incomplete, one could not settle on an answer for 6, finding both alternatives unnatural; the other three were the first informants questioned on this subject and not all the questions were put to them. The answers available show that they fit into Type II (though perhaps not "standard II").

Type I is a clear confirmation of the hypothesis marking personal pronouns as syntactically animate. In all instances, the [+animate] feature is copied onto the adjective. Note that features are copied - not the genitive case: this explains the *uju* ending of 3 and 4 - assigned by the first of the prediction rules (section 3). In all the remaining sentences the genitive is assigned by the second of the prediction rules. One interesting comment from an informant: "I feel they are all personified because of the pronoun."

Type III represents potential counter-evidence to our claim. The counter-evidence is in fact surprisingly weak. Firstly, several informants who gave answers of Type I or II said that, with a long pause after the pronoun, Type III answers were an alternative to those they had given (after a pause, the adjective can refer back to the noun). Thus the four standard Type III informants may simply have taken this reading. The informants who allowed the genitive with one of the "inanimate" pronouns but not the rest (variants d, e, f, g) further weaken the importance of the group; if animacy can be copied in one instance, there is no reason in principle why it should not be copied in the others.

Type II (which varies from Type I only in having accusative-nominative for 5 and 6) is the most complex group, and the most popular: it also provides the best support for our hypothesis. The question is why animacy should not be copied only when the pronoun is neuter. The answer is that these speakers, when copying features from the pronoun, have applied the copying restriction as if copying from the semantic component. In other words, they have copied the feature [+animate] only when accompanied by the feature [+plural] or [+masculine]. This leaves the neuters as accusative-nominative.

This explanation involving the extension of the copying restriction may seem unlikely: why should a restriction operative on the copying of semantic features on to the syntactic characterization be applicable when copying features for syntactic agreement? The answer is that although the operations are different, there is no reason why they cannot be performed by the same rules (basically 'copy all features') with the same restrictions. If the restriction on copying animacy is applied when copying features from noun to adjective this will have no effect. Animacy will be copied on to the adjective only along with [+masculine] or [+plural] but it will have reached the syntactic characterization of the noun only if so marked. Thus generalizing the semantic-syntactic copying rules to adjectival agreement is a simplification of the grammar which will not normally be reflected in syntax.⁴ The difference between Type I speakers and Type II speakers is that the latter have generalized the copying restriction while the former have not. Normally there would be no indication as to whether a speaker had generalized the copying rules or not: only such unusual sentences as given above expose the difference.

There are interesting variations in group II. One informant chose the accusative-genitive for 5 but not 6 (variant b), and two others admitted it as grammatical while preferring the accusative-nominative. Here, I suggest, the speaker, confronted with the "illegal" syntactic combination:

+animate
-masculine
-feminine
-plural
:

has "checked back" to find where the feature [+animate] has come from. When in the case of 5 it is found also in the semantic characterization it is admitted, whereas in the case of 6, where it has no supporting semantic feature, it is omitted.

Two informants, shown by previous experience to be most reliable, gave to answers to 5, specifying that if the *čudovišče* was animate the adjectival ending *-ogo* was required, otherwise *-oe*.⁵ This confirms the case above. Perhaps it is also an attempt to rationalize a choice where there are two good possibilities.

The variation at (a)—three informants—is more difficult to explain. It seems that these informants "check back" as in the previous case and have rejected the animacy marker on *ego* because the gender marker (masculine) is not supported by a semantic marker. This would explain how they split singular and plural in this way: the "suspicious" examples in the plural, when checked back, reveal a plural marker even in the semantic component.⁶

Lest the value of this evidence be called into question, two potential objections will be considered—that the sentences involved are too unusual and that the test is too blatant.

The sentences involved are indeed unusual—were they more usual it is likely that the standardizing or nonstandardizing of the copying convention would have been made regular. However, examples of agreement with object pronouns do occur unsolicited:

- (12) *I do togo ee, miluju, raskačalo, čto ...*
(Zoščenko, Čert)
'And so much *her*, *nice*, (it) shook about,
that ...'
(And she was so much shaken about, the dear
thing, that ...)
- (13) *Ego i vprjam' našli sredi mertvix, slepogo ...*
(Pravda, 31.5.73)
'Him even indeed (they) found amid the dead,
blind ...'
- (14) ... P. Beljaevskij ščitaet vopros o
vtorostepennyx členax predloženiya nastol'ko
temnym i zaputannym, čto predlagaet otkazat'sja
ot deleniya ix ... i obobščit', ob"edinit'
vsex ix v odnoj kategorii pojasnitel'nyx slov.
(V. V. Vinogradov, *Iz istorii izučeniya ruskogo*
sintaksisa, 1958, 268)
'P. Beljaevsky considers the question of second-
ary parts of the sentence so obscure and in-
volved, that he suggests refraining from divid-
ing them ... and generalizing, uniting *all them*
(i.e. them all) in one category of explicative
words'.

Example (14) is the most relevant for our purposes in that it shows not only agreement with an object pronoun but also animate agreement with a pronoun with inanimate reference. This example is quoted by Blažev (1962, 30). Unknown to me, when the informant work described above was carried out,

Blažev had already reported instances of animate agreement with pronouns with inanimate reference, both from texts and informant tests. Besides examples with forms of *vse*, he includes examples with *ego samogo*, 'it itself', *samogo sebja*, 'itself' (reflexive), *ix oboix*, 'them both' and claims that with forms of *sam* the animate form is obligatory to avoid its being understood as referring to the subject. In his main informant test Blažev restricted himself to the choice *vsex* v. *vse* when agreeing with *ix* referring to an inanimate (ten subjects were given nine choices: there were 23 occurrences of *vsex* and 67 of *vse*) and so he did not discover the regularities of feature copying described above.

It must be admitted that our test is unsophisticated. However, this weights the odds against obtaining such clear-cut results as were in fact obtained. While there is room for more detailed work, the evidence gives clear support for copying of animacy from pronouns (including those referring to inanimates) and thus to the analysis of feature copying.

5. *Extension to other Slavonic Languages*

It is claimed that the mechanisms justified above are applicable to the other Slavonic languages. The analysis of pronouns will be considered for all the Slavonic languages and animacy in Slovenian will be considered in general. This is taken as a test case as it has been discussed recently; data from Ukrainian and Belorussian will also be discussed briefly.

The claims made for Russian personal pronouns:

- (1) that they are marked syntactically [+animate];
- (2) that there forms may be derived by the accusative prediction rules given above;

hold good for all Slavonic languages (with the exception of Bulgarian and Macedonian which are irrelevant here). Some, like Serbo-Croat and Slovak, have a special feminine accusative singular form, as indeed do some North Russian dialects (*onu*); this is handled by the first prediction rule. Others, like Belorussian and Ukrainian, have accusative-genitive throughout. No Slavonic language has accusative-nominative in any personal pronoun.

As Slovenian personal pronouns, especially those of the third person, are the most complex, we shall take them as an illustration.

		Masculine	Neuter	Feminine
Singular	Nom.	<u>ón</u>	<u>óno/onô</u>	óna
	Acc.		njéga (ga)	njǒ (jǒ)
	Gen.		njéga (ga)	njǐ (je)
Dual	Nom.	<u>oná</u>	<u>oné</u>	<u>oné</u>
	Acc.		njú/njìh (ju/jih)	
	Gen.		njú/njìh (ju/jih)	
Plural	Nom.	<u>oní</u>	<u>oná</u>	<u>oné</u>
	Acc.		njǐ (jih)	
	Gen.		njìh (jih)	

(from De Bray, 1951, 397; the bracketed forms are enclitics) The first prediction rule allows for the forms *njǒ*, *jǒ* and *njǐ*. It also handles the masculine *-nj* and neuter *-nje* used after prepositions. All the remaining accusative gaps are filled with "borrowed" genitives by the second prediction rule.

It is worth asking how it is that pronouns can carry a marker for animacy even when referring to inanimates. Perlmutter and Orešnik were particularly concerned about this point (1973:439). In the light of the analysis given above this problem is no longer particularly troublesome. Once it is identified as being a syntactic problem, then it is seen to be comparable to that of syntactic gender which does not reflect sex. Referring to inanimates by a syntactic animate is no "worse" than making them masculine or feminine.

Given then that the theoretical problem is by no means unique and that the pronouns in question show a syntactic quirk, possible reasons are not too difficult to find:

- (i) the other personal pronouns are always animate;
- (ii) pronouns tend to move further forward in the sentence than other NP's. This makes the discriminatory role of case marking (ensuring that subject and object are distinguishable) more important; problems would arise if nominative and accusative coincided.

Pronouns therefore behave like Russian *slon*; when referring to inanimates they cannot lose their syntactic

animacy.

From the analysis above it is clear that the accusative forms of Slovenian personal pronouns can be predicted by the mechanisms suggested for Russian. Let us now consider whether the rest of the theoretical constructs are applicable.

Firstly the distinction between semantic and syntactic animacy is just as necessary in Slovenian to deal with nouns such as *rak* 'cancer' and *as* 'ace' which are semantically inanimate but syntactically animate (Perlmutter & Orešnik, 1973:432). More generally, there are feminine nouns which are animate semantically though this is not reflected syntactically. Having a restricted copying rule as postulated for Russian captures the "collective irregularity" of these nouns rather than giving each an animate marker which is not used in syntactic rules. The copying rule will be further constrained to copy animacy only in conjunction with the feature [+singular]. Even though the pronoun *jih* is marked [+animate] and has its accusative as the genitive, the plural "orphan accusative" will not show genitive case marking as the first prediction rule ("if there is an independent accusative it is selected") will specify the accusative plural endings.

The variation in usage in the accusative singular of animate neuters can also be written into the copying rule: some speakers copy animacy together with [+neuter, +singular], some do not. The fluctuation in the orphan accusative and its general avoidance are natural consequences: there is doubt as to whether animacy should be copied from a neuter pronoun and so the situation is avoided. When the problem is faced, the copying rule is applied as in Russian giving nominative or genitive as the final result, depending on whether the speaker allows animacy copying with neuters. This is further evidence that the same copying rules may operate within NP's as operate in the copying of semantic to syntactic features.

Thus a re-analysis of the Slovenian data along the lines suggested allows us to retain the considerable merits of the Perlmutter-Orešnik analysis while both further simplifying the grammar and increasing its explanatory value. The simplification rests in the prediction of the accusative forms of the pronouns by the mechanism already available and in the elimination of redundant syntactic markers (e.g. animacy for feminine nouns). The explanatory value is increased by the separation of the semantic feature of animacy (required for selectional restrictions) and the syntactic feature. This analysis reinforces the claim

that all that is peculiar to Slovenian in the constructions discussed by Perlmutter and Orešnik can be traced back to the fact that personal pronouns may be used in cases of Identity of Sense.

Some Slavonic languages have gone further than Russian or Slovenian in marking nouns as animate even though there is no possible semantic association with animacy. For example, Zatovkanjuk (1972) gives numerous examples from Ukrainian and Belorussian. Here we see animacy as a syntactic marker becoming more like grammatical gender; instead of being predictable from semantic considerations in all but a few instances, it is becoming more idiosyncratic. More generally, instead of differentiating subject and object precisely when confusion is most likely (i.e. when the object is animate) these languages are tending to give a formal marker to the accusative case whether it is required or not.

6. *Theoretical significance*

Our analysis of animacy has theoretical interest in that a clear model is proposed and justified; the proposal involves both semantic and syntactic markers. This seems innocent enough but such a view, as put forward by Katz and Fodor (1963), has been challenged. Weinreich contends that there are no grounds for postulating two distinct categories:

The only issue in KF [Katz and Fodor] on which the 'metatheoretical' distinction between syntactic and semantic markers has a substantive bearing is the problem of markers of both kinds which 'happen to' have the same names. It is proposed, for example, that *baby* be marked semantically as (Human), but grammatically as nonHuman (hence it is pronominalized by *it*), whereas *ship* is treated in the reverse way. The problem, however, has been solved in a purely grammatical way since Antiquity in terms either of mixed genders or of double gender membership. (1966, 404)

Unfortunately, the solution which has worked "since Antiquity" is nowhere to be found. Weinreich gives references to Hockett and Martinet where the problem is posed but certainly not solved.

The animacy problem is a fully analogous case in that animacy is relevant both semantically and syntactically but the two do not coincide. This evidence alone—quite apart from similar sex/gender problems—

is sufficient to justify separate semantic and syntactic markers.

However, they are not to be kept completely apart. The system of copying rules proposed allows us to capture the obvious generalization that semantic and syntactic features often coincide, while permitting us to handle the instances where they do not. It recognizes the fact that *brat* 'brother' and *dub* 'oak' are not masculine "in the same way": this sort of problem would not affect Weinreich as his analysis was based on English: clearly, his model, which involves treating concord as a semantic process, would fail here. Thus the separation of semantic and syntactic features is justified and the copying mechanisms described above are a necessary addition to linguistic theory. Furthermore, it has been shown that similar devices required in different parts of the grammar (in this instance, copying devices) may or may not be treated as a single device in the grammars of individual speakers of the language.

NOTES

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¹This can be expressed by a second copying convention: 'copy gender only with the feature [-plural]'. Our earlier feature set for *sestry* can be simplified: [+feminine] should not be copied into the syntactic characterization.

It might be objected that the gender distinction in the plural cannot be so easily dismissed. The oblique cases of *oba* 'both' preserve the distinction masculine-neuter v. feminine. In fact the use of *oba* demonstrates once again that the distinction has been lost: the feminine forms are used only in the written language and very careful speech—normally the masculine-neuter endings are used throughout. Zaliznjak (1964: 31) rejects the claim that gender is not distinguished in the plural on other evidence:

- (i) *Ja dovolen ètimi stenami, každyja* (fem. sing.)
iz kotoryx po-svoemu xoroša.

'I am pleased with these walls, each of which in its way is good.'

He claims that *stenami* must be labeled as feminine plural in order for *každyja* to be given the correct form. This is hardly convincing: the gender of *každyja* could be established in different ways, the simplest being to suggest a deleted noun (*stena*).

²Forms like 1 and 7, where the answer is obvious, serve a double function:

- (i) they help prevent the native speaker becoming dis-oriented and losing confidence in his judgments. A series of questions, all of which are difficult, soon leads to confusion.
- (ii) they serve as a check that the informant knows what is involved—that he is reading the whole sentence for example.

There was only one set of answers which seemed invalid on the basis of this test: an informant (variant (c) below) gave the ending *-ye* for sentence 9 with *yx* for 8. That is—as expected—the only such example and suggests that that particular set of data is highly suspect.

³Some informants gave alternative responses or comments. These are listed here:

Type I

In discussion, one informant said he preferred *-oe* at 6. One was very hesitant about 5 and 6, said 6 was the most difficult and accepted *-oe* for both.

Type II

One informant, varying as under (b), gave variants at 2, 5, 8, 10 and 12, with the noun repeated. One said that *-ogo* was an acceptable alternative at 5, although both were better avoided, and that *-yj* was completely unacceptable at 2. One gave *-ogo* as an alternative at 5. One gave alternatives with *prokljatuščego*, etc. One said there were no possible alternatives; he then said that *-ogo* was as good as *-oe* at 5, perhaps even better, but that *-ye* in 8, 10 and 12 was definitely inferior. One said the nominative was possible as an alternative throughout (including 3 and 4) if the sentence was divided into two '*smyslovye gruppy*'. One gave alternatives at 2, 8, 10, and 12.

Type III

One informant gave *-yx* as an alternative for 8, 10 and 12. One, varying at (g), queried his own responses at 2, 8 and 12.

⁴Similarly if the convention given in note 1 were applied in copying features from noun to adjective it would also have no effect. Thus in *xorošie sestry* 'good sisters' gender would not be copied from *sestry*; equally *sestry* could not be syntactically marked for gender. However, I have not found a way of forcing the generalizing or non-generalizing of this copying rule to the surface.

⁵*Čudovišče* can, unfortunately, sometimes refer to inanimates. There was no better alternative as the completely unambiguous neuter animates are all morphologically adjectives or participles and so would have caused interference problems.

⁶Another curious phenomenon which may be related is the behaviour of *personaž* 'character, personage' (Rozenal' and Telenkova 1972:177) which can only be inanimate in the singular but can be animate or inanimate in the plural.

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INDIVIDUATION: AN HISTORICAL CASE STUDY

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0. Introduction

Slavic declension provides a wealth of morpho-syntactic information, including some valuable evidence of the existence of an unexpected diachronic interface between morphologically and syntactically conditioned case-marking phenomena. The following discussion examines one aspect of a well-known Slavic case-marking phenomenon, consisting synchronically in the occurrence of genitive-case forms of certain nouns, adjectives, and pronouns in syntactic conditions that require the accusative case. This marking (the term "marking" being used here in its common-parlance sense, without any implications as to the nature or grammatical source of the marking) is illustrated in the Russian examples (1)-(3) below, where the relative pronoun *kotoryj* 'who, which, that' is shown to have two different forms in the masculine singular accusative, depending on the animacy of its antecedent; the animate accusative in (3) is identical to the genitive, which appears in (2), whereas the inanimate accusative is the same as the nominative, which occurs in (1):

- (1) *Slon, kotoryj medlenno idet*
Poezd,
'An-elephant
'A-train *that* (nom.) is-going slowly'
- (2) *Slon, bez kotorogo ničego by ne vyšlo*
Poezd,
'The-elephant
'The-train *without which* (gen.) nothing
would-have worked-out'
- (3) *Slon, kotorogo vy tak ljubite*
Poezd, kotoryj
'The-elephant *that* (acc.)
'The-train *that* (acc.) you like so-much'

The genitive-accusative occurs in certain declension classes, such as the personal pronouns, that do not have an animate/inanimate distinction, and it has even been extended to all anaphoric pronouns,

regardless of the animacy of their referent. A few inanimate nouns in Russian also show the genitive-accusative, for example, *tuz* 'ace', whose genitive and accusative are both *tuza*. Ukrainian makes more extensive use of the inanimate genitive-accusative than Russian does; but the inanimate noun genitive-accusative in Ukrainian usually if not always has a nongenitive accusative doublet. Thus, in Ukrainian, the accusative of *lyst* 'letter' is either *lyst* or (gen.-acc.) *lysta*. In Polish the inanimate noun genitive-accusative is even better established; it is found as the only accusative of many masculine singular nouns; they mostly refer to completely conventional realia, such as games and dances. For example, the game of bridge is in Polish:

- (4) *brydż* (nom.)
brydża (gen., acc.)

and we have constructions such as

- (5) *grać w brydża* 'to-play bridge'.

As shown in (5), the genitive-accusative occurs not only as a direct object, but also after prepositions governing the accusative. For all paradigms that have a genitive-accusative, it is used obligatorily wherever an accusative appears. This is illustrated in the Russian examples in (6); *na* 'at' governs the accusative:

- (6) a. *Slon, na kotorogo *kotoryj vy smotrite*
 'The-elephant *at which* you are looking'
 b. *Poezd, na kotoryj *kotorogo vy smotrite*
 'The-train *at which* you are looking'

These examples illustrate the fact that the genitive-accusative occurs without syntactic restrictions. For this and other reasons, Meillet (1897:18-24) carefully distinguished the Slavic genitive-accusative from syntactic genitives, as in e.g. (2) above, where the appearance of the genitive is conditioned by the fact that the preposition *bez* 'without' takes the genitive case. Other scholars have followed Meillet on this point (see Lunt 1974:126-127 on Old Church Slavonic; Timberlake 1974:74 on early East Slavic). In the opinion of most scholars, then, the genitive-accusative is syntactically accusative (that

is, it occurs in all syntactic positions where an accusative is required), even though it is morphologically genitive (that is, its form is identical with that of the corresponding syntactically conditioned genitive). Exceptionally, a few scholars have treated the genitive-accusative as a semantic genitive (van Schooneveld 1977:132), or as the output of a syntactic case-marking rule (Comrie 1971:212); but they have not attempted to deal with the difficulties of such an analysis, pointed out by Meillet and discussed in considerable detail by Timberlake. In the present paper, I will show that the genitive-accusative in East Slavic historically shares certain properties of East Slavic syntactic genitives; and, in particular, that the diachronic implementation of the morphological genitive-accusative rule or rules in East Slavic has referred to a semantic hierarchy of individuation (see Timberlake 1975, and below), which is also referred to by syntactic case-marking rules. I will show that the individuation hierarchies of syntactic genitive-marking rules are found inverted in the history of the genitive-accusative; and I will discuss the implications of this fact, offering a tentative explanation of it.

1. *Individuation and the Russian genitive*

It was the Russian scholar Šaxmatov (1925:101ff.) who first noted the importance of individuation for genitive case marking in modern Russian; he pointed out several correlates of individuation with respect to the partitive genitive. The partitive genitive occurs as an object incompletely affected by an action, as in, for example:

- (7) *Dam tebe moloka.*
'I-will-give you (some) milk (gen.).'

where the object of the verb occurs in the genitive; the same verb governs the accusative, in a nonpartitive meaning:

- (8) *Dam tebe tvoe moloko.*
'I-will-give you your milk (acc.).'

Most nouns do not morphologically distinguish the partitive from other genitives; but some masculine singular nouns have a distinctly partitive ending *-u* as well as a general genitive in *-a*, for example:

- (9) *kon'jak* (nom.) 'cognac'
kon'jaka (gen.)
kon'jaku (part. gen.).

Šaxmatov proposed that modified nouns, count nouns, and singular nouns are more highly individuated than unmodified nouns, mass or abstract nouns, and plurals; the more highly individuated nouns resist partitive-genitive formation. Šaxmatov also suggested that mass and animate nouns may be regarded as the two extremes of a scale ranking nouns with respect to individuation; animate nouns never permit the *-u* partitive form, and the noun genitive-accusative, which is nearly entirely restricted to animates, always has the ending *-a* in the singular, never *-u*:

- (10) *brat* (nom.) 'brother'
brata (gen., acc.)
 **bratu*

Šaxmatov's proposals were extensively elaborated by Timberlake (1975) in his study of the occurrence of genitive direct objects of negated verbs. Russian transitive verbs take the genitive case when they are negated, instead of the accusative, for example:

- (11) *On èto znaet.* 'He knows *this* (acc.).'
 (12) *On ètogo ne znaet.*
 'He does-not know *this* (gen.).'

However, this usage has been changing, for the most part leading to the erosion of the genitive of negation and the generalization of the accusative direct object (but see Comrie 1978b). The conditions on the genitive of negation in its present state of change have been widely discussed; and Timberlake proposed that a number of conditions, usually treated completely separately, can be usefully treated as correlates of more general hierarchies. In particular, his observation of an individuation hierarchy for the genitive of negation suggests the possibility of correlating the genitive of negation rule with the partitive genitive and other genitive-marking rules. This is of some importance, especially since several syntactic genitive-marking rules, including both the partitive and the genitive of negation, all seem to be being lost simultaneously in Russian; and since the syntactic genitive-marking rules are as a class better preserved in those parts of East Slavic where the morphologically conditioned genitive-accusative

developed relatively late and weakly. (The second point is discussed in §4 below.) This suggests that there was an historic correlation among the various East Slavic genitives. Since partitivity and animacy are features in Timberlake's hierarchy (see §3), and since animacy and partitivity are related as Šaxmatov described, the possibility arises of characterizing several phenomena of in some ways quite different types by means of an individuation hierarchy whose features may be variously ranked (on ranking, see Andersen 1974:43-44).

2. *Conditions on the Genitive-Accusative in Early East Slavic*

The genitive-accusative of nouns, pronouns, and adjectives is a Common Slavic phenomenon; only its East Slavic development will be discussed here. Within East Slavic, implementation of the genitive-accusative extended over at least six centuries, and is not entirely stable in Ukrainian even today. In addition to the optional inanimate singular genitive-accusative mentioned above, Ukrainian also differs from Russian in having failed to generalize the plural genitive-accusative for nouns referring to animals, and, in some dialects, the nongenitive accusative occurs even for personal nouns in the plural (see Carlton 1971:32-36 and references therein). The nongenitive accusatives of plural animate nouns are, however, increasingly felt as an archaism; and generalization of the animate plural genitive-accusative will probably eventually occur. Implementation of the genitive-accusative in East Slavic proceeded in morphologically well defined stages (see Klenin, to appear, a), and it was subject to a variety of conditions within each morphological stage. For the most part, the conditions are not shared by the different morphological stages, nor are the conditions themselves primarily morphological. The following conditions favored the generalization of the genitive-accusative at one or more attested morphological stages:

- (13)
1. pre-existing nominative-accusative syncretism;
 2. direct-object status;
 3. lack of or isolation from (Timberlake 1979:119ff.) a nominative subject in the sentence;
 4. personhood/animacy of the referent;
 5. modification;
 6. singular number;

7. focus;
8. definiteness;
9. properness;
10. referential independence;
11. masculine gender;
12. informal style.

The first three conditions in (13) have been amply documented. Nominal genitive-accusatives were always restricted to paradigms that already had nominative-accusative syncretism (Thomson 1908); on the role of (13-1) in the pronoun genitive-accusatives, see Klenin (to appear, b). For all form classes generalizing the genitive-accusative, the generalization occurred first in direct-object accusatives, and only later in objects of prepositions. For details, see Thomson (1908), Unbegaun (1935:229-234), Timberlake (1974:238), Klenin (to appear, a and b). The no-subject condition (13-3) applied only to anaphoric pronouns and is discussed in Klenin (to appear, b).

Condition (13-4) is well known as the main condition characterizing the Russian nominal genitive-accusative, and it is illustrated in (1)-(3) and (10) above. Personal nouns generalized the genitive-accusative much earlier than animal nouns; and in Ukrainian personal nouns in the plural show the genitive-accusative more than animal nouns do. Condition (13-5) was noted by Unbegaun (1935:233) as a restriction on the genitive-accusative of masculine plural noun objects of prepositions, for the period 1500-1550. He noted that, at this period, masculine plural direct-object personal nouns had generalized the genitive-accusative; but the genitive-accusative was found only sporadically for these nouns when they were objects of prepositions. When it did occur, the object of the preposition was usually modified, according to Unbegaun, and his examples include the following (Unbegaun 1935:234):

- (14) *pošel' na našix' nedrugov'*
'went against our enemies (gen.-acc.)'

Condition (13-6) characterizes masculine personal nouns, masculine animal nouns, and anaphoric pronouns: for all these groups, the singular generalized the genitive accusative before the plural did. Personal pronouns, on the other hand, generalized the plural genitive-accusative before the singular. The preference for the singular may in the personal nouns and anaphoric pronouns be an automatic consequence of the fact that in early East Slavic the singulars, but

not the plurals, of masculine nouns and anaphoric pronouns (see Klenin, to appear, (b) met condition (13-1); the personal pronouns met (13-1) in the plural, but not in the singular. There are two reasons for mentioning (13-6) as an independent condition, however; first, animal nouns seem to have generalized the genitive-accusative first in the singular, even though both numbers could have acquired it simultaneously, according to (13-1): animal genitive-accusatives were extremely rare in either number until after nominative-accusative syncretism had been acquired by the masculine plural. Second, feminine plural nouns had nominative-accusative syncretism in early East Slavic, but acquired the genitive-accusative very late. This fact can be described by (13-11), without reference to number; but, alternatively, one might propose that feminine plurals lacked the genitive-accusative because of the tendency to avoid creating a category distinction (namely, animacy) in the plural if it were not expressed in the singular. In the plural personal pronouns, the genitive-accusative did not express a category distinction, since there was no animate/inanimate differentiation in the personal pronouns.

Condition (13-7), focus, is found only in the singular personal pronouns, and, even there, it is documented for only one text, the Laurentian manuscript of 1377. In this manuscript, the genitive-accusative of singular personal pronouns is consistently used when the pronoun is contrastive, proposed, or apparently under heavy stress. The non-genitive accusative is consistently used elsewhere. This is illustrated in the following examples from the Laurentian manuscript:

(15) *tako i mene spodobi prijati str(as)t'*
'thus he-has-enabled me too to-receive
the-passion' (Laur. Ms., 46a09)

(16) *ašče byša i mene jali* (90a10)
'if they-had seized me also'

Condition (13-8), definiteness, is attested most clearly in the history of the animal-noun singular genitive-accusative. The early examples are nearly all definite, for example:

(17) *nalezoša byk" velik" i silen" i povelě
razdražditi byka*
'They found a big strong bull and he-ordered
that-they-tease the-bull (Laur. Ms. 42c32ff.)

Conditions (13-9), properness, and (13-10), referential independence, are well documented for the early East Slavic masculine singular noun genitive-accusative. In the early chronicles, personal-noun direct objects had not yet generalized the genitive-accusative in the masculine singular; but masculine singular proper names nearly always take the genitive-accusative:

- (18) *oni že sunuša se na jang* (Laur. Ms., 59c07)
'And they threw themselves on Jan.'

On the other hand, certain masculine singular nouns referring to persons were resistant to the genitive-accusative. Thus, for example, as Thomson (1908) observed, nouns modified by *svoi* '(one's) own' usually did not take the genitive-accusative; and certain lexical items, most obviously *syn* 'son' did not take the genitive-accusative. The noun *muž*', which can mean either 'husband' or 'vassal', is quite interesting in this respect. In the meaning 'husband', only the genitive-accusative occurs:

- (19) *da byx ... oplakal" muža eja*
'That I-might-have ... mourned her husband'
(Laur. Ms., 84a05-06)

In its other meaning, the nongenitive accusative is usual:

- (20) *vyпусти ty svoi muž'* (Laur. 42c02)
'You release your man'

There is no other clear difference in the use of the two nouns *muž*', and, in fact, the nongenitive accusative of 'husband' has even been preserved in modern Russian as a relic *vyjti zamuž* 'to get married', literally 'to-go to-a-husband'. However, *muž*' in the meaning 'husband' always occurs in the chronicles with a known referent, with a known name; whereas *muž*' 'vassal' usually has an otherwise unknown referent, and the reference may even be nonspecific. In (20), for example, the sentence occurs as part of a dialogue between rival leaders, in which one of them says: "You release your man [that is, any one of your men] and I'll send in one of mine; and let the two of them fight." The proposed condition (13-10), referential independence, is intended to cover all these facts. The restriction on *svoi*, for example, can be analyzed as a consequence of the fact that *svoi* always has as its antecedent the topic or subject of

its clause; its head noun is thus marked as nontopic and less well established in discourse. *Syn*" is, of course, relational; and, in the chronicles specifically, reference to someone as the son of someone else normally is found where the father, and not the son, is the discourse topic. The behavior of *muž'* in its two meanings follows the same pattern.

Condition (13-11), masculine gender, has been mentioned; (13-12), informal style, well attested in the animal nouns, probably reflects the general tendency of innovations to occur earliest in the more casual types of speech.

The interaction of the various conditions in (13) is not entirely clear; reference has already been made to the possibility of ranking (13-1) higher than (13-6) to explain the fact that personal pronouns generalized the plural genitive-accusative before the singular. There is insufficient data, however, to rank all the hierarchies with respect to one another. Moreover, only the first two conditions in (13) hold at every stage of the implementation of the genitive-accusative; consequently, (13) is not a list of synchronic conditions on a single rule generating genitive-accusatives. In fact, it is very unclear that there was a single genitive-accusative rule, any more than there is a single syntactic rule to account for every syntactic genitive in modern Ukrainian or Russian. The chronology of and conditions on the various morphological classes of genitive-accusative implementation were extremely diverse; and it is difficult to see how the whole development can be captured in a single rule that would both naturally and accurately represent the various changes it would have had to undergo across time. For this reason, it is particularly striking that the conditions listed in (13) in fact form a fairly cohesive set. This is clear when we compare the conditions in (13) with those presented by Timberlake (1975) in his work on the genitive of negation, mentioned in §1 above. Nine of the twelve conditions in (13) are mentioned by Timberlake, and (13-4)-(13-9) are members of his individuation hierarchy. (13-10) can readily be grouped together with these other individuation hierarchies. (13-1), (13-2), and (13-12) are treated separately by Timberlake; only (13-3) and (13-11) seem to be irrelevant to the genitive of negation. These facts will be studied in more detail below.

3. *Individuation Hierarchies in the Genitive-accusative and the Genitive of Negation*

Timberlake (1975:134) lists the following individuation hierarchies:

- (21)
1. properness;
 2. abstractness;
 3. partitivity;
 4. animacy;
 5. number;
 6. definiteness;
 7. negation;
 8. focus;
 9. modification.

Since animacy is ranked so high in the genitive-accusative, abstractness (21-2) and partitivity (21-3) would be predicted, by Šaxmatov's theory, to be excluded from the genitive-accusative hierarchies, as they are. The negation hierarchy (21-7) is mysterious, and lacks a precise equivalent in the genitive-accusative hierarchies. Its status may be different from that of the other hierarchies in (21) because it refers to the feature referred to by the genitive of negation rule itself. In any event, there are six individuation hierarchies shared by the genitive of negation and the genitive-accusative:

- (22)
1. properness;
 2. animacy/personhood;
 3. definiteness;
 4. singular number;
 5. focus;
 6. modification

However, the two sets of individuation hierarchies differ in one major respect: all the conditions favoring the appearance of the genitive form in the genitive-accusative favor the accusative under the genitive of negation rule. That is, the two individuation hierarchies are mirror images of each other.

Three other hierarchies affect both the genitive of negation and the genitive-accusative. According to (13-12), informality of style favored the genitive-accusative, and it also favors the accusative object under negation. In each instance, it is the innovated form, whether genitive or accusative, that is favored by stylistic informality; and (13-12) should not be treated as specific to the Slavic genitive-forming rules, since it seems to reflect a very

general linguistic tendency. Both (13-1) and (13-2) have correlates in the genitive of negation rule, where, just as in the genitive-accusative, nominative-accusative syncretism favors the appearance of the genitive, as does direct-object status. Thus, it is specifically the individuation hierarchies that are inverted in the two classes of genitives, and not all the hierarchies to which they both refer.

4. *Individuation and the History of the East Slavic Genitives*

Timberlake (1975:127) follows Jakobson (1936/1971) in proposing that the Russian genitive case expresses quantification, or limited participation in the narrative. The functionality of the individuation hierarchies in genitive-marking rules is then explained by Timberlake as a consequence of the incompatibility of individuation and quantification: the accessibility of a narrative participant to quantification varies inversely with the extent to which it is perceived as an individual. Timberlake's analysis thus relates, on the one hand, discourse participation, and, on the other hand, notions such as 'mass' that are based on internal differentiation or its absence. Such a correlation is intuitively satisfying, in view of the facts of Russian morphology sketched in §1 above; however, not enough work has yet been done to provide independent justification of Timberlake's proposal; and, if the correlation is as he suggests, then some explanation must be given for its complete reversal in the genitive-accusative. In Klenin (1978) I presented new evidence of the quantificational nature of the genitive of negation: when an overt quantifier is introduced into the direct object of a negated verb, the individuation hierarchies tend to be reversed. This shows that quantification and individuation are highly correlated in a syntactic genitive-marking rule. The results presented in the present paper tend, again, to confirm the relevance of individuation to genitive marking; and, furthermore, suggest that the individuation hierarchies are referred to by all rules generating genitive-case forms, even when genitive-case formation is not syntactically conditioned. This suggests a revision of the status to be assigned to the genitive-accusative, which is usually treated entirely as an accusative, for syntactic reasons, as explained above. Obviously, the genitive-accusative displays some genitive properties, since it refers to individuation hierarchies, even

though it is not entirely clear why the genitive-accusative reverses them. In any event, the historic attestation of individuation properties in the genitive-accusative raises the question of the historic link between the genitive-accusative and the genitive objects that already existed in East Slavic before the genitive-accusative developed. These genitives include all the syntactic genitives now found in modern Russian and Ukrainian.

The specifically genitive form of the genitive-accusative was selected for purely mechanical reasons, as a result of previously existing models for analogy. In particular, the animate interrogative pronoun *k"to* 'who, what' throughout the history of Slavic had as its only accusative the form *kogo*, which is also the genitive. In addition to this purely morphological model, Thomson (1908), for example, suggests the possibility of analogy to the various genitive direct objects—partitives, objects of verbs under negation, and also objects of many verbs that, not in modern Russian but in earlier East Slavic, took the genitive, for example, many verbs of perception. In general, Russian maintains these genitive objects less well than does Ukrainian; but even in Russian, genitive and accusative objects are often treated as alternative types of direct object (for example, in Švedova 1970:350), in contrast to dative or instrumental objects, for example. It is unclear, however, that these syntactic genitive objects can have served as a model for the genitive-accusative, for two reasons.

The first, weaker, reason that the syntactic genitive objects are unlikely to have been analogical models for the genitive-accusative is that, if they had been, it should have been precisely the less individuated forms that ought to have acquired the genitive-accusative first; but this is the reverse of what happened. One might, however, propose that the original innovation of the genitive-accusative occurred for independent reasons—such as the need to differentiate subject and object, for example—and that the use of the syntactic genitives as an analogical model was independent of the semantics of genitive case-marking. Consequently, this reason for dismissing the syntactic genitive object as a model for the genitive-accusatives is not very strong.

The second, stronger, reason is that, if the syntactic genitives served as an analogical model for the genitive-accusative, then this would seem to suggest that the genitive-accusative originated

as a syntactic genitive case-marking rule, which eventually extended from direct to prepositional objects, thus being morphologized. It is sometimes said (Comrie 1978a) that this progression is shown by the fact that the earliest genitive-accusatives at each morphological stage were direct objects. If, however, all of East Slavic had such a syntactic rule—and, indeed, reintroduced it at each morphological stage of the implementation of the genitive-accusative (Klenin, to appear, a)—it would be expected that at least some dialect somewhere in Slavic would have maintained such a rule or some later development of it. For example, we might expect to find a dialect where the nongenitive accusative direct object has been entirely eliminated, while the genitive-accusative cannot occur in prepositional phrases. This, however, does not occur. Besides, the restriction to direct-object position was a recurrent condition at each stage of the implementation of the genitive-accusative; and this by itself suggests that, for some reason, direct object position was the position most accessible to this particular morphological innovation, and not that East Slavic kept repeatedly introducing and rejecting new morphologically-conditioned variants of one and the same syntactic case-marking rule.

It should be stressed that rejecting the proposal that there was in early East Slavic a syntactic rule that genitive-marked animate and some other direct objects is not the same as rejecting a functionalist explanation of why the marking arose. Comrie, for example, views the extension of the genitive-accusative to prepositional phrases as grammaticalization (morphologization) and concomitantly as loss of functionality of the genitive-accusative as a means of differentiating (nominative) subjects from (accusative) objects; since prepositional objects are ipso facto not nominative subjects, Comrie argues, the prepositional-object genitive-accusative is not functionally motivated. I would argue more or less the reverse.

Comrie, like others before him, observes that the genitive-accusative arose in morphological classes with pre-existing nominative-accusative syncretism; and he notes that the genitive-accusative serves to avoid subject-object confusion. East Slavic, however, seems not to have had any synchronic or diachronic prejudice in favor of differentiating subjects from objects; whereas its predilection for differentiating objects from one another seems to the foreign observer to exceed the bounds of communicative

efficiency. Morphosyntactically, there is no one "subject case" in Russian (see Chvany 1975:17ff. and 178ff.); and the much greater complexities of subject and object in Ukrainian have never even been explored. On the other hand, East Slavic has historically maintained a clear distinction between accusative and genitive direct objects, where the expressive value of genitive can be associated with the general attributes of quantification (see above). In its specifically East Slavic context, then, the innovation of genitive-marking on highly individuated direct objects would seem to be actually dysfunctional, since the genitive case could no longer be unambiguously associated with quantification, but only with either quantification or its complete opposite. A concrete example of this dysfunction may be helpful. In early East Slavic, as in modern Ukrainian and to a much lesser extent in Russian, the partitive genitive occurred on plural count nouns, including those referring to persons. In early texts, where the plural masculine genitive-accusative has begun to appear, it is not always obvious when a given genitive form carries a partitive meaning, for example after a verb such as *sešš'i* 'to seize', which, according to Sreznevskij, occurs with either genitive or accusative, depending on the meaning (Sreznevskij 1904:III, 909-910):

- (23) *segoša i nevinovatyx*"
 'they-seized also (some of?) those-
 that-were-not-guilty'
 (Synod Ms., 36, 15)

Istrina (1923:153) lists (23) as a rare early example of a plural genitive-accusative; but it would seem to be difficult to prove that it is not a partitive genitive.

In modern Russian, the partitive-genitive distinction is neutralized in the plural for animate nouns (Jakobson 1936/1971:43); but neutralization, as opposed to ambiguity, occurs only because nouns referring to animates (as well as all pronouns) lack the morphological means for expressing accusative vs. genitive direct object. If animate nouns had a non-genitive accusative, then the appearance of the genitive would represent a choice—but not a recoverable one. Consequently, if one assumes that genitive-case choice is meaning bearing, then the generalization of the genitive-accusative to all syntactic positions must be regarded as at least as functional as its innovation in direct-object position, since at

least it eliminates ambiguity in favor of neutralization. From this it appears that the maximally functional innovation in East Slavic would not have been genitive-case marking of direct objects per se, but precisely a purely morphological syncretism rule. Consequently, functionalist explanation does not seem in this instance to entail a distinct functional and syntactically-conditioned stage, followed by loss of functionality and grammaticalization, as described for example by Comrie (1978a). From this it follows that the correctness of Comrie's claim that the origin of the genitive-accusative has a functional explanation cannot be disproved by arguments addressed to the status of the genitive-accusative in the grammar of early East Slavic.

From what has been said above, it would appear that the specifically genitive form of the genitive-accusative is a consequence of analogy to those forms (originally, just *k"to*) that already had a genitive-accusative; it is not, then, necessary to assume any reference to genitive-case semantics with respect to the original innovation. To the extent that any explanation can be given for the persistence of individuation hierarchies in the genitive-accusative, this explanation pertains only to the implementation of the genitive-accusative, and not to its innovation. This fact may point in the direction of a solution to the problem of individuation reversal. Since genitive-case semantics govern, not the innovation, but only its implementation, we would expect the hierarchies, if applicable at all, to apply in the direction of maximally differentiating the new genitive forms from the older, "true" genitives. Because the genitive-accusatives, regardless of the reason for their appearance, represented an encroachment on the older case-marking system (as illustrated in examples such as (23)), the inverted hierarchies functioned to create semantic space between the new and old forms. The notion that the genitive-accusative was in fact a kind of encroachment on the syntactic genitive objects is supported by the fact, mentioned above, that the various East Slavic dialects maximize either the genitive-accusative or the genitive-direct-object system, but not both. It is clear, in any event, that the genitive-accusative is historically related to the syntactic genitives; and that the functionality of the genitive-accusative may be more complex, and more interesting, than is usually supposed.

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GENDER AND REFERENCE IN POLISH AND RUSSIAN*

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Most of the time we use nouns and noun phrases to refer to things (or people). This is not their only function, however, and the non-referential use of NP's as well as the syntactic consequences of such use have attracted the attention of a number of linguists and philosophers in the last several years (e.g., Donnellan 1966, Heringer 1969, Kuno 1970, Partee 1972). Donnellan for example was concerned with the two readings of definite descriptions in sentences like

(1) Smith's murderer is insane.

Here *Smith's murderer* can be understood either referentially (= Jones) or attributively (= whoever killed Smith). Otto Jespersen (1954, 3:123-4, 1965:242-3, reprints of works from the 1920s) had already commented on sentences such as

(2) If I were his wife, *which*, thank goodness, I shall not be now...

(3) He is a gentlemen, *which* his brother is not.

in which the use of *which* shows that "the quality, not the person is thought of," as opposed to, say,

(4) He met a gentlemen *who* knew his brother.

Cf. also (Kuno 1970:348)

(5) He is a fool, although he doesn't look *it*.

The referential and non-referential use of personal (i.e., [+human]) nouns is examined in some detail in an unpublished Soviet dissertation (Kopeliovič 1970a) dealing with the semantics of gender in Russian. The author distinguishes the use of nouns as *naimenovanie lica* (NL) 'designation of a person,' as *naimenovanie xarakteristiki lica* (MXL) 'designation of a person's characteristics' and as *naimenovanie neopredelenno-sobiratel'nogo lica* (NMSL) 'designation of an indefinite-collective person' (see also Kopeliovič 1977), with only the first having the property of *notativnost'*, i.e., referentiality. (These correspond resp. to Heringer's referential, attributive and generic use of indefinite noun phrases.) Applying the now commonplace analysis of

feminine gender as the marked member and masculine as the unmarked member of the basic gender opposition,¹ Kopeliovič notes the tendency to have marked forms in referential use, unmarked forms in non-referential, especially generic, use:

- (6) Prodavščica [f] pokazala mne knigu.
'The saleswoman showed me the book.'

(feminine noun as NL, referential),

- (7) Ona rabotaet prodavščicej/prodavcom [m].
'She works as a saleswoman/salesman [= salesperson].'

(feminine or masculine noun as NXL, non-referential, attributive),

- (8) Prodavec [m] dolžen byt' vežlivym.
'A salesman [= salesperson] should be polite.'

(masculine nouns as NNSL, generic).²

A similar situation prevails in Polish. Thus we are more likely to have

- (9) Marysia chce zostać lekarzem.
'Mary wants to become a doctor [masc., non-ref.].'

but (10) Lekarka mi powiedziała, że...
'The doctor [fem., ref.] told me that...'

Here the feminine form for 'doctor' is used referentially (10) and the unmarked masculine form, non-referentially (9). As in Russian, nouns that are traditionally viewed as being of masculine gender vary syntactically and stylistically in the degree of their unmarkedness. Thus one can establish the following sort of continuum:

- (11) a. noworodek 'new-born child,' dzieciak
'kid (= child),' (człowiek 'person')
b. świadek 'witness'
c. psycholog/(psycholożka) 'psychologist'
d. profesor/(profesorka)~pani profesor
e. dyrektor/dyrektorka~pani dyrektor
'director,' kierownik/kierowniczka
'director, manager'
f. nauczyciel/nauczycielka 'teacher'
g. Polak/Polka 'Pole,' student/studentka.

Words such as those in (a) have no feminine equivalents and show masculine agreement regardless of the sex of the referent. Words like *świadek* also have no feminine equivalents and traditionally occurred only with masculine agreement (*świadek zeznał* 'the witness testified'), but current usage (Doroszewski 1968:134-5) permits feminine agreement if the referent is female (*świadek zeznała*). In group (c) the feminine form may exist, but is stylistically far from neutral: *psycholożka*, for example, could only be jocular (something on the order of 'psychologette').

In group (d) the feminine form has a similar stylistic marking or may take on a different semantic function. Thus the latest edition of the authoritative guide to correct usage (Doroszewski 1973:571) lists, for example

- (12) Jego matka jest profesorką [f] liceum.
'His mother is a high-school teacher [lit. professor].'

but (13) Ona jest profesorem [m] uniwersytetu.
'She is a university professor.'

In referential use another possibility here is *pani profesor*, approx. 'madam professor.' In group (e) the masculine and feminine forms are more independent, but again there is a hierarchy: a women factory director could only be *dyrektor* (masc.), while the female head of a nursery school could well be *dyrektorka* (fem.).³

In group (f) the equality of the two terms is such that the masculine form would rarely be used referentially where the referent is a woman, i.e., in Prague School terms the opposition is essentially equipollent: the masculine term is no less marked than the feminine. This is even stronger in group (g). Note that words such as *brat* 'brother,' *ksiądz* 'Roman Catholic priest,' *kobieciarz* 'ladies' man' etc., are "below the bottom" of the list on pragmatic grounds.

The continuum of "degrees of lexical markedness" described here is very much language-specific. Thus for example Slovak, a language that is very close to Polish in many ways, consistently uses feminine forms such as *profesorka*, *doktorka*, *autorka* in both referential and nonreferential contexts. *Nomina attributiva*, nouns used to characterize people, on the other hand, often have only unmarked masculine forms, while the comparable Polish nouns tend to represent equipollent pairs, e.g., Slovak *nadutec* 'pompous person' vs. Polish *ważniak/ważniaczka* (Dvonč et al. 1966:136, Buttler et al. 1971:108).

Except toward the bottom of the list, marked forms are unlikely in nonreferential use. Even at the bottom of the list masculine nouns can lose their markedness if a generic interpretation is forced by plurality or by a modifier: *każdy Polak* 'every Pole [not only men],' *wszyscy studenci* 'all students [not just males],' although markedness may be preserved even in the plural (*studenci i studentki* 'male and female students'—to avoid any possible ambiguity). Cf. also a note in the Warsaw weekly *Polityka* (7/16/76) about an

- (14) apel do studentów [m], aby zaczęli się kąpać lub myć przynajmniej.
'appeal to students to begin bathing or at least washing.'

The reference turns out to be to male students, who are getting preferential treatment in the housing market in Poznań because they don't use the bath as much as female students.

Note that the plural forms of the nouns mentioned above as being "below the bottom" of the list retain their markedness, e.g., *bracia* means only 'brothers' and not 'siblings.' On the other hand, even in referential use an unmarked member of one of the other groups may occur if the designation is at all figurative. Thus someone referring to say, Maria Skłodowska-Curie as 'our teacher' would use the masculine form *nauczyciel* rather than the feminine form *nauczycielka*. Or, to take a Russian example, both the masculine *xudożnik* and the fem. *xudożnica* can mean 'artist' in the sense of 'painter,' but only the former can be used to refer to a woman or a man who is talented as a musician or writer, etc. (Protčenko 1960:122).

The word *człowiek* 'person, man [generically]' is an interesting case. It serves as a classic example of the unmarkedness of masculine gender:

- (15) Ona jest wspaniałym człowiekiem.
'She is a marvelous person.'

but only in such nonreferential use. Thus in

- (16) Czeka na ciebie jakiś człowiek.
'Some person is waiting for you.'

- or (17) Nie znam człowieka.
'I don't know the person.'

the referent can only be male. Indeed Polish colleagues cite a tongue-in-cheek proof that a woman is not a person: if you call out on the street, *Ej*,

człowieku! 'Hey, man!' no woman will turn around.

The facts are similar in Russian. For example the author of an unpublished Soviet dissertation (Kuznecov 1971:6) points out that the person referred to in

- (18) Na derevjannom trotuare leżał čelovek.
'There was a person lying on the wooden sidewalk.'

can only be a man. Note also the semantic shift of Ukrainian *čolovik* to 'male; husband.'⁴

Omitted from the continuum that we have been discussing is a group of nouns that seem to show a reversal of the usual markedness relation, the so-called nouns of common gender, such as *sierota* 'orphan,' *pokraka* 'freak, monster,' *moczygęba* 'drunkard' etc.⁵ The textbook description of such nouns as being of variable gender (masculine when referring to males, feminine when referring to females) is incomplete. Doroszewski (1973:536) illustrates the textbook principle with the examples.

- (19) Była brzydka i niezgrabna, prawdziwa [f] pokraka.
'She was ugly and awkward, a real monster.'
- (20) Wyglądał jak ostatni [m] pokraka.
'He looked like an utter monster.'

The original version of (20), however, as quoted in another authoritative dictionary (Doroszewski 1958-69, 6:843) has the feminine form of the adjective (*ostatnia*). Thus feminine agreement is the unmarked case, possible when the reference is to a male or to a female, whereas masculine agreement specifies reference to a male. Cf.

- (21) [M]ała [f], opuszczona [f] sierotka walczyła [f] jeszcze widać we śnie i zzywała matkę-opiekunkę na pomoc.
(Centkiewiczowie 1953:66)
'The little abandoned orphan was apparently still struggling in its sleep and calling to its "foster mother" for help.'

The "orphan" referred to here is a bear cub of unspecified sex, but both the adjectives and the verb show feminine agreement as the unmarked case.⁶

To return briefly to the use of nouns like *profesor* with respect to women in Polish, the conflict between sex and (traditional) gender is resolved in part by treating such nouns as indeclinable when they

refer to women. This is the norm when the nouns are used as titles and possible in other referential uses:

- (22) Rozmawiałem z profesor [undecl.] Sawicką [instr.].
'I spoke with Prof. Sawicka.'
- (23) Idę do laryngolog [undecl.].
'I'm going to the laryngologist.'
(Klemensiewicz 1957:115-116)

This usage is parallel to the treatment of women's family names, which are declined if they are adjectival in form and therefore differ from the corresponding man's name (e.g., fem. *Kowalska* vs. masc. *Kowalski*) but are not declined if they are nominal in form and therefore the same as the corresponding man's name (e.g., fem. or masc. *Kowal*). Nouns like *profesor* are, however, declined when they are used nonreferentially:

- (24) Sawicka otrzymała nominację na profesora [acc.].
'Sawicka was nominated [to the rank of] professor.'
- (25) Ona jest już profesorem [instr.].
'She's already a professor.'

In Russian such nouns are normally declined in all functions, as can be seen from caption to a cartoon in a 1945 issue of *Krokodil* (Mirtov 1953):

- (26) Kogda končitsja vojna, Trofim, poženim tvoego [m] seržanta [m] na moem [m] efrejtoe [m].
'When the war ends, Trofim, we'll marry my sergeant to your corporal.'

The choice of the verb in the Russian sentence makes it clear that the sergeant is to be the groom and the corporal, the bride. The nouns themselves and the agreeing possessive adjectives are of no help on that score.

Polish, like many other languages, has agreement phenomena: the gender of a noun determines the gender of agreeing and anaphoric elements. The use of unmarked masculine nouns with reference to females, moreover, creates the conditions for what Latin grammarians called *constructio ad sensum*, i.e., agreement based on the "sense" of the noun rather than agreement based on its form, *ad formam* (Greenough et al.,

1916:168, 171), e.g., British

- (27) The government [sing., but plural in "sense"] have resigned.

or Polish

- (28) Profesor [masc. with female referent] powiedziała [f]...
'The professor said...'⁷

In Polish the tendency toward agreement *ad sensum* is stronger than in Russian: the verb is normally feminine, attributive adjectives (at least in the nominative) are often feminine as well:

- (29) Nasza [f] dyrektor [m] wyjechała [f].
'Our director has left.'

vs. Russian

- (30) Naš direktor uexal(a).⁸

Conflict between the two kinds of agreement is also possible in Polish with another large class of nouns. The syncretism of accusative and genitive plural that in Russian, for example, characterizes all animate nouns is restricted in Polish to nouns that refer to (or can refer to) male human beings. Such "male personal" (or "virile") nouns (henceforth denoted by *mp*) also normally have special nominative plural endings (involving consonant alternations) and require male personal endings in agreeing and anaphoric elements:

- (31) Ci miłi Polacy [mp, plural of *Polak*] mówili...Oni...
'Those nice Poles said... They...'
- (32) Te miłe Polki [non-mp, plural of *Polka*] mówiły... One...
'Those nice Polish women said... They...'

Some nouns that refer to men and have the typical acc./gen. syncretism may not (for stylistic or other reasons) have male personal forms in the nom. pl., e.g., *łajdak* 'scoundrel,' with the nom. pl. *łajdaki*, rather than the expected, but less common *łajdacy*. Agreement phenomena involving such words (and the unmarked masculines referring to females) provide evidence for a continuum of syntactic functions related to the continuum of syntactic categories discussed by Comrie and others. On the basis of predicate agreement phenomena Comrie 1975, inspired in part by Ross 1972, argues that universal grammar requires "a

continuum from VERB to NOUN, with individual languages requiring different intermediate positions on this hierarchy" (417). Here we see, for example, predicate adjectives behaving more like verbs, unlike attributive adjectives.⁹ Thus attributive adjectives are most likely to show agreement *ad formam*, predicate adjectives and verbs, less so:

- (33) Te łajdaki były/byli...
'Those scoundrels were...'

Adjectives and participles used in what Czech syntacticians call "semi-sentential constructions" (*polovětné vazby*, e.g., Hrabě 1964; cf. also Pisarkowa 1965) are like true predicates in this respect:

- (34) Z takich właśnie struktur psychicznych powstają *Arnoldy Szyfmany* współczesności, *przestawieni* w odmienne niż tradycyjny teatr regiony, ale to samo *czyniący*...
'Out of just such mental structures arise the Arnold Szyfmans of our time, transposed into different regions than the traditional theater, but doing the same things.'

(*Polityka*, 5/30/78). Here the name of a well-known Polish director and theater organizer, used figuratively, takes on non-male-personal endings (*Szyfmany* rather than *Szyfmanowie*), but the two participles agree *ad sensum* (male personal *przestawieni* and *czyniący* rather than *przestawione* and *czyniące*). Cf. also part of the description of a poetry evening at which graduating high school students (boys) perform (Makuszyński 1976:51):

- (35) Wyłazi nowa [f] cholera [f], elegancki [m], w białych rękawiczkach i deklamuje koncert Wojskiego.
'A new s.o.b. comes out, elegant, in white gloves, and recites [a famous poetic passage].'

Anaphoric (including relative) pronouns are the most sensitive to the sex of the referent:

- (36) Te łajdaki, którzy [mp]... Oni [mp]...
'Those scoundrels who... They...'

Cf. a Russian example (Kopeliovic 1970a:117 from *Prizyv* 6/5/68):

- (37) Devuški podošli k prodavcu [m], котораја [f] тут же напоlnила [f] bidon.
'The girls came up to the salesperson, who

filled the can right away.'

Such data suggest some weakness in the arguments (at least the synchronic ones) of Givón 1976, which ties agreement very closely to anaphoric pronominalization.¹⁰

The normal sensitivity of pronouns to the real properties of the referent is "overruled" when the pronouns themselves are related anaphorically not to a referent, but to a noun used nonreferentially. Thus

- (38) Pani profesor Bielska była kiedyś kierownikiem katedry, ale już *nim* nie jest.
'Prof. Bielska [f] was once head [m] of the department but is no longer [it--masc].'

and in Russian (Kopeliovich 1970a: 285, from *Sovetskij ekran* 1967, no. 22):

- (39) I xotja ona uže davno po dolžnosti ne komissar, no ona ostaetsja *im* po prizvaniju.
'And although she has not been a commissar in title for a long time, she has remained one [m] by vocation.'

Cf. also two amusing examples from Russian, one from the Soviet children's writer Sergej Mixalkov, cited in Mirtov 1943:

- (40) Kto moj drug?
On krasnyj galstuk nosit rebjatom vsem v primer.¹¹
On—devočka, on—mal'čik, on—junyj pioner.
'Who is my friend?
He wears a red tie as an example for all children.
He's a girl, he's a boy, he's a young pioneer.'

and another from a Russian edition of the *Arabian Nights* (Tysjača 1976;107):

- (41) Kaķ žal', čto èto ne čelovek, a obez'jana!
Bud' *ona* čelovekom, ja by sdelal *ego* svoim vizirem.
'What a pity that it's a monkey [f] and not a human. If *she* were a human [m], I would make *him* my vizier.'

This also happens in the style in which a woman refers to herself (or is referred to) as *autor*, *reporter*, etc., although this style is apparently becoming less than natural. Writing in December 1976, *Polityka* columnist Daniel Passent makes fun of the

editors of the rival weekly *Kultura* for "writing about their author in the masculine gender." On the other hand the author of a normative handbook dealing with linguistic errors in the press (Pisarek 1978) mocks the use of a masculine pronoun to refer to a male who is introduced into the sentence by means of the feminine noun *ofiara* 'victim':

- (42) Trzech młodych mężczyzn po pobiciu swej [f] ofiary zaczęło przeszukiwać mu [m] kieszenie.
'The three young men, after beating up their victim, began to search through his pockets.'

Pisarek comments (162)

- (43) A więc to była [f] *ten* [m] ofiara!¹²
'So it was *that* victim!'

So far referentiality has been discussed only with respect to nouns or noun phrases, but there are related phenomena in the use of adjectives that also affect gender agreement. Bolinger (1967) drew attention to the difference between

(44) Henry is a drowsy policeman.
and

- (45) Henry is a rural policeman.

In (44), according to Bolinger, *drowsy* modifies *Henry* ("referent modification"), whereas in (45) the adjective *rural* modifies *policeman* ("reference modification").

Crockett (1976:95ff) applies Bolinger's terminology to characterize colloquial Russian sentences like

- (46) U nas byla očen' xorošaja [f] zubnoj [m] vrač.
'We had a very good dentist.'

Here a feminine form (*xorošaja*) is used for referent modification and a masculine adjective (*zubnoj*), for reference modification (*zubnoj vrač* = 'dental doctor,' i.e., 'dentist'). Crockett's analysis is undoubtedly correct for those speakers who accept sentences like (46). Other speakers (presumably fewer still—see note 8) even accept feminine modifiers for reference modification: *zubnaja vrač*, *glavnaja vrač* 'head physician' (Kopeliovich 1970a: 124). This is possible in Polish as well:

- (47) Swój ostatni felieton [...] *redaktor naczelna* [f] "Filipinki" poświęciła [f]

bezinteresownej lekturze ogłoszeń.

'The editor-in-chief of *Filipinka* devoted her last column ... to a disinterested reading of advertisements.'

(*Tygodnik Powszechny*, 11/5/78). On the other hand the same weekly (*TP*, 11/19/78) reverted to more traditional agreement *ad formam* when the reference modifier was followed by a clearly feminine appositional phrase:

- (48) Były [m] premier Indii, pani Indira Gandhi odzyskała [f] [...] mandat [...].
'The former premier of India, Mrs. Indira Gandhi, regained her seat [in Parliament]...

Crockett (1976:132ff) also discusses sentences like the following (based on her (113a-c), slightly changed to suit my informant):

- (49a) Novyj vrač u nas očen' xorošij.
'Our new doctor is very good.'
(b) Novyj vrač u nas očen' molodoj.
'Our new doctor is very young.'
(c) Novyj vrač u nas očen' dobryj.
'Our new doctor is very kind.'

In all three sentences the predicate adjective is masculine, but in (49a) the doctor referred to may be male or female, whereas in (b) and especially (c) informants tend to understand the sentence as referring to a male doctor. Crockett attributes the difference to the fact that *xorošij* 'good' in (49a) describes the doctor as a doctor while *dobryj* 'kind' in (49c) characterizes the doctor as a person. Her argument is strengthened if we add that *molodoj* 'young' in (49b) could presumably be read either as 'objectively young' or 'young for a doctor,' and hence the in-between status of (49b). Note also that if we replace *molodoj* with its diminutive *moloden'-kij*, which is very concrete and absolute, (49b) can only refer to a male. Likewise if we replace *xorošij* in (49a) with its diminutive (morphologically, if not semantically) *xorošen'kij* 'attractive; cute.'

The facts illustrated by (49a-c) are related to Quine's distinction (1960:103, 132) between the "attributive" and "syncategorematic" use of adjectives: when we say that X is a kind doctor, we attribute kindness to him, independently of his "doctoriness," but when we say that he is a good doctor, *good* must be interpreted together with *doctor*. Quine's example was the phrase *intellectual dwarf*, which may characterize either a very small person who thinks a lot

(attributive use) or a person of unspecified size whose mental capacities are being called into question (syncategorematic use). The example is cited by N. D. Arutjunova (1976:354-5), who also quotes Vendler's

(50) She is a beautiful dancer.

and adds that the Romance languages usually make use of word order to make such distinctions, citing as an example the contrast between *une vieille coquette* 'an old flirt [i.e., one who has been at it for a long time]' and *une coquette vieille* 'an old [i.e., elderly] flirt.'

What really seems to be needed is a three-way (at least) distinction between attributive referent modification [ARftM], syncategorematic referent modification [SRftM] and (syncategorematic) reference modification [SRfcM], i.e.

(51) *ARftM*

drowsy policeman
kind doctor
coquette *vieille*

SRftM

beautiful dancer
[dances beautifully]
poor violinist
[plays poorly]
good doctor
vieille coquette

SRfcM

rural policeman
zubnoj vrač ['dentist']
intellectual dwarf
emotional cripple
literary prostitute.

Another way of formulating the distinction is to consider sentences of the form "X is an A N." If we substitute one of the phrases under ARftM for [A N], we can then conclude both that X is A and that X is an N. If we use one of the phrases from SRftM, we cannot conclude that X is A (X may be a beautiful dancer, but physically unattractive, or a rich violinist who plays poorly), but instead we interpret the sentence to mean that "as an N, X is A." Finally if we substitute one of the phrases from SRfcM, we conclude that X is an N (perhaps figuratively) of the type or in the manner specified by A.¹³

A phrase that is ambiguous between an attributive and a syncategorematic reading may have the latter weakened in a referential context. Thus if someone says

(52) I met a poor violinist last night.

we are most likely to understand *poor* as meaning 'impoverished' or 'unfortunate' rather than assuming that a critical judgment is being made. A number of authors (including Kopeliovič 1970a, Semenova 1960, Hlavsa 1975, Ermakova 1976) have observed that there are classes of nouns (and types of noun phrases) with limited referential use (or even none). Most evaluative nouns are of this sort; an extreme case is the Russian noun (cited by Kopeliovič) *zagljaden'e* 'a lovely sight,' which can only be used predicatively. Cf. English

(53a) You're a sight!

(b) *A sight walked in.

Such nouns are in some ways like adjectives: A. V. Mirtov (1946) calls one class of such nouns (the common gender words) "substantiva adjektiva." One can occasionally even find a kind of comparative degree, as in the following Yiddish example (Sfard 1966:127):

(54) Efsher iz er nokh mer nar fun dir?
'Maybe he's even more [a] fool than you?'

and adverbs used as modifiers

(55) No ja—očen' skeptik, togda byl
mučitel'no skeptik.
'But I'm very [much a] sceptic, then I was agonizingly [a] sceptic.'

(Blok, cited in Arutjunova 1976:352). Such examples show that even nouns (one pole of Comrie's continuum) do not constitute a uniform class with respect to syntactic function. Some nouns are less nouny than others.

We have seen that while agreement phenomena are based, as has traditionally been assumed, on choices among a small number of discrete values of the category of gender (number, etc.), continua of syntactic and sociolinguistic functions are superimposed on this discreteness. Thus the choice of a masculine or feminine personal noun for a given utterance is influenced by "degrees of lexical markedness" (table (11) above), a continuum along which different languages, even closely related ones, arrange their nouns in different ways, partly in reflection of hierarchical relations in the society that uses the language, as well as by the referential, attributive or generic function the noun (or the NP containing it) is called upon to fulfill. The choice of agreeing and anaphoric elements in cases of conflict between "form" and "sense is influenced by position along a possibly

universal continuum of syntactic functions (Corbett's "syntactic distance") as well as by the role of the modifier (attributive referent modification, etc.).

NOTES

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¹This analysis is due to Jakobson, who pointed out (in Jakobson 1932 for example) that personal nouns of feminine gender are marked for female sex reference, while masculine personal nouns do not necessarily specify sex.

²Some similar observations are contained in Bogusławski 1954. Kopeliovíč (1970a:237) notes that within generic use there is a possible opposition of part to whole expressed by marked vs. unmarked, as in a letter from a woman pilot, an Honored Master of Sports, to a girl who has decided to become a parachutist:

Pomni: uže sejčas tebe nado poser'eznee izučat' v škole fiziku, matematiku, ne možeš *parašjutist* [m] ne znat' mexaniku, aërodinamiku. Uže sejčas ty dolžna zakaljat' sebja... *Parašjutistka* [f] dolžna byt' sil'noj...

'Remember: in school you should already be studying physics and mathematics seriously; a parachutist [m] has to know mechanics, aerodynamics. You should already be toughening yourself... A parachutist [f] should be strong...'

Both male and female parachutists have to know mechanics and aerodynamics, but strength is especially important for females.

³A recent newspaper item (*Tygodnik Powszechny*, fall 1977) points out, however, that

Kierowniczkzi przedszkoli, jak donosi "Rodzina i Szkoła", będą odtąd nosiły tytuł dyrektora.

'Heads [f] of nursery schools, [the journal] *Family and School* reports, will from now on bear the title of director [m].'

⁴Cf. the discussion of "asexual nouns denoting human beings" in Crockett 1976:64-68.

⁵The Greek grammarians, e.g., Dionysios Thrax (c. 170-90 B.C.), used the term *onómata koiná* (Latin *nomina communia*) to categorize nouns whose gender in a given utterance depends on the sex of the referent: Greek *ho alektryōn* [with the masc. article] 'the rooster' vs. *hē alektryōn* [with the fem. article] 'the hen' or Latin *hic canis* 'this male dog' vs. *haec canis*

'this female dog.' These contrasted with *onómata epíkoína* (Latin *nomina promiscua*, later *nomina epicoena*), which are of fixed gender regardless of the sex of their referent: Greek *aetós* [m] 'eagle [male or female],' *kselidón* [f] 'swallow [male or female],' Latin *aquíla* [f] 'eagle,' *corvus* [m] 'crow' (Oberpfalcer 1933: 19-25, Nemirovskij 1938).

⁶This atypical behavior of common-gender nouns is undoubtedly related to the fact that they belong to the declensional pattern that is most typical for feminine nouns and to the fact that they were originally feminines. On common gender in Russian, see Crockett 1976 and Kopeliovíč 1970a, 1970b, 1970c, 1977. Kopeliovíč shows the full complexity of common gender usage in Russian, pointing out among other things that unmarked use of masculine agreement is sometimes possible. Cf. the following example (from the journal *Vokrug sveta* 1975, no. 7), supplied by V. A. Robinson of the Russian Language Institute (AN SSSR, Moscow):

Drevnejšij [m] obžora v mire.

'The oldest glutton in the world.'

The common-gender noun *obžora* 'glutton' is used with a masculine modifier to characterize a fish (feminine in Russian regardless of the creature's sex) from the Tertiary era (some 60 million years ago) that had apparently choked to death on a large eel larva.

⁷Cf. the distinction in Perlmutter 1972 of "syntactic" vs. "semantic" number.

⁸Such constructions as *naša* [f] *direktor* were preferred by only twenty-five percent of those surveyed (more than three thousand answered questionnaires) in a Soviet study in the 1960s, while more than fifty percent preferred feminine agreement in the verb as in *direktor uexala* (Panov 1968:27, 38). Cf. the observation of A. M. Peškovskij, writing in 1927:

... "dobraja tovarišč" russkij čelovek n i v k a k o m s l u č a e ne možet skazat', a "tovarišč vyšla", xotja i s nekotorym stesneniem, no možet.

'... A Russian could *never* say "dobraja tovarišč," but he could say, albeit with some inhibition, "tovarišč vyšla."

(reprinted in Peškovskij 1956:190). The 1970 Academy Grammar (Švedova 1970:489, 555) admits the feminine form of the adjective in colloquial speech and treats the choice of masculine or feminine verb as a matter of free variation. Kopeliovíč (1970a:229-30) goes so far as to say that "one can cite many instances in which constructions of the type *vrač skazal* ['the physician said'--with a masc. form of the verb] (about a woman) are stylistically marked, while expressions of the type *vrač skazala* [with a fem. verb form] are becoming more and more widely used, are losing their stylistic limitations and are occupying a firm position in the system of the Russian language as the neutral variant." See also the references in Rothstein 1973a, 1973b, 1976 and Comrie and Stone 1978: Chapter 6.

⁹G. G. Corbett was kind enough to send me a copy of Corbett (forthcoming), in which he proposes a "syntactic distance" metric to account for some of the agreement phenomena discussed here. Many of these problems are also examined in Crockett 1976.

¹⁰Moravcsik 1978 has recently argued for a weak version of the "pronominal theory of agreement," namely "that agreement markers and anaphoric pronouns are derived by the same *type* [emphasis hers] of rule." The two claims of this version are (i) that "agreement markers [like anaphoric pronouns] must include some semantic and/or syntactic properties of the agreed-with constituent" and (ii) that "agreement markers [like anaphoric pronouns] must involve reference to the agreed-with noun phrase."

¹¹A red neck-tie is part of the uniform of the Pioneers, the Soviet organization for ten- to fourteen-year-olds.

¹²Crockett 1976:95n convincingly argues that the use of masculine pronouns to refer to women initially denoted by masculine nouns like Polish *autor* or Russian *avtor* provides "indisputable evidence in support of the view that at least some pronouns are products of syntactic transformations."

¹³Emmon Bach has called my attention to a dissertation by Judith N. Levi in which phrases like those under SRfcm are treated as complex nominals. I have been unable to consult the dissertation (now published as Levi 1978), but Levi 1973 and 1974 present a number of syntactic and semantic arguments for deriving "non-predicate adjectives" from nouns. Crockett 1976:101, 171 makes a similar proposal with references to Bolinger 1967, Sussex 1974, as well as to Levi 1973, 1974. It should also be noted that the ambiguity between the attributive and syncategorematic readings of Quine's *intellectual dwarf* and of parallel phrases such as *emotional cripple* or *literary prostitute* (readers are invited to send me their own examples) results from the fact that the modifiers can be understood as qualitative or relational adjectives while the nouns can be taken literally or figuratively.

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CLAUSE STRUCTURE AND MOVEMENT
CONSTRAINTS IN RUSSIAN*

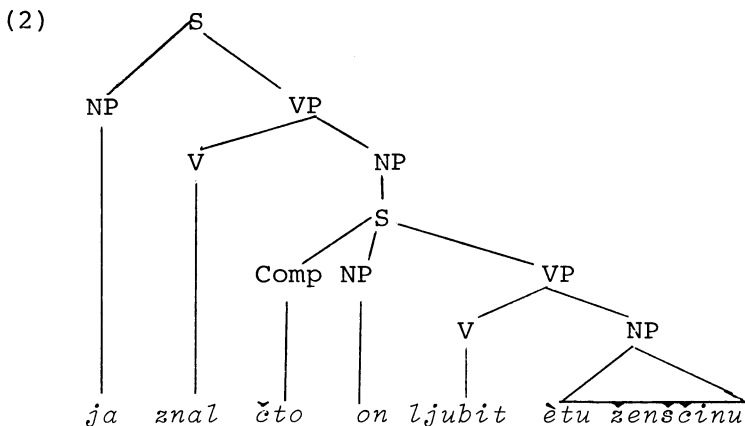
Bernard Comrie
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1. In the present paper, I wish to examine some of the constraints on movement transformations (as the term is used by Ross 1967) in Russian. In particular, I hope to show that some of the basic movement transformations in Russian are constrained by the presence of internal sentence boundaries or, in more traditional terminology, by the clause structure of complex sentences. The results presented here are a redevelopment of some of the ideas presented in Comrie (1971, especially Chapter 4).

As a starting point, I shall assume that the sentence

- (1) *Ja znal, čto on ljubit ètu ženščinu.*
'I knew that he loved this woman.'

has the structure



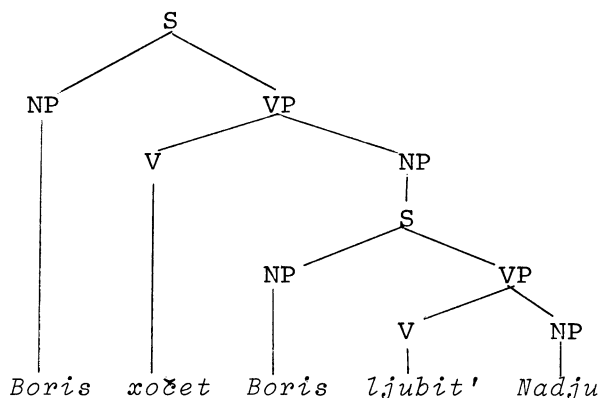
Aspects of this structure that are most likely to be controversial—the presence of an NP node above the embedded S; the position of the complementizer—do not in fact affect the body of my argument. For a sentence like

- (3) *Boris xočet ljubit' Nadju.*
'Boris wants to love Nadja.'

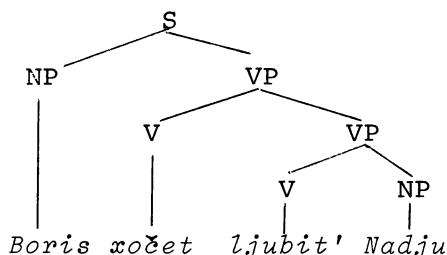
with a dependent infinitive construction, I shall refer to the following two levels of derivation, an underlying structure (not necessarily the deep struc-

ture) (4), a derived structure (not necessarily the surface structure) (5):

(4)



(5)



(5) is derived from (4) by the application of EQUI-NP-DELETION; again, the precise statement of the operation of this transformation is not relevant. One point that may raise substantive objections, however, is the deletion of the embedded S-node in the passage from (4) to (5). A major claim of the present paper, following Ross (1969, 299), and contrary to the claim of Chomsky (1971), is that there is a rule of S-pruning, which operates automatically to reduce the intermediate structure of (4)-(5) to (5). Under Ross's formulation:

"An embedded node S is deleted unless it immediately dominates VP and some other constituent."

The S-node will be pruned, since after the underlying subject of the embedded sentence of (4) has been deleted, we are left with

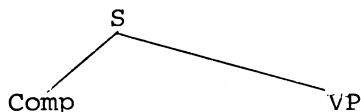
(6)



(Note that the Russian infinitive differs from the English infinitive, in the most typical cases, in that it does not have an overt complementizer like English *to*. I return to this distinction below. According to Ross, the presence of *to* in English blocks S-pruning.) According to Chomsky's alternative proposal, differences between the behavior of finite verbs and infinitives, participles, etc., result from the fact that the former have the feature [+ tensed], while the latter are [- tensed]. The use of the term "tensed," for the traditional "finite," is unfortunate in Russian, where there are nonfinite verb forms that show tense (participles), and finite forms that do not show tense (the subjunctive-conditional), but for present purposes I shall treat "tensed" and "finite" as interchangeable.

While in the most typical cases the Russian infinitive has no complementizer, and the two proposals mentioned in the previous paragraph have the same empirical consequences, there are some constructions where the Russian infinitive does have a complementizer, e.g., *čtoby* 'in order to', *prežde čem* 'before'. Here S-pruning and the tensed-S condition have different empirical consequences, since tensed-S claims that, in the absence of other conditions, these constructions should behave like complementizerless infinitives; while S-pruning says they should behave like clauses with finite verbs, since the S is not pruned:

(7)



even after the subject noun phrase has been deleted. Such examples will therefore play an important part in what follows.

In the remainder of this paper I shall examine the constraints on various movement transformations of modern Russian in their relation to the occurrence of internal S-boundaries. Of particular importance will be the differential behavior of synonymous or near-synonymous pairs like the following, where the first example has an internal S-boundary which is lacking in the second:

- (8) *Ja obeščal, čto prinesu ogurcy.*
'I promised that I would bring the cucumbers.'
- (9) *Ja obeščal prinesti ogurcy.*
'I promised to bring the cucumbers.'

- (10) *Nevozmožno, čtoby prinesli ogurcy.*
'It's impossible that (anyone) should bring the cucumbers.'
- (11) *Nevozmožno prinesti ogurcy.*
'It's impossible to bring the cucumbers.'

2. Scrambling

Word order in Russian is much freer than that of English, so that given a grammatical sentence like

- (12) *Kolja nenavidit Petju.*
'Kolja hates Petja.'

any of the possible permutations of the word order is also a grammatical sentence—the individual variants differ, however, particularly in the distribution of informational content (theme/rheme, topic/comment, given/new). There are overall restrictions on the reordering of constituents even in simple sentences, for instance to avoid ambiguity (though this is not an absolute criterion), to avoid breaking up certain constituents, in addition to specific restrictions such as that requiring prepositions to precede, rather than follow, noun phrases. Scrambling is the rule which allows this freedom of word order.

The precise degree of freedom of word order depends on the style of language. I shall deal first of all with the written language. Here we find that it is impossible to reorder constituents out of embedded sentences:

- (13) *Ja skazal, čto Kolja nenavidit Petju.*
- (14) **Petju ja skazal, čto Kolja nenavidit.*
- (15) **Nenavidit ja skazal, čto Kolja Petju.*
'I said that Kolja hates Petja.'
- (16) **Ogurcy ja obeščal, čto prinesu.*
'I promised that I would bring the cucumbers.'
- (17) *Ogurcy ja obeščal prinesti.*
'I promised to bring the cucumbers.'

From the last example, we see that reordering is possible out of an infinitive verb phrase, as also in

- (18) *Nadju Boris xočet ljubiti'.*
- (19) *Ljubiti' Boris xočet Nadju.*
'Boris wants to love Nadja.'

But the presence of a complementizer before the infinitive blocks scrambling:

- (20) *On sliškom molod, čtoby čitat' takie povesti.*
 (21) **Takie povesti on sliškom molod, čtoby čitat'.*
 'He's too young (in order) to read such stories!'

In the spoken language, the restriction against reordering out of an embedded sentence is considerably relaxed. The investigation of the syntax of the colloquial variant of the standard language has been largely carried out under the direction of E. A. Zemskaja, and the following examples (all actually recorded utterances) are from Zemskaja (1971):

- (22) *Noski ja rada, čto kupila.*
 'The socks I'm glad that (I) bought.'
 (23) *Petrov stranno, čto nam pomogal.*
 'Petrov it's strange that (he) helped us.'

Most of the examples quoted by Zemskaja, incidentally, involve the movement of a noun phrase or prepositional phrase, and this seems to be the basic difference between the written and spoken styles, rather than that the spoken language allows arbitrary rearrangements of constituents of complex sentences. However, Zemskaja does quote a few examples like

- (24) *No ja ix postavila pomnju čto v škaf.*

cf. the usual written order

- (25) *No ja pomnju, čto ix postavila v škaf.*
 'But I remember that (I) put them [lit. them put] in the cupboard.'

In general, the stylistic difference between written and spoken language is sufficiently acute for the linguist to be able to make clear-cut decisions as to the ungrammaticality of sentences like (14)-(15), (16), (21) in the written language—many Russians are horrified to learn that they actually use such sentences quite freely in speech—, though obviously as the difference between the styles is not absolutely watertight exceptional judgments may be offered on individual occasions.

3. *Strong topicalization*

In the previous section I noted that variation in word order in Russian correlates to a large extent with such distinctions as topic/comment, and given/new information. However, spoken Russian has other means of specifically marking the topic of a sentence. In particular, the topic can be set off from the rest of the sentence as a distinct intonation group.¹ With this kind of topicalization, the

topicalized noun phrase must be taken up by a pronoun in the main part of the sentence. We are therefore dealing not with chopping transformations, but with copying transformations (Ross, 1967, 235; note that there is now overwhelming evidence that constraints on movement transformations are not just constraints on chopping and feature-changing rules, cp. e.g., Keenan and Comrie 1972). In the first of the two varieties of "strong" topicalization, the topic appears in the nominative case, irrespective of the case of the pronoun:

- (26) *Televizory* [Nom.] // *v ètom magazine ix*
 [Gen.] *mnogo*.
 '(As for) televisions, in this shop (there are) lots of them.'

It is not clear whether or not this construction involves movement, and in any case since it operates across internal sentence boundaries, as in

- (27) *Televizory* // *ja znaju, èto v ètom magazine ix mnogo*.
 'As for televisions, I know that in this shop there are lots of them.'

it is not relevant to the present discussion. Such sentences are fully acceptable in colloquial speech, and examples are found in modern literature.

In the second variety of strong topicalization, the topicalized noun phrase appears in the same case as the pronoun. This suggests that movement has taken place, otherwise one would not expect the noun phrase to appear in the case in which it would have appeared had it not been moved. This kind of topicalization, unlike the nominative topic, can be either to the left or to the right. In fact, while this topicalization rightwards is acceptable to all speakers of the colloquial standard language, leftward topicalization is not acceptable to everyone:

- (28) *V ètom magazine ix mnogo* // *televizorov* [Gen.].
 (29) *Televizorov* // *v ètom magazine ix mnogo*.

The rightward variant operates across internal sentence boundaries, and is therefore not crucial to our argument:

- (30) *Ja znaju, èto v ètom magazine ix mnogo* // *televizorov*.

Leftward topicalization, however, is blocked by the presence of internal sentence boundaries:

- (31) **Televizorov // ja znaju, što v ètom magazine ix mnogo.*

though it operates out of infinitive constructions without a complementizer:

- (32) *Ogurcov // ja obeščal kupit' ix mnogo.*
'As for cucumbers, I promised to buy lots of them.'

4. *Relativization*

In Russian relative clauses, the relative pronoun, whatever its syntactic role in the relative clause, appears as part of the first major constituent of the relative clause; in general, this means as first word of the relative clause, although it may be preceded by other constituents that are pied-piped with it, e.g., prepositions, head noun, and optionally dependent infinitives:

- (33) *Tanja snjala kvartiru.*
'Tanja rented a flat.'
- (34) *Boris byl dovolen kvartiroj, kotoruju Tanja snjala.*
- (35) **Boris byl dovolen kvartiroj, Tanja snjala kotoruju.*
'Boris was pleased with the flat that Tanja rented.'
- (36) *Krepost', kotoruju oni ne mogli vzjat', stojala na xolme.*
- (37) *Krepost', vzjat' kotoruju oni ne mogli, stojala na xolme.*
'The fortress which they were unable to take [to take which they were unable] stood on a hill.'

As can be seen from (36), movement is possible out of an infinitive construction.

The constraints on relative pronoun movement out of more complex constructions is a tricky problem in Russian, since there is a certain amount of individual variation. Movement is not possible out of a clause introduced by *što* 'that':²

- (38) **Vot ogurecy, kotorye ja obeščal, što prinesu.*
'Here are the cucumbers that I promised I'd bring.'

cf.

- (39) *Vot ogurecy, kotorye ja obeščal prinesti.*

'Here are the cucumbers that I promised to bring.'

The same applies to most other types of subordinate clauses, e.g., indirect questions:

(40) **Vot ogurecy, kotorye mama sprosila, prinesu li ja.*

'Here are the cucumbers that mother asked if I'd bring.'

Difficulties are posed by clauses beginning with *čtoby* (which can mean 'in order to/that', but also corresponds to 'that' plus the subjunctive in Western European languages). Here individual judgments vary particularly greatly, e.g.

(41) ?*Vot kniga, ktoruju ja prikazal, čtoby on pročital.*

'Here is the book which I ordered that he should read.'

received judgments ranging from fully acceptable to fully unacceptable. The same applies to infinitives introduced by *čtoby*:

(42) ?*Policejskie okružili zdanie, ktoroe on privez bombu, čtoby vzorvat'.*

'The police surrounded the building which he had brought a bomb in order to blow up.'

There are some *čtoby*-clauses out of which movement is almost universally felt to be impossible:

(43) **Vot čelovek, kotoryj nevozmožno, čtoby prišel.*

'Here is the man that it's impossible that (he) came.'

and also infinitive constructions with complementizers out of which movement is impossible:

(44) **Ty znaeš' muščinu, za ktorogo ona ljubila Petju, prežde čem vyjti замуž?*

*Do you know the man that she used to love Petja before marrying?

For some Russians, then, we can say in absolute terms that the movement involved in relativization is impossible out of an embedded sentence. For the majority of Russians there will be exceptions to this general principle, but it still seems as if the most profitable approach will be to start from this general principle, and formulate exceptions to it, rather than to adopt a completely different standpoint for speakers of Russian other than the most restricting idiolects.

5. Reflexivization

5.1 In Russian, the reflexive pronoun *sebjja*, which changes for case, though not for person or number, occurs in simple sentences where a constituent of the sentence is coreferential to the subject of the sentence, e.g.

- (45) *Petja_i kupil sebe_i cvety.*
'Petja bought himself some flowers.'

(there are some cases where the reflexive pronoun is coreferential to some object noun phrase, rather than the subject, though this is a marginal phenomenon in Russian. The present argument is not affected thereby.) In fact, within the simple sentence the use of the reflexive is obligatory. If in (45) one used the non-reflexive pronoun *emu* 'to him, for him', it could not be coreferential with *Petja*.

Reflexivization in Russian does not extend down into finite embedded sentences, e.g.

- (46) *Petja_i velel, čtoby ja kupil emu_i/*sebe_i cvety.*
'Petja ordered that I should buy him some flowers.'

- (47) *Petja_j velel, čtoby ja_i kupil sebe_i cvety.*
'Petja ordered that I should buy myself some flowers.'

nor into an infinitive construction with a complementizer:

- (48) *Predsedatel'_i ne tak umen, čtoby ego_i/*sebjja_i uvažat'.*
'The chairman isn't clever enough (for one) to admire him.'

(though (48) with *sebjja* is grammatical on the reading 'the chairman isn't clever enough to respect himself', where the underlying subject of the infinitive is also *predsedatel'*.)

With infinitives lacking a complementizer the situation is complex, and here only a general survey of the possibilities can be given (for more details cp. Ružička 1973). In general, reflexivization extends optionally into infinitive constructions, i.e., as the Russian translation of 'Petja_i told me to buy him_i some flowers' one can say either of the following:

- (49) *Petja_i velel mne_j kupit' emu_i cvety.*
(50) *Petja_i velel mne_j kupit' sebe_i cvety.*

of which (50) is, as expected, ambiguous, i.e., can also mean '*Petja_i ordered me_j to buy myself_j some flowers_j*'. With some matrix verbs, reflexivization into the infinitive construction is virtually obligatory, i.e., the use of the non-reflexive pronoun is felt to be very unnatural or outright unacceptable on a coreferential reading.

- (51) *Boris_i ne dal druž'jam_j ugovorit' sebja_i/*
 (*)*ego_i.*
 'Boris didn't allow his friends to persuade him.'

There are also cases where this type of reflexivization is excluded:

- (52) *Boris_i poprosil otca_j poslat' ego_i/*sebja_i na*
front.
 'Boris asked his father to send him to the front.'

One might try to clarify the data by referring to other types of reduced sentence structure, for instance participle constructions as reduced relative clauses. In Russian, these are opaque to reflexivization,³ as in

- (53) *Ja vernul knigi, vzjatye mnoj/*soboj.*
 'I returned the books taken by me.'

However, instances of the reflexive pronoun in sentences like (53) are attested in earlier Russian, and are possible in Polish, which otherwise seems to have the same constraints on reflexivization as Russian:

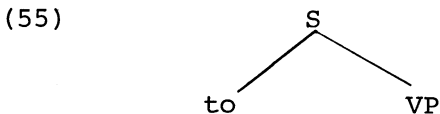
- (54) *Zwróciłem książki wzięte sobą.*

This suggests that in this area both Russian and Polish have arbitrary rules, rather than rules that follow from some general linguistic principle—otherwise one would expect both languages to offer the same paradigm.

The data of this section can be summarized as follows: reflexivization is obligatory where the coreferential noun phrases are clause-mates in underlying structure; it is excluded where they are not clause-mates in derived structure. Where they are not clause-mates in underlying structure, but are clause-mates in derived structure, reflexivization is sometimes obligatory, sometimes excluded, sometimes optional. The last of the three cases demonstrates that the scope of reflexivization in Russian is not determined exclusively by the distribution of internal sentence boundaries, whether in underlying or

derived structure.

5.2 It is worth pausing for a moment to consider the status in English of the relationship between infinitives and reflexive pronouns, since this is often given as a paradigm instance of the interrelation between internal sentence boundaries and constraints on transformations (cp. Jacobs and Rosenbaum, 1968, 239-40). This rests on the assumption that the structure of the English infinitive, after the subject noun phrase has been removed, is



with no S-pruning since the S dominates more than just VP. Whence follows that reflexivization, which is claimed to operate only within the simplex S, does not extend down into infinitive constructions:

(56) *I told John to buy me/*myself some flowers.*

The fact that English infinitives have an overt complementizer, while Russian infinitives do not, would seem to explain why the Russian infinitive does not usually block transformations that are constrained to applying only within simplex sentences. However, the English data are not as unambiguous as this. English also has infinitives without a complementizer (sometimes as alternatives to constructions with), and these are equally opaque to reflexivization:

(57) *Harry helped me (to) buy him/*himself some presents.*

(58) *Harry made me buy him/*himself some presents.*

(59) *Harry watched me buy him/*himself some presents.*

cp. also complement types that do not allow of a preverbal complementizer:

(60) *Harry saw me buying him/*himself some presents.*

There are several conclusions one might draw from these examples. One might save the basic claim by saying that in underlying structure (in fact, at levels before reflexivization) sentences like (57)-(60) do have an overt complementizer; it is not clear that this modification has any empirically testable consequences over and above what would follow from simply marking the aberrant forms as exceptions. Alternatively, one might claim that the correct con-

straint on English reflexivization is that the coreferential noun phrases must be clause-mates in underlying structure. This accounts for the ungrammaticality of (56)-(60), as well as for the ungrammaticality of

- (61) **I told Harry that he should buy myself some flowers.*

with a finite embedded sentence—the type of example that originally led to the constraint being stated in terms of internal sentence boundaries. The latter seems the more general solution.

6. *Negative-distribution*

Russian has a rule of Negative-distribution, which enables one to distribute sentence-negation across indefinite pronouns. Thus one can say either

- (62) *On ne obraščalsja k komu-libo.*
'He didn't turn to anyone.'

or, more commonly,

- (63) *On ne obraščalsja ni k komu.*
'He turned (lit. didn't turn) to no-one.'

The morphological distinction between the relevant indefinite pronoun and the negative pronoun is that the former has the suffix *-libo*, and the latter the prefix *ni-*; this prefix will be separated from the root by a preposition. Both sets of pronouns have as their root the interrogative pronoun, cp. *k komu?* 'to whom?'. The *ni-*forms arise by distribution of negation from the sentence negation.

This distribution is not unbounded. In particular, it cannot apply into embedded finite sentences:

- (64) *On ne xočet, čtoby ja obraščalsja k komu-libo.*
(65) **On ne xočet, čtoby ja obraščalsja ni k komu.*
'He doesn't want that I should turn to anyone.'

However, it does extend down into infinitive constructions:

- (66) *On ne xočet obraščat'sja k komu-libo.*
(67) *On ne xočet obraščat'sja ni k komu.*
'He doesn't want to turn to anyone.'

but not if the infinitive has an overt complementizer:

- (68) *On ne tak smel, čtoby obraščat'sja k komu-libo.*
(69) **On ne tak smel, čtoby obraščat'sja ni k komu.*

'He isn't brave enough to turn to anyone.'

7. Other rules

7.1. One might expect Special (WH-) question formation to provide evidence similar to that from Relative clause formation. In Russian, the movement of a WH word to the front of the sentence is optional—failure to move does not, as in English, carry the implication of an echo-question:

(70) *Kogo ty videl?*

(71) *Ty videl kogo?*
'Who did you see?'

However, for most informants the restrictions on movement of the WH pronoun are weaker than those on movement of relative pronouns; the following are typical judgments:

(72) *Čto vy xotite, čtoby ja prines?*
'What do you want that I should bring?'

(73) (?) *Kogo ty skazal, čto on ljubit?*
'Who do you say that he loves?'

(74) *?Na kokoe derevo ty videl, kak on lez?*
'On which tree did you see him climbing
(lit. how he climbed)?'

and the unnaturalness felt with some of them does not seem strong enough to warrant this construction as a heuristic test for establishing internal sentence boundaries, although in the reverse direction it is possible to maintain that the unnaturalness occurs where one would, on other grounds, posit the incidence of internal sentence boundaries. The variants of (73) and (74) without movement are more acceptable:

(75) *Ty skazal, čto on ljubit kogo?*

(76) *Ty videl, kak on lez na kakoe derevo?*

7.2. Ross (1967, 1975-76) mentions another rule that seems to be bounded by internal sentence boundaries, namely the rule which puts the direct object into the genitive (rather than the accusative) after negation. In modern Russian the rule is optional, i.e., after a negative both accusative and genitive are found (often, though not always, with slight differences in meaning); the current tendency is to reduce this use of the genitive:

(77) *Ja ne sdelał èto (Acc.)/ètogo (Gen).*

'I didn't do this.'

The operation of this rule does not extend down into embedded sentences with finite verbs, nor into infinitive constructions with complementizers. However, it does extend down into some complementizerless infinitive constructions, e.g.,

(78) *Ja ne xotel delat' èto/ètogo.*
'I didn't want to do this.'

although here the use of the genitive for the direct object is even less usual in the modern language. Although the bounding of this rule is, as noted by Ross, connected with the occurrence of internal sentence boundaries, the correlation does not seem sufficiently one-to-one to enable us to use constraints on this transformation as a heuristic in all cases.

The rule of Direct-object-genitivization may be usable as a heuristic test in Polish where, at least in the standard language, the use of the genitive is obligatory for the direct object of a negated verb, including the direct object of an infinitive dependent on a negated matrix verb.

8. *Conclusions*

It should be observed that the restrictions noted above apply only to movement rules and feature-changing rules that operate across a variable; the possibility in Russian of rules like Subject-raising, which specify movement of a noun phrase into the next highest sentence, is not excluded.

The above discussion shows that a number of movement transformations and feature-changing transformations of Russian have to be bounded to the same domain: movement may not occur out of (or into) embedded sentences with finite verbs, nor into infinitive constructions with a complementizer; though movement is possible into (or out of) infinitive constructions that lack a complementizer.

This is the same dichotomy as is predicted by Ross's S-pruning convention; it provides a means of adjudicating between this condition and Chomsky's tensed-S condition. It is interesting to note that this same dichotomy is reflected in the delimitation of subordinate clauses in traditional Russian grammar. By a rule of Russian punctuation, subordinate clauses are set off by a comma, and examination of the examples in this article will suffice to show that embedded finite sentences and infinitives with a complementizer are set off by commas, whereas other infinitives are not.

NOTES

*This article first appeared in *You Take the High Node and I'll Take the Low Node*, edited by C. Corum, T. C. Smith-Stark, and A. Weiser, Chicago Linguistic Society, 1973, pp. 291-304. We are grateful to the Chicago Linguistic Society for permission to reprint.

The only changes made to the original text have been to update references to works published after submission of the original manuscript, plus a few minor editorial adjustments. Although some details of the presentation reflect the linguistic climate of the early 70s, several of the points discussed remain of importance to syntactic theory in general and the analysis of Russian in particular, for instance the extent to which Russian permits movement out of subordinate clauses, and the relevance of clause structure vs. finiteness in constraining movement.

For further details of movement in colloquial Russian, reference can now be made to Lapteva (1976); see also Chvany (1978). Section 5 of the present article, on Reflexivization, represents a very rudimentary statement; for more recent discussion of the factors controlling reflexive pronouns see, for instance, Timberlake (in this volume), and references therein.

¹I am grateful to J. R. Payne for providing me with information on his work on topicalization.

²J. R. Payne tells me that one of his informants accepts movement out of *čto*-clauses, at least in some cases. This idiolect is thus irrelevant for establishing the relationship between movement constraints and clause structure.

³I am grateful to Catherine Chvany for drawing my attention to such examples.

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ON PLACE ADVANCEMENTS IN ENGLISH AND RUSSIAN

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This paper is concerned with the analysis of certain constructions of English and Russian in the framework of Relational Grammar. Relational Grammar is based on the notion that the relations expressed by the noun phrases within a clause are fundamental facts of grammar, that these relationships must be incorporated into a grammatical description, that they determine or constrain the course of derivation of a sentence, and that they are governed by universal laws and principles (which must also be stated) of the grammars of human languages. Among the syntactic relations which are identified in Relational Grammar are those of Subject, Direct Object and Indirect Object. It is the recognition of these relationships which has the greatest effect—in concrete terms—of distinguishing Relational Grammar from mainstream Transformational Generative Grammar. In its attempt to make use of relational information of this sort Relational Grammar is reminiscent of Case Grammar; but the difference here is that while Case Grammar deals with essentially semantic relationships (Agent, Patient, etc.), Relational Grammar deals with basically syntactic ones.¹ It thus recognizes that noun phrases have a syntactic function or relation in the clause in which they are used in addition to representing a syntactic category (noun phrase), and since this relation is stated explicitly in the syntax it becomes available to syntactic rules which may make use of the information or may operate to change the relation.

The three key relations recognized by Relational Grammar are Subject, Direct Object and Indirect Object, for convenience labeled 1, 2 and 3, respectively. NPs bearing one of these three relations are said to be Terms; NPs bearing other possible relations—Instrument, Place, Time, etc.—are Non-Terms. 1s and 2s together are called primaries; 2s and 3s are called objects. The relations are organized in a hierarchy such that all Terms outrank Non-Terms, and, among Terms, Subjects outrank Direct Objects, which in turn outrank Indirect Objects. There is at present no evidence for hierarchical ranking among the Non-Terms. This hierarchy is empirically based and rests on observations about the behavior of the elements of the hierarchy with respect to various

syntactic rules and processes (cf. Keenan and Comrie 1977). The higher in the hierarchy a given category is, the more "powerful" it will be in the syntax. Thus, for example, Terms rank higher than Non-Terms, and it is only Terms which can trigger reflexivization, coreferential deletion or verbal agreement. Not all Terms will necessarily do these things in all languages (e.g., it is traditionally said that in Russian reflexivization is triggered only by 1s and never by 2s or 3s,²) but the claim is made that in no language will something other than a Term have the power to do this (i.e., no Non-Term will ever trigger reflexivization, verbal agreement, etc.). Likewise, with respect to Terms, the hierarchy explicitly predicts that certain kinds of behavior exhibited by a 3 in a given situation will also be exhibited by a 2 or a 1, but does not predict the converse (although it may happen to be true). Thus, if a language marks its verbs for Object agreement, the claim is that it will also mark Subject agreement, while languages having Subject agreement need not have Object agreement (though they may, and, in fact, some of them do). In addition, the hierarchical organization means that no language can have, say, 1-agreement and 3-agreement unless it also has 2-agreement.

A change in the relation borne by an NP may be effected by a syntactic rule which changes its place in the hierarchy. Such a rule is called a Revaluation Rule. A Revaluation Rule, in the course of promoting or demoting the new bearer of the grammatical relation, will displace any NP which up to that time was the bearer of the relation. Such an NP displaced from its former relation is called a *chômeur*, and the NP is said to be en *chômage*. The further treatment of these displaced NPs is a language-specific matter, but it is revealing to note that there are usually some general principles within a language which apply to *chômeurs* from many different sources; for example, in English they are usually shunted to the end of the sentence, while in Russian they are usually marked with the Instrumental case.

There are three kinds of Revaluation Rules: Advancements, which promote an NP to a higher relation within its own clause (e.g., PASSIVE, which promotes a 2 to a 1); Demotions, which demote an NP to a lower relation within its own clause (e.g., INVERSION, which demotes a 1 to a 3); and Ascensions, which take a sub-constituent of a complex NP and promote it to bearing the relation which was originally borne by the whole NP (e.g., OBJECT RAISING). The matrix NP from which the sub-constituent ascends is known as

the host; the remainder of this matrix NP after an Ascension becomes a *chômeur*. Ascensions may apply within a clause or between clauses (from an embedded S to an immediately dominating S).

Revaluations themselves are only one of four types of rules which affect termhood (in their case, by moving an NP up or down in the hierarchy); there are also Insertion Rules, Deletion Rules and Clause Union Rules which can change term status in other ways. Insertions create new Terms within a clause by inserting dummies (e.g., *THERE*-INSERTION in English). Deletions, as the name implies, remove constituents from a structure; when they remove NPs which bear grammatical relations, they change the term structure (e.g., *EQUI-NP DELETION*). Clause Unions collapse a two-level clause structure into a single clause by making the syntactic dependents of the lower verb into syntactic dependents of the higher verb (e.g., the rule which produces causative constructions in many languages); in such situations grammatical relations are always altered in the lower clause, and are usually affected in the higher clause as well. One interesting observation which has emerged from looking at rules which change termhood is that they all represent rules whose analogs in Transformational Grammar, if they exist, can be shown to be cyclical.³

The general effect of Revaluation Rules is to change the governmental structure of the sentence, producing a sentence which is related but which has a different grammatical structure. Many of these same kinds of relationships have also been studied from other points of view, notably under the heading of valence (*valentnost'*). Examples of a valence-based treatment of questions of this type can be found in Xolodovič (1969, 1974), Meščaninov (1967) and Nedjalkov (1971), as well as in Apresjan (1967). The valence-based approach and the Relational Grammar approach provide two different perspectives on a common body of syntactic phenomena.

As indicated above, there is a class of rules known as Advancement Rules, which are characterized by the fact that they all advance a nominal in the hierarchy of relations, while keeping it within its own clause. This permits, in principle, a rule which makes any of a variety of Non-Terms (Instrument, Benefactive, Place, etc.) into a 3, a 2 or a 1; or a rule which makes a 3 into a 2 or a 1; or a rule which makes a 2 into a 1. Since Non-Terms are all of equal rank in the hierarchy, an Advancement Rule cannot make one Non-Term into another. While some of the theoretically-possible Advancements may not exist

(confirmed examples have not been found for all of them), many certainly do. Productive Advancements of many types are quite commonly found in Malayo-Polynesian languages, several of which are noted for their multiple Advancements to 1 (from 2, from 3, and from various kinds of Non-Terms; cf. Bell, 1976). Advancements are less productive and less varied than this in many other language groups, but are, nevertheless, known from a very wide variety of languages, even in traditional descriptions. However, while many traditional descriptions of languages may have recognized the facts of a number of Advancements, their treatment of them was usually as idiosyncratic and isolated phenomena of a given language; Relational Grammar attempts to integrate them into—and account for them within—a comprehensive and unified theory of relations and changes in relations.

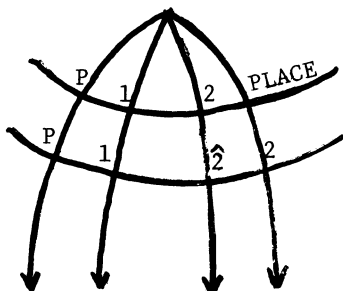
Once such a theory is recognized, it becomes possible to discern Advancements in many places where they had gone unnoticed or had been seen only as sporadic or unsystematic instances of "parallel forms of government," "alternative types of construction," etc. A handful of examples of an unproductive syntactic construction in a given language seems hardly sufficient reason for setting up a syntactic rule phrased in general terms; but a small group of examples illustrating the limited and unproductive application in one language of a rule which is quite productive and general in another (or whose existence is predicted by various theoretical considerations) takes on a rather different character.

In the remainder of this study we will take a closer look at a particular Advancement Rule and at some of the benefits of a Relational treatment of this phenomenon. The Advancement which will be discussed here is the one which promotes a Place argument⁴ to Direct Object, as formalized in (1).

(1) PLACE ADVANCEMENT: PLACE → 2

The relevant portion of the derivation of a sentence which has undergone this Advancement can be shown schematically as in (1'). The horizontal arcs define the various stages (strata) along the path of a derivation. In the present case the upper stratum represents the initial structure, and the lower one represents the structure derived by the application of PLACE ADVANCEMENT: the Place argument has been promoted to 2 and the former 2 has become a *chômeur*. This advancement may at first seem unusual from the point of view of Indo-European languages, but appears to be quite ordinary in various Malayo-Polynesian

(1')



languages, where it is very productive and even has a morphological marker. Among these, LOCATIVE ADVANCEMENT⁵ has been noted in Indonesian by Chung (1974), in Malagasy by Keenan (1972), in Tagalog by Schachter and Otnes (1972), and in Cebuano by Bell (1976). An example of LOCATIVE ADVANCEMENT in Indonesian (after Chung) is given in (2).

- (2) a. *Wanita itu duduk di atas kursi.*
 woman the sit on top chair
 'The woman is sitting on the chair.'
- b. *Wanita itu men-duduk-i kursi.*
 woman the TRANS-sit-LOC chair
 'The woman is "besitting" the chair.'
- c. **Kursi di-duduk-i di atas oleh wanita itu.*
 chair PASS-sit-LOC on top by woman the
 'The chair is being sat on by the woman.'
- d. *Kursi di-duduk-i oleh wanita itu.*
 chair PASS-sit-LOC by woman the
 'The chair is being "besat" by the woman.'

The "basic" sentence is shown in (2a), while (2b) shows the effect of LOCATIVE ADVANCEMENT; as seen in (2c), no passive is possible from (2a) directly, since the verb is not transitive, but (2d) is an acceptable passive sentence, derived from (2b). The existence of the passive (2d) supports the Advancement analysis for (2b); other evidence for Advancement in (2b) comes from the addition of the transitivity marker *men-* and the deletion of the preposition *di atas*. Chung also cites evidence from Relativization that *kursi* in (2b) is the Direct Object.

While PLACE ADVANCEMENT is clearly not as well developed in English or in Russian, there are constructions which seem to lend themselves to this analysis. One such case in English is *sprinkle*, which can be constructed either as in (3a) or as in (3b), with no significant difference in meaning.⁶

- (3) a. *Boris sprinkled water on the plants.*
 b. *Boris sprinkled the plants with water.*

Sentence (3a) has a Direct Object and a Place Phrase; in (3b) what had been the Place has become the Direct Object, and the old Direct Object turns up marked by the preposition *with*. Evidence that *plants* in (3b) has really become the Direct Object can be drawn from the disappearance of the preposition *on* and also from the fact that two passives are possible; (3c) is the passive corresponding to (3a) and (3d) corresponds to (3b).

- (3) c. *Water was sprinkled on the plants by Boris.*
 d. *The plants were sprinkled with water by Boris.*
 e. **Water was sprinkled the plants by Boris.*

That there has been a change in relations can be seen from the fact that after PLACE ADVANCEMENT has applied, PASSIVE can no longer promote the 2 *water* (cf. the ungrammaticality of (3e)), although it may promote the new 2 *plants* (cf. (3d)). This is in accord with the prediction made by the RELATIONAL ANNIHILATION LAW.⁷ In addition, the preposition *with* in (3d) provides clear evidence that (3d) must come from (3b) and not directly from (3a); otherwise, among other things, it would be necessary to repeat the information that *with* is inserted into the sentence. Furthermore, it would be difficult indeed to get PASSIVE to apply to the object of a preposition, which it would have to do if (3d) were derived directly from (3a). Another rule of Passivization, which operates only on the objects of prepositions of Place with certain specified verbs, would have to be stated; and the list of these verbs would turn out to be identical to the list which must be given anyway for PLACE ADJUSTMENT (i.e., for the rule which transforms sentences of the type (3a) into sentences of the type (3b)).

The ability to undergo PLACE ADVANCEMENT is idiosyncratic and must be stated as a property of the trigger verbs. Thus, a verb like *pour*, which seems to be a close parallel to *sprinkle* both semantically and syntactically, can form sentences corresponding to (3a) and (3c), but not to (3b) or (3d).

- (4) a. *Boris poured water on the plants.*
 b. **Boris poured the plants with water.*
 c. *Water was poured on the plants by Boris.*
 d. **The plants were poured with water by Boris.*

This is the surface reflection of the fact that, while

sprinkle allows PLACE ADVANCEMENT, *pour* does not. Other verbs like *sprinkle* include *shower*, *spray*, *splash*, *spatter*, *splatter*, and *drizzle* (in the culinary use). It is interesting, and probably not accidental, that these verbs fall into a semantic group; but verbs which can undergo PLACE ADVANCEMENT in English are not limited to this group. Thus, for example, the verb *load* is semantically unrelated to *sprinkle*, but is syntactically similar (at least with respect to PLACE ADVANCEMENT), as can be seen from (5).

- (5) a. *The dockworkers were loading boxes onto the ship.*
 b. *The dockworkers were loading the ship with boxes.*
 c. *Boxes were being loaded onto the ship by the dockworkers.*
 d. *The ship was being loaded with boxes by the dockworkers.*

Again there are two passives, (5c) and (5d), depending on whether or not PLACE ADVANCEMENT has applied in the derivation. Other verbs in the same semantic group as *load* which undergo Advancement include *pile* and *stack*; but there are also verbs with this semantic idea which do not allow Advancement, like *place* and *stand*.

Another category of PLACE ADVANCEMENT verbs in English is the motion verbs. These verbs are normally intransitive and occur with Place phrases expressing destination or, sometimes, position. But, at least in certain instances, they can also occur with what looks strikingly like a Direct Object, and this Direct Object seems to come from a Place phrase. Examples with a Place phrase and with a Direct Object are given in (6)-(9).⁸

- (6) a. *We rode on the roller coaster at Coney Island.*
 b. *We rode the roller coaster at Coney Island.*
 (7) a. *The Lone Ranger rides on a white horse named Silver.*
 b. *The Lone Ranger rides a white horse named Silver.*
 (8) a. *Ski on Mount Snow.*
 b. *Ski Mount Snow.*
 (9) a. *Fly on National (Airlines) to Miami.*
 b. *Fly National to Miami.*

Applying the test of Passivization to these sentences,

it can be seen that they do passivize, though only in a limited way: in order to be felicitous, the passive often must involve a claim, a statistic or a comparison. The a sentences (without Advancement) of course do not have corresponding passives, since they are intransitive, but the b sentences do, thus supporting the Advancement analysis.

- (6) c. ---- (no passive)
 d. *The roller coaster at Coney Island has been ridden by over a million people.*
- (9) c. ---- (no passive)
 d. *National is flown (to Miami) by more young executives than any other airline.*

Other verbs in this category include *walk* (*the streets, the plank, etc.*), *pace* (*the floor*), *sail* (*the seas*), *drive* (*the turnpike*), etc. There are also some verbs which normally take Place phrases of location and sometimes Direct Objects of limited classes, and which can undergo PLACE ADVANCEMENT, but only if no Direct Object is already present;⁹ in this sense they seem to be more like (intransitive) motion verbs than like the verbs of the *sprinkle* or *load* category. Examples are given in (10)-(11).

- (10) a. *Every important act in the country has played at the Palace.*
 b. *Every important act in the country has played the Palace.*
- (11) a. *Watch out! A gang of muggers is working in this area.*
 b. *Watch out! A gang of muggers is working this area.*

As with the motion verbs, the b sentences have corresponding passives, generally with similar limitations on the freedom or felicity of Passivization in these cases.

- (10) c. ---- (no passive)
 d. *The Palace has been played by every important act in the country.*
- (11) c. ---- (no passive)
 d. *Watch out! This area is being worked by a gang of muggers.*

There are also some motion verbs with a less basic meaning which are less restricted with respect to PLACE ADVANCEMENT and, consequently, also with respect to the possibility of subsequent Passivization. Ad-

vancement with these verbs is common enough that they are thought of as being normally transitive. In their more literal meanings they are now generally found with Direct Objects (i.e., having undergone Advancement), although in earlier English they seem to have occurred without Advancement; in their more figurative meanings both forms of government are often found.¹⁰ This group includes verbs like *enter*, *penetrate* and *infiltrate*, as illustrated below.

- (12) a. **Natasha entered into the room.*
 b. *Natasha entered the room.*
 c. ---- (no passive)
 d. *The room was entered by Natasha.*
- (13) a. *It is easier for a camel to go through the eye of a needle, than for a rich man to enter into the kingdom of God. (Matt. xix, 24, King James Version [1611])*
 b. *It is easier for a camel to go through the eye of a needle than for a rich man to enter the kingdom of God. (Matt. xix, 24, Revised Standard Version [1946])*
 c. ---- (no passive)
 d. *It is easier for a camel to go through the eye of a needle than for the kingdom of God to be entered by a rich man.*
- (14) a. *Japan and Brazil entered into an agreement to promote bilateral trade between the two nations.*
 b. ?*Japan and Brazil entered an agreement to promote bilateral trade between the two nations.*¹¹
 c. ---- (no passive)
 d. ?*An agreement was entered by Japan and Brazil to promote bilateral trade between the two nations.*
- (15) a. *His brilliant insights penetrated into the innermost recesses of the problem.*
 b. *His brilliant insights penetrated the innermost recesses of the problem.*
 c. ---- (no passive)
 d. *The innermost recesses of the problem were penetrated by his brilliant insights.*
- (16) a. *The CIA infiltrated a top agent into the KGB.*
 b. *The CIA infiltrated the KGB with a top agent.*
 c. *A top agent was infiltrated into the KGB.*
 d. *The KGB was infiltrated with a top agent.*¹²

There is another phenomenon in English which at first may look as if it belongs with the kind of PLACE ADVANCEMENT discussed above; there is, however, a

significant difference, as will be seen below, although an alternative analysis may connect it with the type of Advancement already mentioned. An example is given in (17).¹³

- (17) a. *Wild flowers abound in Siberia in the spring.*
 b. *Siberia abounds with wild flowers in the spring.*

This example seems like the earlier ones in that a Locative NP has been promoted to form (17b) from (17a), displacing another NP which then shows up marked by *with*; in the process the preposition of the promoted NP is deleted. But the important difference here is that in the previous examples the Place phrase has been promoted to a 2 (and then in some instances the 2 has been advanced to 1 by PASSIVE), whereas in (17) it seems to be promoted directly to 1. There is no evidence for supposing in (17) that *Siberia* was ever a Direct Object; *abound* never occurs in any construction with a Direct Object, nor does it occur in a construction such as Passive which presupposes the existence of a Direct Object at some time, cf. (17c).

- (17) c. **Siberia is abounded by wild flowers in the spring.*

Other verbs like *abound* are *swarm* and *crawl*, as illustrated in (18)-(19); in addition, *teem* seems to undergo an Advancement from Locative to 1, although here Advancement seems to be obligatory, since the form without Advancement does not occur on the surface, cf. (20).

- (18) a. *Bees swarm in the garden.*¹⁴
 b. *The garden swarms with bees.*
 c. **The garden is swarmed by bees.*
 (19) a. *Ants are crawling on that rock.*
 b. *That rock is crawling with ants.*
 c. **That rock is being crawled by ants.*
 (20) a. **Ants are teeming on the path.*
 b. *The path is teeming with ants.*
 c. **The path is being teemed by ants.*

It therefore may be that there are two different PLACE ADVANCEMENT rules in English, as seen in (21) and (22).

- (21) PLACE ADVANCEMENT I: PLACE → 1
 (22) PLACE ADVANCEMENT II: PLACE → 2

There is, however, another possible analysis for these sentences which avoids the necessity of setting up two different rules of PLACE ADVANCEMENT. The semantics of *abound* are such that it does not take an Agent (cf. the ungrammatical (17c-f) below), and so by the principles of universal assignment of initial termhood *abound* will be provided with a 2 and a PLACE, rather than a 1 and a PLACE.¹⁵

- (17) c. **Mother Nature has abounded wild flowers in Siberia.*
 d. **Mother Nature has abounded Siberia with wild flowers.*
 e. **Wild flowers are abounded in Siberia by Mother Nature.*
 f. **Siberia is abounded with wild flowers by Mother Nature.*

If *abound* is an intransitive-2 verb, (17a) will be produced by the operation of UNACCUSATIVE (see note 15 above), and (17b) can be similarly derived through UNACCUSATIVE by having the rule of PLACE ADVANCEMENT TO 2 apply first, with UNACCUSATIVE applying to its output. The question of which of the two proposed analyses is preferable is an empirical one. From what has been presented here it can be seen that the PLACE-ADVANCEMENT-TO-2/UNACCUSATIVE analysis avoids the necessity of having a separate rule of PLACE ADVANCEMENT TO 1 in English; but it is likely that there will have to be a rule of PLACE ADVANCEMENT TO 1 in universal grammar anyway (cf. Bell 1976, Keenan 1972); therefore it would be available to English "free of charge," and so the "saving" is illusory. Only if such a rule could be eliminated from all other languages would it be valid to argue for its elimination from English on grounds of economy. The issue must, therefore, await further empirical evidence for its resolution.

The Transformational explanation of Advancements is phrased in terms of Movements (changes in word order) and concomitant deletion and insertion of prepositions (but without taking into account Grammatical Relations). However, evidence against this position can be found in a language such as Russian. Many Grammatical Relations in Russian are expressed in the surface structure by case markings; also word order is not fixed as it is in English, and thus cannot be used to identify positionally the target of a rule. Examples (23)-(27) show various Russian sentences which are like the English sentences in (3) (i.e., with predicates of the type of *sprinkle*) in that they

exhibit both pre- and post-PLACE ADVANCEMENT forms.¹⁶

- (23) a. *Na baržu gruzili rudu.*
 on barge loaded ore-ACC
 'They were loading ore onto the barge.'
- b. *Baržu gruzili rudoj.*
 barge-ACC loaded ore-INST
 'They were loading the barge with ore.'
- c. *Ruda gruzilas' na baržu.*
 ore-NOM loaded-PASS on barge
 'The ore was being loaded onto the barge.'
- d. *Barža gruzilas' rudoj.*
 barge-NOM loaded-PASS ore-INST
 'The barge was being loaded with ore.'
- (24) a. *Sereža bryzgaet vodu na bel'e.*
 Sereža-NOM sprinkles water-ACC on laundry
 'Sereža is sprinkling water on the laundry.'
- b. *Sereža bryzgaet bel'e vodoj.*
 Sereža-NOM sprinkles laundry-ACC water-INST
 'Sereža is sprinkling the laundry with water.'
- c. *Voda bryzgaetsja na bel'e.*¹⁷
 water-NOM sprinkle-PASS on laundry
 'Water is being sprinkled on the laundry.'
- d. *Bel'e bryzgaetsja vodoj.*
 laundry-NOM sprinkle-PASS water-INST
 'The laundry is being sprinkled with water.'
- (25) a. *My nastilaem kamni na pol.*
 we-NOM lay-out stones-ACC on floor
 'We are laying (paving) stones on the floor.'
- b. *My nastilaem pol kamnjami.*
 we-NOM lay-out floor-ACC stones-INST
 'We are paving the floor with stones.'
- c. *Kamni nastilajutsja na pol.*
 stones-NOM lay-out-PASS on floor
 'The (paving) stones are being laid on the floor.'
- d. *Pol nastilaetsja kamnjami.*
 floor-NOM lay-out-PASS stones-INST
 'The floor is being paved with stones.'
- (26) a. *Alik namazyvaet maslo na xleb.*
 Alik-NOM spreads butter-ACC on bread
 'Alik is spreading butter on the bread.'
- b. *Alik namazyvaet xleb maslom.*
 Alik-NOM spreads bread-ACC butter-INST
 'Alik is spreading the bread with butter.'
- c. *Maslo namazyvaetsja na xleb.*
 butter-NOM spread-PASS on bread
 'The butter is being spread on the bread.'
- d. *Xleb namazyvaetsja maslom.*
 bread-NOM spread-PASS butter-INST
 'The bread is being spread with butter.'

- (27) a. *Aleša zatykaet vatu v uši.*
Aleša-NOM stuffs cotton-ACC in ears
'Aleša is stuffing cotton into his ears.'
- b. *Aleša zatykaet uši vatoj.*
Aleša-NOM stuffs ears-ACC cotton-INST
'Aleša is stuffing his ears with cotton.'
- c. *Vata zatykaetsja v uši.*
cotton-NOM stuff-PASS in ears
'Cotton is stuffed into the ears.'
- d. *Uši zatykajutsja vatoj.*
ears-NOM stuff-PASS cotton-INST
'The ears are stuffed with cotton.'

The a and b sentences of (23)-(27) illustrate directly the operation of PLACE ADVANCEMENT (to 2) in Russian. The correspondence between the two sentences of each a/b pair is exact, except for the case markings of the two noun phrases which are the complements of the verb.¹⁸ Thus it can be seen that the same rule of PLACE ADVANCEMENT TO 2 which was seen to function in English functions in Russian as well. Verbal morphology does not change and word order follows the standard principles for Russian; the only specific fact to be noted is that the chômeur is marked with the Instrumental case.¹⁹

It must be noted, however, that the examples in (23)-(27) do not represent the usual case. The more common situation to find is the type of correspondence of sentences seen in the alternate versions of (23)-(24) given below or the type seen in (28)-(30).

- (23) e. *Na baržu gruzili (*zagružali) rudu.*
on barge loaded (*LOC-loaded) ore-ACC
'They were loading ore onto the barge.'
- f. *Baržu gruzili (zagružali) rudoj.*
barge-ACC loaded (LOC-loaded) ore-INST
'They were loading the barge with ore.'
- g. *Ruda gruzilas' (*zagružalas')*
ore-NOM loaded-PASS (*LOC-loaded-PASS)
na baržu.
on barge
'The ore was being loaded onto the barge.'
- h. *Barža gruzilas' (zagružalas')*
barge-NOM loaded-PASS (LOC-loaded-PASS)
rudoj.
ore-INST
'The barge was being loaded with ore.'

- (24) e. *Sereža bryzgaet (*obryzgivaet)*
 Sereža-NOM sprinkles (*LOC-sprinkles)
vodu na bel'e.
 water-ACC on laundry
 'Sereža is sprinkling water on the laundry.'
- f. *Sereža bryzgaet (obryzgivaet)*
 Sereža-NOM sprinkles (LOC-sprinkles)
bel'e vodoj.
 laundry-ACC water-INST
 'Sereža is sprinkling the laundry with water.'
- g. *Voda bryzgaetsja (*obryzgaetsja)*
 water-NOM sprinkle-PASS (*LOC-sprinkle-PASS)
na bel'e.
 on laundry
 'Water is being sprinkled on the laundry.'
- h. *Bel'e bryzgaetsja (obryzgaetsja)*
 laundry-NOM sprinkle-PASS (LOC-sprinkle-PASS)
vodoj.
 water-INST
 'The laundry is being sprinkled with water.'
- (28) a. *Rabočie steljut (*zastilajut)*
 workmen-NOM lay (*LOC-lay)
novyj kover na pol.
 [new rug]-ACC on floor
 'The workmen are laying a new rug on the floor.'
- b. *Rabočie zastilajut (*steljut) pol*
 workmen-NOM LOC-lay (*lay) floor-ACC
novym kovrom.
 [new rug]-INST
 'The workmen are covering the floor with a new rug.'
- c. *Novyj kover steletsja (*zastilaetsja)*
 [new rug]-NOM lay-PASS (*LOC-lay-PASS)
na pol.
 on floor
 'A new rug is being laid on the floor.'
- d. *Pol zastilaetsja (*steletsja)*
 floor-NOM LOC-lay-PASS (*lay-PASS)
novym kovrom.
 [new rug]-INST
 'The floor is being covered with a new rug.'
- (29) a. *Sereža l'et (*oblivaet) vodu*
 Sereža-NOM pours (*LOC-pours) water-ACC
na detej.
 on children
 'Sereža is pouring water on the children.'

- (29) b. *Sereža oblivaet (*l'et) detej*
 Sereža-NOM LOC-pours (*pours) children-ACC
vodoj.
 water-INST
 'Sereža is pouring water on the children.'
- c. *Voda l'etsja (*oblivaetsja)*
 water-NOM pour-PASS (*LOC-pour-PASS)
na detej.
 on children
 'Water is being poured on the children.'
- d. *Deti oblivajutsja (*l'jutsja)*
 children-NOM LOC-pour-PASS (*pour-PASS)
vodoj.
 water-INST
 '"The children are being poured water on."'
- (30) a. *Gruzovik syplet (*osypaet)*
 truck-NOM sprinkles (*LOC-sprinkles)
na dorožku pesok.
 on road sand-ACC
 'The truck is sprinkling sand on the road.'
- b. *Gruzovik osypaet (*syplet)*
 truck-NOM LOC-sprinkles (*sprinkles)
dorožku peskom.
 road-ACC sand-INST
 'The truck is sprinkling the road with sand.'
- c. *Pesok sypletsja (*osypaetsja)*
 sand-NOM sprinkle-PASS (*LOC-sprinkle-PASS)
na dorožku.
 on road
 'Sand is being sprinkled on the road.'
- d. *Dorožka osypaetsja (*sypletsja)*
 road-NOM LOC-sprinkle-PASS (*sprinkle-PASS)
peskom.
 sand-INST
 'The road is being sprinkled with sand.'

Here the verb which appears with the case frame reflecting Advancement ([___ NOM ACC INST]) has gained a prefix, usually *o(b)-* or *za-*. These prefixes seem to function as registration markers²⁰ to record the fact that something has gone on—in this case PLACE ADVANCEMENT has applied—in much the same way that the verbal markers *meng-* *-i* which bracket the verb in the Indonesian example record the fact that LOCATIVE ADVANCEMENT has taken place.²¹ In Indonesian, however, the marking is a regular morphological process, while in Russian it is sporadic and will probably have to be marked as a feature of individual lexical items. A similar function is served by the English prefix *be-* in such verbs as *besprinkle* and *bespatter*, which can be used only with post-

Advancement government, whereas *sprinkle* and *spatter* can be used with either pre-Advancement or post-Advancement government.²² The English prefix is even more sporadic in its occurrence than the Russian ones. The Russian prefixes, in addition, may have a wider function than simply to mark PLACE ADVANCEMENT. There are in Russian a few verbs which allow Advancement of a 3 to 2, and many of those which do involve the same two prefixes *o(b)-* and *za-* (cf. *obespečivat, odarit', zapasat'/-sja*, etc.; see Channon (1978)). This circumstance leads to the conclusion that *o(b)-* and *za-* mark both PLACE ADVANCEMENT and 3-2 ADVANCEMENT in Russian, and suggests that they may in fact be registration markers for Advancements to 2 in those cases where they appear.²³ Advancements from 2, of course, when they are marked, have their own registration marker *-sja* (in one of its functions).

Example (31) illustrates a motion verb which, through PLACE ADVANCEMENT, has become transitive (like the type of English *enter*, cf. (12)-(16) above).

- (31) a. *Deti* *často xodjat (perexodjat)*
 children-NOM often go (LOC-go)
 čerez pole.
 across field
 'The children often go across the field.'
- b. *Deti* *perexodjat (*xodjat) pole.*
 children-NOM LOC-go (*go) field-ACC
 'The children cross the field.'
- c. ---- (no passive)
- d. *Èto pole* *často perexoditsja*
 [this field]-NOM often LOC-go-PASS
 (**xoditsja*).
 (*go-PASS)
 'This field is often gone across/crossed.'

With these (initially-intransitive) motion verbs the prefix *pere-* or *pro-* appears obligatorily as a registration marker. Even with the prefix / registration marker, however, the intransitive use (retaining the preposition *čerez*) may still occur, though it is not as frequent as the advanced (transitive) form.

PLACE ADVANCEMENT TO 1 may also exist in Russian, as can be seen in examples (32)-(34), where nominals which in the a sentences are Place phrases show up directly as Subjects in the b sentences (cf. the English sentences in (17)-(20) above).

- (32) a. *Gnev kipit v serdce.*
 anger-NOM boils in heart
 "Anger is boiling in the heart."
 ≈ '[Someone] is very angry.'
- b. *Serdce kipit gnevom.*
 heart-NOM boils anger-INST
 "The heart is boiling with anger."
 ≈ '[Someone] is very angry.'
- (33) a. *Murav'i kišat v muravejnike.*
 ants-NOM teem in anthill
 "Ants are teeming in the anthill."
 b. *Muravejnik kišit murav'jami.*
 anthill-NOM teems ants-INST
 'The anthill is teeming with ants.'
- (34) a. *Čistota sijaet v dome.*
 "cleanth"-NOM shines in house
 "Cleanth shines in the house."
 ≈ 'The house is very clean.'
- b. *Dom sijaet čistotoj.*
 house-NOM shines "cleanth"-INST
 "The house shines with cleanth."
 'The house is very clean.'

It is probable that the arguments which apply to the English instances of possible PLACE ADVANCEMENT TO 1 cited above will also apply to the Russian examples, and that the two cases will be resolved in the same way.

A Relational analysis of phenomena like those under discussion here has several points in its favor. For one thing, PLACE ADVANCEMENT TO 1 (assuming it is a separate rule) and PLACE ADVANCEMENT TO 2 can be related to each other easily, and a precise specification of the difference between these two Advancements can be formulated: they have in common that they are Advancements (rather than differing types of rules) and that they advance a Place argument; they differ in the rank to which they promote that Place argument (1 or 2). All of these claims have consequences within the theory of Relational Grammar, some of which have been mentioned above, and the results of the Advancements can be empirically verified. In Transformational terms these two phenomena would be distinguished from each other only by the specific ordering from which each starts and the specific permutation which each accomplishes. Nothing would suggest that the two rules have something in common (Advancement of a Place argument) which is not shared by various other possible Transformations. As for their effects, the shift in linear order would be different, but nothing in particular that this accomplishes could be identified. No further claims are made and no consequences

ensue, and so there is nothing substantive which is even subject to empirical verification; the Transformation would simply be ad hoc.

In addition, the Relational analysis enables us to find the cross-linguistic similarity between English and Russian with respect to these rules, because the rules in (21) and (22), which produce PLACE ADVANCEMENT sentences in English, or, for that matter, in Indonesian or any other language which has such Advancements, are exactly the same as those which are needed for Russian. There is, of course, a set of language-specific information that goes with Russian which must be specified, i.e., how ls are treated, how 2s are treated, etc.; but these things are not part of the PLACE ADVANCEMENT rules which are being discussed, because the markings of Subjects and Direct Objects have to be stated elsewhere in the grammar anyway. It is sufficient simply to say that something is a Subject or becomes a Subject through the operation of a rule and the rest will automatically follow according to rules which already exist in the grammar. In a Transformational analysis cross-linguistic or universal correspondences of this sort cannot be discerned, since the change in structure is statable only in terms of information which is language-specific, including such things as word order, case marking, verb morphology and perhaps others as well. In some cases, the rules needed for two different languages might actually happen to correspond or overlap to a certain extent, but such correspondence would be haphazard and attributable to accidental identity of part or all of the structure of the languages, rather than to a purposeful attempt at revealing the similarity of the syntactic processes involved. As such the observation of similarity between the two languages would properly belong under the discussion of other segments of the grammar (word order, case marking, verb morphology, etc.), and functionally equivalent facts would presumably already be stated there, thus rendering the statement of correspondence of these Transformations redundant.

Aside from pointing out similarities, the Relational approach allows us to differentiate PLACE ADVANCEMENT from other Advancements, such as 3-2 ADVANCEMENT, PASSIVE and UNACCUSATIVE, by contrasting what they start with and what they produce. In Transformational Grammar, as has been mentioned above, these all represent just operations on NPs (moving them, changing their case, etc.) to the extent that Advancement phenomena are recognized at all; the particular NPs chosen and the particular way in which

they are affected (i.e., which of their properties is/are changed or how they are changed) has little or no intrinsic significance. In other words, in a Transformational approach, all of these different kinds of Advancements, as well as many other processes of different kinds which are unrelated to Advancements, would be handled by arbitrary rules which could not formally be distinguished from each other or classified. The only difference between the rules would be in the precise changes which were specified, but those changes would not have any principled justification.

But beyond permitting syntactic processes to be related to and compared with each other, a Relational analysis also points out correlations between these syntactic processes and other parts of the grammar. First there are the obvious syntactic effects on morphology which ensue from the reranking of Terms which is effected by an Advancement Rule. Given that a language marks its 2s in a certain way (e.g., with the Accusative case in Russian), and given that some rule promotes a Place argument to 2, that argument must necessarily give up whatever case marking it used to have and take on the marking of the Accusative case. In Relational Grammar this is a natural consequence of such an Advancement and follows from the definitions and basic concepts of the theory. In Transformation Grammar, on the other hand, there is no way of explaining why certain Transformations should call forth morphological changes of this kind; the morphological change must be written in as part of the Transformation, making the latter even more ad hoc.

Another correlation between syntax and morphology can be seen in the presence of registration markers which appear as a result of various Advancements. These registration markers may be purely morphological affixes, as was seen in the Indonesian examples cited above, or partly morphological prefixes or suffixes, as illustrated in Russian and English above, or may take a variety of other possible forms; but their common essence is that they reflect through form something about the derivational history of a sentence. Registration markers are analogous to traces in Transformational Grammar; traces are not accepted in all varieties of Transformational Grammar, but, in those which do accept them, it is possible to make the same kind of identification of syntactic influence on morphology as represented by a registration marker in Relational Grammar.

There are also some correlations between syntax

and semantics which come to light in a Relational approach to phenomena such as those discussed above. One of these concerns the ongoing attempt, reminiscent of Case Grammar, to establish correspondences between the semantic roles of arguments and their initial syntactic roles, as mentioned in Note 1 above. While these correspondences cannot yet be definitely stated, substantial progress has been made and the attempt seems very promising.

Another is the possible identification of semantic correlates for syntactic processes such as Revaluations, as alluded to in Note 6, connecting differences in semantic shading or discursive focus with differences in the syntactic prominence (rank) of the arguments of the proposition. Given the existence of sentence pairs which are susceptible to an analysis which relates them through a Revaluation Rule, such as that seen above for PLACE ADVANCEMENT sentences, it would not be surprising at all to find a reflection of the syntactic difference in the overall interpretation, since language rarely tolerates the redundancy of completely equivalent forms; such a correlate would thus be the motivation for the existence of Revaluation Rules as a linguistic phenomenon. Although as yet little has been done on this question within the scope of Relational Grammar, the area of investigation would seem to be a fertile one. Ultimately such studies should be related to the relatively large body of existing work on such topics as the meaning of grammatical categories and Functional Sentence Perspective.

NOTES

¹Recently, however, there has been an attempt in Relational Grammar to construct a bridge between the syntactically-rooted relations under discussion and the semantic structure (Perlmutter and Postal, in preparation). This attempt has proceeded along lines of finding a mapping between semantic relations and initial syntactic term values through statement of universal laws of assignment of initial termhood. It must be emphasized that such laws are valid only for the initial assignment of term relations, and that ensuing syntactic changes may modify the relations considerably, thus obscuring the correspondences between the syntactic and semantic relations. These changes in syntactic function often presented problems in Case Grammar, where the arguments retained their semantically-inspired labels and were not fully syntactic entities.

²There are, of course, some celebrated cases in which Reflexivization seems to be triggered by something other than a 1; a discussion of this question is not within the scope of

this study. For the most part it is correct to say that the antecedent of a reflexive must be the Subject of its clause. This question is treated, among other places, in Klenin (1974) and Chvany (1975).

³That is, they can be shown to be cyclical in those varieties of Transformational Grammar which accept and use the notion of the cycle. Although the cycle was once used in Relational Grammar, it now no longer is.

⁴The term PLACE is used here and below to include both Locational and Directional arguments. As will be seen below, both types participate in this Advancement.

⁵The term LOCATIVE is used here and in the discussion of the Indonesian example below since that is the nomenclature used in the sources cited. They treat Locational, but not Directional Place arguments. There is, of course, no difficulty in treating LOCATIVE ADVANCEMENT as a form of PLACE ADVANCEMENT, though the reverse is not necessarily true (i.e., will not be true if these languages do not allow Advancement of a Directional Place argument). Chung and Bell are writing explicitly within the theory of Relational Grammar, Keenan is writing in a compatible framework (though not Relational Grammar), and Schachter and Otnes is in a nonrelational framework.

⁶There is a subtle difference in interpretation between these two sentences, and this is a common fact about almost any pair of pre- and post-Advancement sentences. Even before the formulation of Relational Grammar and the identification of Advancements within it this same question was debated with regard to a number of types of sentence pairs (cf., e.g., Anderson 1971), even with regard to active/passive sentence pairs; in Relational Grammar, of course, Passivization is regarded as a type of Advancement, one promoting a Direct Object to Subject. The view that such sentence pairs are not transformationally related because of the different shadings which they have is not shared here. It is claimed, rather, that the difference lies not really in the meaning but in the focus or in the relative prominence of the various arguments. Far from presenting a problem for the Advancement analysis, this subtle shift in emphasis between sentences actually enhances it, since a difference of this sort is exactly what should be expected and provides a principled reason for why Revaluation Rules should exist in language. It thus appears that there may be a semantic correlate of the syntactic process of Revaluation (see Channon, forthcoming a).

⁷The RELATIONAL ANNIHILATION LAW states that when a noun phrase assumes the grammatical relation borne by another noun phrase, that second noun phrase ceases to bear any grammatical relation; a noun phrase thus deprived of its relation is called a *chômeur*.

⁸Examples of the types shown in (6)-(11) and the restrictions on their passive forms which will be seen below were pointed out to me by David Perlmutter.

⁹This is analogous to the situation of another Advancement, UNACCUSATIVE, which can promote a 2 to 1 only when there is no 1 already present. Another way of stating this restriction is that the rule in question in the relevant situation must not create a *chômeur*; which of these two formulations is preferable is an empirical question.

¹⁰The applicability of PLACE ADVANCEMENT to these constructions varies a great deal from verb to verb and even from speaker to speaker.

¹¹Many speakers find this example odd (cf. Note 10, above). To the extent that (14b) is rejected (14d) will also be.

¹²This example differs somewhat from (12)-(15), since it is the only one which is an initial transitive; this is reflected in the fact that (16c) can be formed. Note that (16d) represents the application of PASSIVE to (16b), which is derived from (16a) by PLACE ADVANCEMENT. It does NOT represent the application of PASSIVE to (16c) after PLACE ADVANCEMENT as can be seen from several facts: the putative $\hat{1}$ is marked by the preposition *with*, when the *chômeur* of PASSIVE should be marked with *by*; the verb should reflect "double" passive morphology (**was been infiltrated* [?]), but does not; and the Agent of the action is interpreted as being unspecified (or, at any rate, is certainly not the " $\hat{1}$ ") and may in fact be supplied, cf. (i).

- (i) *The KGB was infiltrated with a top agent by the CIA.*

This example provides independent confirmation of both the NO REGENERATION LAW (which, in general, prohibits the re-creation of a Term relation which has been left vacant through the prior operation of another rule) and the ADVANCEE TENURE LAW (which, in general, prohibits the displacement of a Term created by the operation of an Advancement Rule through the subsequent operation of another Advancement Rule). If (16d) were derived through (16c), the overall derivational path would have to be PASSIVE—PLACE ADVANCEMENT—PASSIVE; the application of PLACE ADVANCEMENT after PASSIVE would violate the NO REGENERATION LAW (PLACE ADVANCEMENT creates a 2, but there was previously a 2 before PASSIVE), and the application of PASSIVE again after PLACE ADVANCEMENT would violate the ADVANCEE TENURE LAW (the second application of PASSIVE would have to put en *chômage* a 1 created by Advancement—i.e., by the first application of PASSIVE). Thus these laws each predict that (16c) is not in the derivational path of (16d), and this prediction is borne out. There is also example (ii) below, which lends support to the claim that (16d) is not derived through (16c). It has a different interpretation from that of (16c), and belongs to a different set of sentences, which are not derived from the same underlying structure as (16); it is the passive of (iii), and PLACE ADVANCEMENT is not involved.

- (ii) *The KGB was infiltrated by a top agent.*

- (iii) *A top agent infiltrated the KGB.*

(iv) *The KGB was infiltrated by a top agent of the CIA.*

(v) *A top agent of the CIA infiltrated the KGB.*

Thus further confirmation is provided by (ii)-(v), where (iv) and (v) show that *the CIA* is not the Agent; where the $\bar{1}$ is marked with *by*, as it should be; and where the *agent* is the Agent.

¹³ Verbs of the type shown in (17)-(20) are discussed in Fillmore (1966).

¹⁴ This example is taken from Fillmore (1966). There is certainly a noticeable difference in interpretation between the a sentences and the b sentences of (18)-(19) (cf. Note 6, above, and Anderson 1971). Since (20a) does not occur, it cannot be determined whether the same is true of *teem*. But (17) shows that, in principle, it is possible for verbs of this type to undergo PLACE ADVANCEMENT without substantial change in meaning. A possible reason for the perceived difference in meaning with *swarm* and *crawl* lies in the fact that these verbs describe forms of locomotion and, as such, can be literally predicated only of Agentive arguments. Since Locative arguments are by nature not Agentive, these verbs, to the extent that they allow promotion of the Locative argument to 1, will have to have some other, figurative interpretation (cf. the ambiguity of (ii), depending on whether *John* is taken as a Location or as an Agent).

(i) *Large red ants are crawling on John*

(ii) *John is crawling with large red ants.*

Example (ii) can be the answer either to a question like *What situation does John find himself in?* or to a question like *What is John doing and with whom?* In the case of *abound*, however, there is no such presumption about its Subject, and so there is no need to interpret the verb in a different sense after Advancement.

¹⁵ Verbs of this type are known as intransitive-2 verbs. In their deepest level of structure they have no 1; their highest ranking argument is a 2. This 2 can then be advanced by a rule called UNACCUSATIVE, which promotes a 2 to 1 if and when there is no 1 already present (i.e., without creating a *chômeur*). A similar treatment, though phrased in different terms and framed in a different theory (Transformational Grammar), was proposed by Chvany (1975) in her analysis of *be* in Russian. For further details of UNACCUSATIVE in Relational Grammar see Perlmutter and Postal (in preparation). Cf. also Note 1, above.

¹⁶ Many of the Russian examples below are built on data presented by Apresjan (1967).

¹⁷ The Agents are omitted in the passive forms (24c,d)-(27c,d) and in further forms below in order to make them sound more natural. This has nothing to do with PLACE ADVANCEMENT, but is connected with a restriction on the occurrence of the Agent in Russian passive sentences in general. The lack of an overt Agent, of course, does not change the passive character

of these sentences. They can still be taken in an agentive sense, allow inclusion of *naročno*, etc.

¹⁸ The term case marking is used here in the broad sense, after Fillmore (1966), to include prepositions and postpositions (and any other markers which may occur on noun phrases to show their relations), as well as the morphological desinences to which the more traditional use of the term refers.

¹⁹ It will ultimately prove unnecessary to mark even this fact, since it turns out that in Russian Advancement *chômeurs* as a class are marked with the Instrumental case; it is thus not necessary to state this fact individually as a part of each rule that creates a *chômeur*. This generalization, which emerges quite clearly in a Relational analysis of Russian, could not even be suspected in a grammatical framework which does not include the notion of *chômage* (or something equivalent to it). Further discussion of this topic will be found in Channon (forthcoming b).

²⁰ Registration markers serve to record the fact that a change in grammatical relations—usually an Advancement—has taken place. They are akin to traces in Transformational Grammar. Registration markers can be of various different types; examples include passive morphology, affixes such as *di-* and *-i* in the Indonesian examples cited above, Russian *-sja* in some of its uses, etc., as well as the prefixes referred to here.

²¹ Before dentals *meng-* is realized as *men-* because of a morphophonemic rule of Indonesian.

²² The relevant examples with *sprinkle* are found in (3). An example with *spatter* and *bespatter*, which seems to be freer in its occurrence than *besprinkle*, is given in (i) and (ii).

- (i) *The children spattered (*bespattered) mud on the house.*
- (ii) *The children spattered (bespattered) the house with mud.*

Compare also the intuitively-motivated "*besitting*"/"*besat*" in the English translation of (2b,d).

²³ It has been noted in semantic studies of Russian prefixes that *o(b)-* and *za-* have a meaning like 'cover'. This is not in conflict with the observation made above about the use of these prefixes as registration markers; it is simply the semantic correlate of the syntactic behavior noted here. The connecting link between them is expressed in the observation made by Jakobson (1936) that the Accusative Direct Object indicates that the object is completely covered by the action of the verb.

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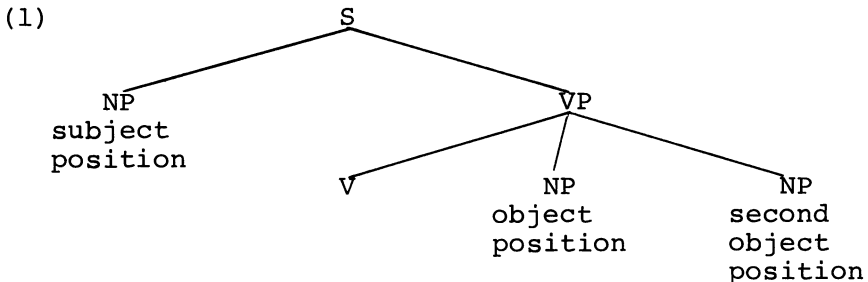
THE OPTIONAL REFLEXIVE AS SPECIFIER
OF AN UNDERLYING GRAMMATICAL
RELATION*

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1. *Introduction*

The syntax of the Russian reflexive pronouns *sebja* and *svoj* is of considerable interest to general linguistic theory. The present study treats one aspect of Russian reflexivization, namely the role of *sebja* as an optional specifier of the grammatico-semantic function of the subject of the sentence, for example, as Instrumental, Locative, or Ethical Dative.¹

1.1. The notion of "subject of the sentence" used in this paper is essentially that of Chomsky (1965). In that framework, the syntactic relations are defined in terms of position in a tree, as shown in (1) below:



In the present modified framework, the subject position may be empty in deep structure (see Emonds, 1970). In that case it may be occupied in surface structure by one of the other noun phrases (NPs) in the sentence, by one of the objects, for instance, or one of the "adverbial" relations (which Chomsky (1965) labels Time, Manner, Locative without commitment as to their position in a tree, since these have not yet been rigorously defined). The surface subject, whatever its deep structure origin, is normally in the nominative case, and corresponds in most (but not all) Russian sentences to the "grammatical subject" of traditional grammar. Diagnostics demonstrating that a given NP is in subject position have been discussed for Russian by Klima (1963) and Chvany (1970). The notion of subject as formulated in trans-

formational literature to date may not be entirely appropriate. I use it here as a part of my working hypothesis, since it is one of the few well-defined concepts relevant to the phenomena under discussion.

1.2 The notion of functional roles, such as Agentive, Locative, Instrumental, and some others has been discussed by, among others, Fillmore (1968, 1971), Gruber (1965), Chvany (1975). According to theories of functional roles of NPs, the syntax of a sentence is affected by the semantic relations of its NPs with respect to the predicate. For example, in Russian, we find the pair of sentences:

- (2) a. *On byl ubit banditami*
'He was killed by bandits.'
b. *Bandity ubili ego.*
'The bandits killed him.'

But for the apparently analogous structure:

- (3) a. *On byl ubit nožom.*
'He was killed with a knife.'

we do not find, according to Peškovskij (1956),

- (3) b. **Nož ubil ego.*
'The knife killed him.'

(An asterisk (*) indicates a bad sentence.) Further investigation reveals that NPs in the instrumental case with passive or reflexive verbs, as in the (a) sentences above, often cannot appear in (nominative) subject position, if these instrumentals signify the means by which the action of the sentence is performed; in other other cases, where the nominative of means is possible, there is also an alternative pattern, as for example,

- (4) a. *Ona byla ubita granatoj*
'She [nom.] was killed by a grenade [inst].'
b. *Granata ubila ee.*
'The grenade [nom.] killed her [acc].'
c. *Granatoj ubilo ee.*
'The grenade [inst.] killed her [acc].'

But an Agent, such as *bandity* in (2.b) regularly appears in the nominative case, serving as the subject of the active sentence. Thus the possible range of sentence variants is influenced by, in this case, whether the arguments of the proposition include

Patient and Agent, on the one hand, or Patient and Instrument, on the other.

1.3 In Russian as in English the functional role of the NP in subject position is neutralized. For example, the subjects of the following sentences all have different functional roles:

- (5) *Gazety pisali ob ètom.*
'The newspapers wrote about this.'

nominative case, Locative sentence role (cf. *V gazetax pisali ob ètom.*);

- (6) *Èto pero pišet lučše moego.*
'This pen writes better than mine.'

nominative case, Instrumental role (cf. *pisat' perom* 'write with a pen');

- (7) *Èta kniga očen' medlenno čitaetsja.*
'This book reads very slowly.'

nominative case, Patient role (cf. *čitat' knigu*). The fact that the subject position is a position of functional neutralization is crucial for the behavior of the subclass of Russian reflexives discussed below.

2. The Reflexive Pronoun in Russian

The reflexive pronoun in Russian, hereafter *sebja*, is an NP.² There are three case forms with no person, gender or number distinctions: *sebja* [acc. and gen.], *sebe* [dat. and prep.], *soboj* [inst.]. The most common type of occurrence of *sebja* is illustrated in the following examples:

- (8) *Ja kupil sebe novyj plašč.*
'I have bought myself a new raincoat.'
- (9) *Ona očen' mnogo govorit o sebe.*
'She talks a lot about herself.'
- (10) *Pridetsja vam zaščiščat' i doč' i sebja.*
'You will have to protect both your daughter and yourselves.'

According to the analysis of Russian in my thesis (and such studies of English as Jackendoff, 1972) the commonly found reflexives illustrated in (8)-(10) are generated as lexical items in deep

structure and are assigned antecedents by rules of semantic interpretation. So far as I know, all earlier transformational studies accepted the view that the antecedent of a Russian reflexive is the subject of the simple sentence in which the two relevant NPs appear when the reflexivization rule applies. This view is accurate for fairly uncomplicated constructions. In simple sentences with only one verb the antecedent is normally the subject of the sentence. In more complex structures some adjustment of the interpretation rule is necessary.

A detailed investigation of reflexives and rules that account for optional reflexive pronouns in more complex structures will be found in my doctoral dissertation.

There is in Russian a very strong tendency, operative at more than one level in the derivation of sentences, for the antecedent of the reflexive pronoun to be identified with the subject of the sentence. This strong association between subject and reflexive makes it *possible* for the reflexive to serve as a grammatically specifying "appendage" to the subject. The structural motivation for this function of reflexives is to be found in the neutralization of functions in subject position.

3. The "Specifier" Reflexive

The following sections will present evidence that the reflexive pronoun *sebjja* may serve to specify the functional role of non-Agent subjects whose function is neutralized by virtue of their being in subject position. A discussion of this special use of *sebjja* as a specifier of the subject presupposes a strong association of *sebjja* with the subject in its other uses. The "specifier" reflexives discussed here, unlike the more common type described above, are transformationally introduced when a given NP moves into a previously empty subject position. These reflexive specifiers are then interpreted by the same semantic rules as being co-referential with the new subject.

3.1 An immediately striking fact defining the specifying reflexives is that they alternate with null forms (11) and with NPs included in the reference of the subject (13). (Obviously, both the reflexive and the equivalent null-form are also included in the reference of the subject.) For example, we may equally well say

- (11) *Èta kniga vključaet mnogo interesnogo o Dostoevskom.*
'This book includes much that is interesting about Dostoevsky.'
- (12) *Èta kniga vključaet v sebja mnogo interesnogo o Dostoevskom.*
'This book includes much that is interesting about Dostoevsky.'
- (13) *Èta kniga vključaet v pervuju glavu mnogo interesnogo.*
'This book includes in the first chapter much that is interesting.'

The reflexive in (12) adds no lexical information to the sentence; it can hardly be said to add even grammatical information, since the relation which it expresses is absolutely clear even when the reflexive is omitted. (The apparent redundancy of these forms makes them stylistically poor and sometimes even unacceptable to sensitive informants.) The problem in dealing with reflexives of this type is not in assigning them their antecedents; it is explaining why they should occur at all.

3.2 There are very strict limitations on what can occur in the place occupied, in our examples (11)-(13), by *v sebja*, zero, and *v pervuju glavu*.

The reflexive does not alternate with other case forms of the reflexive pronoun, although specifying reflexives occur in all three forms of the reflexive paradigm and with and without prepositions. Thus for example, the following sentence—adapted from Peškovskij (1956)—is acceptable to Russian speakers:

- (14) *Nel'zja otorvat' zdes' sojuz ot togo predloženiya, kotoroe on soboj načinaet.*
'One cannot here extract the conjunction from the clause which it begins (with itself).'

But we cannot interchange *soboj* of (14) with *v sebja* of (12).

The place occupied by the reflexive cannot be filled with unrestricted lexical material. Thus, no one would ever accept, say,

- (15) **Èta stat'ja vključaet v ètu knigu mnogo interesnogo.*

*'This article includes in this book much that is interesting.'

Furthermore, what is wrong with (15) is obvious to any speaker of any language that has the concept of inclusion. The ungrammaticality of (15), as compared to the grammaticality of (13), has to do not only with the facts of Russian, but can also be related to the more general condition known as the disjoint reference constraint (Chomsky, 1971). What is distinctively Russian about the paradigm (11)-(13) is the use of reflexives to serve as optional place-holders. This possibility is lacking in such languages as English, although, as the translation of (15) attests, the underlying grammatico-semantic relations are the same. In Russian the semantic specification of the reflexive is taken from the subject; and correspondingly, we also use the reflexive to "interpret" the subject role in the sentence. In (12) we specify "place where." When the specifying reflexive appears with a preposition, the whole prepositional phrase alternates with zero. In (14) we specify what the conjunction begins the sentence with, the only rational possibility being the conjunction itself.

4. *A Parallel with the Ethical Dative*

No complete taxonomy of NP sentence roles exists for any language, and there is some evidence for Russian, as for English, that the data is not entirely systematic. On the other hand, reflexives of the type under discussion are constantly met in literary written Russian (less commonly in the spoken language), and any grammar of Russian must deal with them. Furthermore, a treatment of the Russian data should be illuminating for English and other languages which lack the peculiar advantage of Russian in this respect. And even in the absence of a thoroughly systematic description of sentence roles, there is still a great deal that can be said about them that will contribute toward a theory of grammatical roles.

4.1 Among the sentence roles described by Fillmore (1968) and others, one role always distinguished is that of Agent, a usually animate performer of a usually voluntary activity. It is precisely the Agent role that the specifying reflexive never fills. Obviously, a reflexive can refer to an Agent, as, for example in (8)-(10) or in

- (17) *On byl nakazan samim soboj.*
'He was punished by himself.'

Here *soboj* is clearly not a specifying reflexive since it adds information to the sentence—"It was by himself that he was punished (not by me, or you, or anyone else)." In contrast with Agent, the antecedent of the specifying reflexive is usually either involuntary or is the subject of a verb which does not generally denote an activity (for example, *vkľjučat* 'include').

4.2 This nonperformance nature of the specifying reflexive is sufficiently strong to have motivated an historical development in the syntax of Russian, namely the incorporation of ethical datives into the system of the specifying reflexives. A modern example of the reflexive ethical dative is found in:

- (18) *Mat' plačet, deti šumjat, a on sebe sidit i dumaet, Bog znaet o čem.*
'The mother is crying, the children are making a fuss, and he sits and thinks about heaven knows what.'

Indeed, except for the tie to the other specifying reflexives the ethical dative is totally asystematic, merely a vestige of the rich system of datives that existed in Old Russian. In the older language, we find many examples of the *dativus ethicus*, or *datel'nyj zainteressovannogo lica*, indicating the person "with respect to whom" the intransitive verb applied. The earliest documents contain no reflexives with this function, but they begin to appear in later texts. The ethical dative has virtually disappeared in the modern language, except for the reflexive *sebe* as in (18). Why should the reflexive have remained? One reason may be that the dative here is serving a function that parallels the function of the specifying reflexive in other sentences of the type illustrated in (11)-(14). That is, the reflexive indicates that the role of the subject is not that of an Agent performing an action—rather, the subject is an independent and self-absorbed Experiencer. The ethical dative has thus become integrated as a non-Agentive specifier into the general network of such specifiers in Russian.

5. Conclusion

We have established that some occurrences of

reflexive pronouns, namely those that alternate with zero, add no apparent information to the sentence, but serve merely as place-holders, or specifiers of the semantic role of the subject NP. Examples of such occurrences could be multiplied. Beyond the general support these reflexives lend to the claim that semantic notions such as Agent, Locative and the like must play a role in the syntax, what specific conclusions can we draw about the structure of Russian?

5.1 First, if we regard the specifying reflexives as place-holders, then the deep structures of sentences must include places designated for particular kinds of arguments—Instruments, Locatives, and so on. How these places are marked (the question of labeled nodes) is a different question, not to be answered here.

5.2 Second, we must consider the possible mechanisms that result in the specifying reflexive phenomena, including their nonoccurrence with Agent subjects. Either these reflexives are the result of a reflexive rule applying after the subject has been copied in the appropriate node, or else the NP originates in the nonsubject position and is moved into subject position, leaving its shadow behind. In either case, the twin NPs are doublets split off from a single NP in the course of the derivation; such processes are well-known, not only in transformational grammar but in both synchronic and diachronic studies dealing with surface structure.

5.3 There is so far no decisive evidence for either of the two variant explanations. The first one is straightforward and requires no elaboration. The second possibility—that subjects with "shadows" originate in the positions held by the reflexives in surface structure—is slightly headier, but in some ways more attractive.

First, it has been argued that Agent subjects originate in subject position while non-Agent subjects are derived (Lee, 1971; Chvany, 1975). We have seen that it is precisely Agent subjects which never occur with specifying reflexives. If this hypothesis is correct, then the explanation is obvious: Agents do not have "shadows" precisely because they originate in subject position and are not the result of a "splitting" operation.

Second, let us return to the problem of blocking sentences such as (15). There are no particular lexical items that can be excluded from locative position

in this sentence. Further, the verb *vključat'* occurs also with Agent animate subjects, as in (19):

- (19) *On vključil se^čba v spisok*
'He included himself in the list'

but only the Agent subject can reflexivize. A neat explanation of this is that *vključat'* takes either an Agent or an empty node as deep subject. Only when the subject node is empty can the Locative move in there. This explanation is straightforward and easily captured by any notation with empty nodes.

Another possibility suggested by the second alternative above is that of derivationally associating the "shadow" reflexives with the enclitic *-sja* forms. *-sja* is a particle attached to Russian verbs. Historically it derives from an enclitic form of the reflexive pronoun. On a synchronic plane, it does not co-occur with (accusative) direct objects and is thus traditionally termed a marker of intransitivity. There exists a wide variety of descriptions of *-sja* and its functions (see Schaarschmidt, 1970; Isačenko, 1954). Channon (1968) proposes that most sentences with *-sja* are derived synchronically by a rule of NP preposing. The surface subject of such *-sja* verbs originates in nonsubject position; NP preposing leaves *-sja* as a trace. This explains the complementary distribution of accusative direct objects and *-sja*. It is needed to describe passive and quasi-passive constructions, and it simplifies the Russian rule of raising. NPs raised into subject position can be derived, like NPs raised into object position, from a deep object position, and then moved into subject position, leaving behind *-sja* as a trace. There is no other known way to unite Russian raising into subject position with the rule of raising into object position (see Emonds, 1970; Klenin, 1974). Since there are some cases where *-sja* and *se^čba* are very nearly synonymous (e.g. the "true reflexives," or *javljat'sja/javljat' soboj*) it is desirable to be able to relate them syntactically. Deriving this well-defined subset of reflexive pronouns by the same rule by which we derive *-sja* makes this connection.

Finally, there are no cases where two shadow reflexives occur in the same sentence. If the shadows result from copying an underlying subject this fact goes unexplained: but if the subject itself is derived from a nonsubject position, it is obvious that there can be only one "shadow" per subject.

5.4 All of the preceding discussion is highly pre-

liminary in nature. We can safely conclude that Russian reflexive pronouns offer interesting materials for investigating the role of deep semantic relations in universal grammar. More complete documentation and systematic exploration of other facets of this problem will appear at a later date.

NOTES

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¹Capitalized words indicate functional roles, as opposed to surface cases.

²The system examined here involves only surface NPs, and it therefore excludes *svoj*, which is adjectival in surface structure. The following discussion includes no further mention of *svoj*.

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ON THE REALIZATION OF TRACE:
MACEDONIAN CLITIC PRONOUNS

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0. *Introduction*

This paper undertakes an analysis of clitic pronouns in Contemporary Standard Macedonian¹ within the Revised Extended Standard Theory (Chomsky 1973, 1976, 1977, 1978; Chomsky and Lasnik 1977; etc.). It is shown that clitic pronouns arise as the product of a kind of noun phrase (NP) movement called Object Adjustment. Specifically, clitics are analyzed as traces in accordance with the principles of trace theory. However, whereas traces are normally considered to be inaudible, visible only to the rules of semantic interpretation, these traces are actually given phonetic representation as clitic pronouns. Viewing clitics as realized traces leads to an overall simplification of the grammar in that the single major transformational rule—Move α —is even further generalized.

With regard to Object Adjustment, and a similar rule, Subject Adjustment, two kinds of languages are distinguished on the basis of "propositional domains": S languages and \bar{S} ("S-bar") languages. Macedonian is defined as an \bar{S} language, in which subjects and objects are moved to the COMP position under certain circumstances. The analysis maintains that Subject Pronoun Deletion is really an instance of free deletion in COMP, and it sheds light on the status of subject position, the *[that[t]] filter of Chomsky and Lasnik (1977), the concept of "mirror images," passive, and other phenomena. Finally, it is concluded that a movement analysis of clitics is superior to a theory in which clitic pronouns are generated in the base component.

1. *Object Reduplication*

A striking characteristic of the Macedonian language is its object reduplication, which is correlated with the definiteness of an NP. Definite NPs are marked by the presence of the suffixed definite article (-ot, -ta, -to, -te, etc.) or by their use with demonstrative pronouns; proper nouns, of course, are inherently definite. By reduplication it is meant that an anaphoric clitic (hereafter, CL) copy

co-occurs with the NP, sharing its features of gender, person, number, and case. This anaphoric copy is associated with an indicative verb or a negative imperative as a proclitic. When associated with a positive imperative or a verbal adverb, it is an enclitic. A definite NP is reduplicated when it functions as a direct object (hereafter, DO), but an indefinite DO NP is generally not reduplicated.² An indirect object (hereafter, IO) is reduplicated whether the NP is definite or indefinite.

The sentences of (1)-(3) exemplify the usual instances of Macedonian reduplication. In (1a) and (3a,b), the definite article is separated from the noun by a hyphen merely for the sake of illustration. This practice will not be followed throughout, however. Since CL pronouns are our chief concern, they will be capitalized throughout the paper. Coindexing (identical subscripts) denotes coreference.

- (1) a. *Marija GO_i poznavava učenik-ot_i*
 Marija HIM_i knows the-pupil_i
 'Marija knows the pupil'
- b. *Marija GO_i poznavava [toj učenik]_i*
 Marija HIM_i knows [that pupil]_i
 'Marija knows that pupil'
- c. *Marija GO_i poznavava Vlado_i*
 Marija HIM_i knows Vlado_i
 'Marija knows Vlado'
- d. *Marija poznavava [eden učenik]*
 Marija knows [one pupil]
 'Marija knows a pupil'
- (2) a. *MU_i dadov edno penkalo [na Vlado]_i*
 TO-HIM_i I-gave one pen [to Vlado]_i
 'I gave a pen to Vlado'
- b. *MU_i dadov edno penkalo [na eden učenik]_i*
 TO-HIM_i I-gave one pen [to one pupil]_i
 'I gave a pen to a pupil'
- (3) a. *Skrsi JA_i caša-ta_i*
 break IT_i the-glass_i
 'Break the glass'
- b. *Ne JA_i skrsi caša-ta_i*
 not IT_i break the-glass_i
 'Don't break the glass'

Note the absence of the reduplicated CL pronoun *GO* from (1d) because the DO *eden učenik* is indefinite. In the sentences of (2), however, the dative CL *MU* co-occurs with both the definite and the indefinite IO.

A noteworthy feature of the language is that the full (non-CL) pronominal forms for objects may co-occur with their corresponding CL forms to indicate focus or emphasis, as in (4a).

- (4) a. *Marija GO_i poznavá nego_i*
 Marija HIM_i knows him_i
 'Marija knows him'/'It's him that Marija knows'
- b. **Marija poznavá nego*
- c. *Marija zboruva za nego*
 Marija talks about him
 'Marija is talking about him'
- d. *Marija GO poznavá*
 Marija HIM knows
 'Marija knows him'

In (4a,b,c), *nego* is the non-CL pronoun corresponding to *GO*. Full forms without corresponding CL copies cannot serve as verbal objects, as witnessed in ungrammatical (4b), though full (DO) forms, and not CLs, regularly serve as objects of prepositions as in (4c). When a CL alone is the object of a verb, as in (4d), its reference is interpreted to be any likely noun of the same gender and number determined by the context.

The distribution of third-person pronominal forms follows. The full forms for subjects frequently undergo subject Pronoun Deletion, leaving the verb ending alone as a marker of person.

(5) SUBJECT	DIRECT OBJECT		INDIRECT OBJECT	
	FULL	CLITIC	FULL	CLITIC
toj (m.)/toa (n.)	nego	go	nemu	mu
taa (f.)	nea	ja	nejze	ì
tie (pl.)	niv	gi	nim	im

2. The Value of Clitics

The behavior of CL pronouns in object reduplication provides valuable insight into the nature of certain syntactic operations. A language like English, which lacks CL pronouns, also lacks one

parameter of overt linguistic representation which might otherwise be used as additional proof in support of one hypothesis over another. For example, consider the following data from Macedonian which might be used as added support in favor of the lexicalist hypothesis with regard to certain types of nominals.

It was mentioned above that verbal adverbs (which are historically participles and take the suffix *-jki*) take enclitic pronouns. When the object of a verbal adverb is a definite NP, reduplication occurs just as it does with finite verb forms. In (6a),³ there is no reduplicated CL after the verbal adverb *frlajki* 'casting' because its object *pogled* 'glance' is indefinite. On the other hand, the verbal adverbs in (6b,c) are followed by the CLs *GO* and *GI*, respectively, because their objects are definite NPs and reduplication occurs as expected.

- (6) a. *Frlajki pogled na selanecot...*, *Lažarce se iznenadi...*
 casting glance at the-villager...Lazarče was-taken-by-surprise
 'Casting a glance at the villager, Lazarče was taken by surprise'
- b. *Pa, vadejki GO; portmonetoi, GI praša kolku pari IM e dolžen...*
 then taking-out IT the-wallet THEM he-asked how-much money TO-THEM is owed
 'Then, taking out his wallet, he asked them how much money he owed them...'
- c. *Toj plačeše neutešno brišejki GI; so šamija očilataj...*
 he cried inconsolably wiping THEM with kerchief the-glasses
 'He cried inconsolably, wiping his glasses with a kerchief...'

Such is not the case with Macedonian verbal nouns, which end in *-nje*. The object of a verbal noun can be represented in two ways: either by a prepositional phrase equivalent to English *of NP* after action nominals (*the refusing of the offer*); or by an NP directly after the verbal noun as with English gerundive nominals (*refusing the offer*). One striking difference between English and Macedonian is that an object in Macedonian can follow the verbal noun directly even when the verbal noun has the definite article, a structure which is prohibited in English (**the refusing the offer*). The two types of objects of a verbal

noun are illustrated in (7).

- (7) *Obratuvanjeto na zemjata i odgleduvanjeto*
rastenija se vika zemjodelstvo
 the-tilling of the-soil and the-growing plants
 REFL calls agriculture
 'The tilling of the soil and growing plants is
 called agriculture'

Both verbal nouns have the definite article *-to*. The object of the first, which is a definite noun, is represented as *na NP* (= *of NP*). The object of the second verbal noun is an indefinite noun and is represented as NP alone, without *na*.

What happens when a definite NP functions as the object of a verbal noun and follows it directly? Do we get reduplication or not? The answer, exemplified by a sentence like (8), is no: a CL does not appear.

- (8) ...*kratkite formi se sveduvaat prosto do eden*
znak za odreduvanje odnosot sprema predmetot...
 the-short forms REFL reduce simply to one sign
 for designating the-relation to the-object
 '...the short forms are reduced simply to one
 sign for designating the relation to the ob-
 ject...'

Despite the fact that *odnosot* 'the relation' is definite, any structure of the form **odreduvanje GO_i odnosot_i* or **GO_i odreduvanje odnosot_i* is impossible. Reduplication does not occur with the definite object of a verbal noun.

Clearly, CL object pronouns are attracted to verbal, and not nominal, structures. If this is taken to be a decisive criterion for distinguishing NP from VP constituency, we might argue (along with other evidence) that the Macedonian verbal adverb has a transformational derivation but that the Macedonian verbal noun is in full compliance with the lexicalist hypothesis, in the context of Chomsky (1970). In other words, the underlined phrase in (6b) is derived transformationally from something like *X GO_i vadi portmoneto_i* 'X IT takes-out the-wallet', whence the CL in the derived phrase containing the verbal adverb. In contrast, the verbal noun *odreduvanje* 'designating' in (8) is lexically inserted with the feature [+N] and is not derived transformationally from anything like *X odreduva* 'X designates'; hence there is no source for a CL that would be associated with the definite DO NP. The phenomenon of object reduplication and the presence of CL pronouns in the

surface syntax of Macedonian enable us to follow this line of reasoning.

3. *The Phonetic Realization of Trace*

Turning now to the central theme, we want to establish that Macedonian CL pronouns are the phonetic realization of trace.⁴ First we shall argue that at least some CLs constitute phonetically realized traces and then move to an analysis which maintains that all CL pronouns are to be so interpreted.

Consider the behavior of CLs in relative clauses. Macedonian uses three relative markers fairly interchangeably: the relative pronoun *koj*, the relative complementizer *što*, and a combination of the two—*kojšto*.⁵ When the relative pronoun is the DO or the IO of the verb which governs it, reduplication occurs and a pronominal copy is procliticized to the verb. When the relative word is a subject or the object of a preposition, there is no CL copy. In sentence (9), *što* serves as the subject of *vrveše* 'went', so there is no CL involved. But the second relativizer *kojšto* serves as the object of *asfaltiraa* 'they were asphaltting', and a CL copy is required by the principles of reduplication.

- (9) *Od glavniot pat što vrveše niz seloto, a kojšto i togaš GOi asfaltiraa, se oddeluvaa mali ulički*
 'from the-main road which went through the-village and which then IT they-were-asphaltting REFL split-off little streets
 'Little streets split off from the main road which went through the village and which they were then asphaltting'

Consider next the English sentences in (10) and the corresponding Macedonian sentences in (11). The English sentences as well as (11a,b) reflect surface structures enriched with trace, represented as *t*, where *t* marks the spot vacated by an NP after the application of a movement rule—in this case, *wh*-movement. Sentences (11a',b') are the actual phonetic realizations of (11a,b).⁶

- (10) a. She is the woman [_S who_i [_S t_i lives not far from us]]
 b. She is the woman [_S who_i [Marko saw t_i in the park]]

- (11) a. Taa e ženata [_S koja_i [t_i živee nedaleku od nas]]
 she is the-woman who lives not-far from us
 a' Taa e ženata koja živee nedaleku od nas
- b. Taa e ženata [_S koja_i [Marko t_i vide vo parkot]]
 she is the-woman who Marko saw in the-park
 b' Taa e ženata koja_i Marko JA_i vide vo parkot
 she is the-woman who Marko HER saw in the-park

Sentences (10a,b) and (11a,b') are the structures to which the rules of semantic interpretation apply under Revised Extended Standard Theory. After *wh*-movement has moved the *wh*-phrase into COMP,⁷ the remaining trace marks the spot from which the *wh*-phrase is moved; coindexing here denotes coreference between the *wh*-words and their traces. In (10a), *who* is interpreted as subject because its trace is in subject position within S; *who* in (10b), however, is interpreted as the object of *saw* because its trace is in object position within S. English (10a) and Macedonian (11a,a') are parallel as to the interpretation of trace in subject position, in that *t* is not manifested in phonetic representation. But (10b) and (11b') differ since the trace marking the object position vacated by *koja* in the Macedonian sentence is actually represented phonetically as the CL *JA*.

CLs as realized traces also mark the position from which an NP has been moved out of a *da* clause. The *da* complementizer is roughly equivalent to the *for-to* complementizer in English, except that it takes a finite verb form since Macedonian lacks an infinitive. Otherwise, the English infinitive clause and the Macedonian *da* clause are, more or less, functional equivalents. Compare the sentences of (12).

- (12) a. *The old woman is coming who_i Dimče advised me [to visit t_i]*
- b. *Doađa babata što_i Dimče me sovetuvaže [da JA_i posetam]*
 is-coming the-old-woman that Dimče me advised that HER I-visit

Again, *JA* is the realization of *t*.

Trace is also realized in *wh*-questions when the questioned NP has been moved to COMP from DO or IO position, as in the following sentences:

- (13) a. [*which kitten*]_i do you like t_i the most

- a' [*koe mače*]_i najmnogu GO_i sakaš
which kitten the-most IT you-like
- b. [*who*]_i did you give a kitten to t_i
- b' [*komu*]_i MU_i dađe edno mače
'to-whom TO-HIM you-gave one kitten
- c. [*which kitten*]_i do you want to buy t_i
- c' [*koe mače*]_i sakaš da GO_i kupiš
which kitten you-want that IT you-buy
- d. [*who*]_i do you think [*your mother said [she will give the kitten to t_i]*]
- d' [*na kogol*]_i misliš [*deka majka ti reče [deka ke MU_i GO_j dađe mačeto_j]*]
to whom you-think that mother to-you said
that will TO-HIM IT give the-kitten

Note that in (13d'), even though a constituent has been moved via *wh*-movement from a deeply embedded *deka* clause, *t* is realized as a CL, just as it is in (13a',b',c'), despite the depth of embedding. The complementizer *deka* is roughly equivalent to (non-relative) *that* in English.

From examples (9) and (11)-(13) it would seem that Macedonian always realizes in the form of an anaphoric CL copy the trace left when an NP in DO or IO position is moved into COMP. The situation, however, is not quite so simple. In questions of the type (14), the trace left by a vacated NP is never realized as a CL.

- (14) a. *What_i does Milka want to do t_i*
a' *Što saka Milka da (*GO) napravi*
what wants Milka that (*IT) she-does
- b. [*what kind of blouse*]_i does Milka have t_i
- b' [*kakva bluza*] (*JA) ima Milka
what-kind blouse (*IT) has Milka

Examples (14a',b') are ungrammatical if *t* is realized as *GO* and *JA*, respectively. The difference between (13) and (14) will be made clear in section 5 after other principles are established.

3.1 *All clitics as trace*. Up to now we have determined that some CLs appear to be the phonetic representation of traces but, from (14), that a trace is not always realized as a CL. We now advance a proposal that all CL objects are the realization of trace, even those in simple sentences like (1)-(3)

above. Such a proposal has far-reaching consequences for trace theory and for linguistic theory in general, in that it moves toward an even greater generalization of the scope of the rule Move α , which is the only major transformational rule assumed under Revised Extended Standard Theory (see Chomsky 1978, p. 4).

Consider the sentences of (15), which are parallel in structure.

- (15 a. *Boro e čovekot_i što GO_i mrazi [mojata tetka]*
 Boro is the-man that HIM hates the-my aunt
 'Boro is the man my aunt hates'
- b. *Boro e čovekot što JA_j mrazi [mojata tetka]_j*
 Boro is the-man that HER hates the-my aunt
 'Boro is the man that hates my aunt'

The two sentences differ only in that *GO* in (15a) has masculine gender and is coreferential with *čovekot* 'the man', while *JA* in (15b) is feminine and is coreferential with *mojata tetka* 'my aunt'. Following what has been proposed, *GO* is the trace left by *wh*-movement and is assigned the same index as the head of the complex NP in which it is contained. Unlike *GO*, *JA* is the result of ordinary DO reduplication and has the same index as the NP object of the verb *mrazi* 'hates'. Although *GO* in (15a) arises as the result of *wh*-movement, the origin of *JA* in (15b) has yet to be explained.

To propose that all CL objects in Macedonian are the realization of trace is to claim that they are all the product of a movement rule in compliance with trace theory. What could be the nature of a movement rule that would leave traces—ultimately CL pronouns—in (15b) and in simple structures like (1)–(3) above?

A clue to the answer might be found in a sentence like (16), where an object seems to be moved into COMP in a way that has the expressive power of topicalization or passivization in English.

- (16) ...no [*i negovata upotreba*]_i ne treba [_S da *JA*_i
smetame nepravilna]
 but even the-its use not must that IT
 we-consider incorrect
 '...but even its use we don't have to consider
 incorrect' -or- '...but even its use doesn't
 have to be considered (by us) incorrect'

A logical explanation for the origin of the CL *JA* in (16) would be to say that it arises when the object NP is moved into COMP during topicalization, just as

an object NP is moved into COMP during relativization. But since a CL appears always as the product of reduplication, we justify in the following pages the existence of a movement rule even more basic than all the rules generally considered to fall under the rubric of *wh*-movement (Chomsky 1977, p. 110).

Such a movement rule has the function of arranging thematic structure—that is, subjects, DOs, IOs, etc.—by moving some of these NPs into positions other than those designated by the phrase structure rules (in a manner to be elaborated below). Specifically, the origin of the traces which are realized as CL pronouns in Macedonian is the result of the movement of NPs out of the domain of S in the "adjustment" of certain types of objects. Such a movement analysis provides a natural, straightforward explanation for object reduplication, that "curious" phenomenon of the Balkan and other languages.

Under the proposed analysis, the CL copy *GO* in (17a) arises as the realization of *t* when (17b) is converted into (17c) as a result of the movement of the definite object *vesnikot* 'the newspaper' out of S.

- (17) a. *GO_i pročitav vesnikot_i*
 IT I-read the-newspaper
 'I read the newspaper'
- b. [_S...[... *vesnikot pročitav*]...]
 S
- c. [_S...[...*t_i pročitav*] *vesnikot_i*]
 S

To guarantee the proper position of *t* (whence *GO*), we interpret DO position here to be preverbal before movement, as shown in (17b).

If there is no reduplication with indefinite DOs, this must mean under our movement analysis that an indefinite NP is not moved out of S in the placement of objects, hence no *t* and no CL. Thus, (18a) should derive from (18b).

- (18) a. *Čitav vesnik*
 I-was-reading newspaper
 'I was reading a newspaper'
- b. [_S...[*čitav vesnik*]]
 S

For the moment we interpret the DO position of indefinite NPs to be post-verbal. The question of underlying order is taken up in section 6.

3.2 *Subject/Object Adjustment.* The theory behind (17)

and (18) reveals two variations of the general rule Move α . The first, which we call Subject/Object Adjustment, moves certain NPs into subject and object positions. The second kind of movement encompasses all those operations generally classified as types of *wh*-movement: relative formation, topicalization, clefting, question formation, etc. Both kinds of movement leave trace in accordance with trace theory. Languages seem to differ, first of all, in whether or not they give phonetic representation to traces at all and, secondly, they differ as to which traces they choose. For example, one language might realize the trace left by Object Adjustment, another the trace left by *wh*-movement.

This point can be illustrated by contrasting Macedonian with Bulgarian. Tomić (1977, p. 676) points out that two closely related languages can use the same "device," in this case, reduplication, to express different functions. She offers the following examples to show that object reduplication in Macedonian has a purely "syntactic function" (to denote an object) but that in Bulgarian it denotes "communicative contrastiveness" in a function roughly equivalent to clefting in English.

- (19) a. *GO_i vide tatka_i si*
 HIM he-saw father to-self
 'He saw his father'
- b. *GO_i vide TATKA_i SI*
 'It was his father he saw'
- (20) a. *Vide bašta si*
 he-saw father to-self
 'He saw his father'
- b. *Vide GO_i bašta_i si*
 he-saw HIM father to-self
 'It was his father he saw'

In the Macedonian sentences of (19), the CL *GO* marks the definite DO in the normal fashion in (19a). In (19b), the meaning expressed by English cleft sentences is achieved by placing heavy stress on the object NP, denoted by the capitalization of *TATKA SI*. Bulgarian, on the other hand, uses reduplication in such instances but does not reduplicate a definite object under normal circumstances. Thus, Bulgarian (20a) is parallel in meaning to Macedonian (19a), even though (20a) lacks a CL copy. Sentence (20b) is parallel to (19b), but it is the CL in (20b), and not

heavy stress, which marks the expressive function similar to clefting.

The significance of these differences is that Macedonian and Bulgarian realize traces which arise in different ways. The CL *GO* in (19a) is the realization of *t* left after Object Adjustment, whereas *GO* in (20b) is the realization of *t* left after a kind of clefting. If we assume that Object Adjustment is also operative in Bulgarian, then it follows that *bašta si* in (20b) has been moved twice—once during Object Adjustment, once during clefting. Before the trace is given phonetic representation, (19a) has the structure (21a) and (20b) has the structure (21b), where *t* is the trace of Object Adjustment and *T* the trace of clefting.

- (21) a. [...[... *t_i vide*][*tatka si*]_{*i*} ...]
 S
 b. [...[...[... *t_i vide*][*T_i*]] [*bašta si*]_{*i*}]
 S

Macedonian realizes *t*; Bulgarian realizes *T*. With respect to the realization of trace in different languages, it follows that the rules of semantic interpretation assign logical form to surface structures often containing differing numbers of (inaudible) *t* for equivalent structures. For one language may realize a given *t* while another does not, as we have seen from Macedonian (19a) versus Bulgarian (20a) and from Macedonian (11b') versus English (10b).⁸

3.3 *Theme and rheme*. Looking again at the differences between definite and indefinite DO NPs with regard to Object Adjustment, we saw in (17) above that the definite NP *vesnikot* 'the newspaper' was moved out of the domain of *S* but that the indefinite NP *vesnik* 'a newspaper' remained within the domain of *S* in (18). Consider now the sentences of (22), which illustrate the four possibilities of combining definite and indefinite subjects and DOs.

- (22) a. *Profesorot JA_i prašuvawe studentkata_i*
 the-professor HER was-questioning the-student (f.)
 The professor was questioning the student'
 b. *Profesorot prašuvawe edna studentka*
 'the-professor was-questioning one student (f.)
 'The professor was questioning a student'
 c. *Eden profesor JA_i prašuvawe studentkata_i*

one professor HER was-questioning the-student (f.)

'A professor was questioning the student'

- d. *Eden profesor p̄rašuvaše edna studentka*
 one professor was-questioning one student (f.)
 'A professor was questioning a student'

In terms of definiteness, the subjects are distinguished by the choice of article (*-ot* versus *eden*) and the objects are distinguished both by the choice of article (*-ta* versus *edna*) and by reduplication.

Tied closely to the notion of definiteness is the notion of "theme" and "rheme." The theme constitutes "old" or previously known information while the rheme constitutes "new" information. Along these lines, a definite NP represents old information in that the speaker and hearer presuppose its existence or share some common knowledge about the NP. But an indefinite NP introduces new information and carries no such presupposition of existence or shared knowledge. Accordingly, in a given context the speaker and hearer presumably know from prior mention or knowledge the identity of the referents of the NPs *profesorot* and *studentkata* in the sentences of (22). In contrast, the NPs *eden profesor* and *edna studentka* are newly introduced, mentioned for the first time. Although the differentiation of theme and rheme is unquestionably an important semantic distinction, our proposed analysis makes the claim that it is in fact a fundamental syntactic distinction.

With previous knowledge of the referents of *profesorot* and *studentkata*, (22a) can be replaced in the proper context by (23), where \emptyset indicates the unspecified referents of the clitic *JA* and the verbal ending (*-še*).

- (23) [\emptyset_j] *JA_i p̄rašuvašej* [\emptyset_i]
 HER he-was-questioning
 'He was questioning her'

On the other hand, (22d), which contains the indefinite NPs, cannot be meaningfully replaced by (23) because the CL and verbal ending in (23) by themselves presuppose the existence of definite referents.⁹

In view of the foregoing statement of facts, we now make the following claim: During Subject/Object Adjustment an NP constituting previously known or old information, in other words, a definite NP, is moved out of the basic propositional domain of the sentence, namely S. The traces of these NPs, whether phoneti-

cally realized or not, mark the grammatical relations held by these NPs before Adjustment. Unlike definite NPs, indefinite NPs are not moved out of S by Subject/Object Adjustment because they constitute new information, introduced into the propositional domain for the first time and therefore not removable. In compliance with this claim and with the principles of trace theory, (22a) and (22d) have the surface structures (enriched with trace) (24a,b), respectively.

- (24) a. [_S profesor_{tj} [[_S NP _{VP} NP]] [JA_i]
 [prašuvaše_j]] studentk_a]
 V
- b. [... [[_S NP _{VP} V]] [prašuvaše_j]
 [edna studentka]]] ...]
 NP

In (24a), the definite NPs are moved out of S; in (24b), the indefinite NPs remain within S.

3.4 *Subject Placement.* It should be noted that the verb forms, actually the verbal ending *-še*, in (23) and (24) have been assigned an index identical to the index of the subject NP. If we are going to claim that CL pronouns are the phonetic representation of traces that arise as the result of a movement rule, it is just as reasonable to assume that verbal endings are the product of a movement rule.

We can explain the phenomenon of subject-verb agreement, whereby a subject agrees with its verb in person, number, and sometimes gender, by proposing a rule of Subject Placement. Subject Placement differs from Subject Adjustment in that it is a general rule which moves an NP into subject position regardless of its definiteness feature. Subject Adjustment is a separate rule which then moves a definite subject, but not an indefinite subject, out of S.

Let us assume that an NP, before it is placed in subject position, originates inside the VP along with DOs, IOs, etc. To adopt this view we would of course have to abandon the traditional view of phrase structure: S would not expand to subject NP + VP, as it does under most current views. Instead, let us assume that the NP which is to become the subject is moved out of the VP and into subject position by the rule of Subject Placement. Accordingly, it is distinguished from all other NPs by virtue of the unique subject status which it has acquired.

Subject Placement may be illustrated by (25).

(25) a. *Profesorot čita* 'The professor is reading'
the-professor is-reading

b. [_S [_S VP
profesorot čita-PRESENT]]]

c. [_S [_S NP [_{VP} T_i čita-PRESENT]]]

Sentence (25a) has the underlying structure (25b), in which *profesorot* is bounded by VP. Via Subject Placement *profesorot* is moved out of VP into the usual subject position as in (25c). It leaves its trace, T_i, which subsequently attaches itself to the verb *čita*-PRESENT. Since T_i represents the features "third person" and "singular" (as well as "masculine"), the third-person singular morpheme \emptyset is attached to the verb to yield *čita* '(he) is-reading' in (25a).

In essence, the trace left by Subject Placement is manifested in the form of a verbal ending and is responsible for the relationship of agreement between a subject and its verb. Both definite and indefinite NPs undergo Subject Placement. In languages which lack or have few verbal endings for person and number, the trace of Subject Placement is not represented phonetically as an overt morpheme. Instead, subject-verb agreement is guaranteed through configuration.

Once Subject Placement has applied as in (25c) above, Subject Adjustment then applies to move a definite subject out of S as discussed in sections 3.1-3.3. After the application of this rule, (25c) becomes (26).

(26) [_S profesorot_i [_S NP [_{VP} T_i čita-PRESENT]]]

While T_i has phonetic representation in the form of a verbal ending, t_i is not realized but remains an inaudible mark of the subject position vacated by a definite NP. The significance of t_i is discussed in section 4.

Analyzing subject-verb agreement as the result of a movement rule (Subject Placement) leads to an even further generalization of Move α . Traditionally, subject-verb agreement is viewed as the transfer of the syntactic features associated with the subject NP to the verb. The mechanism by which this might be achieved is unclear. But trace theory enables us to view subject-verb agreement as an incorporation into the verb of the syntactic features of the trace of the subject NP, which are of course identical to the features of the NP itself. Since the trace is a syntactic reality, subject-verb agreement becomes the simple attachment of a constituent to the verb in a

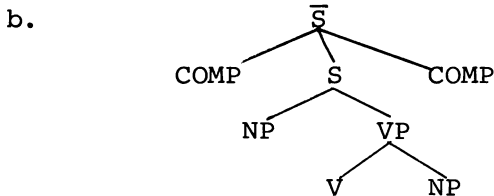
straightforward manner.

4. Movement to COMP and Subject Pronoun Deletion

Consider again Macedonian sentences with definite subjects and/or objects. When we say that definite subjects and objects are moved out of S as in (24a) above, where are they moved?

Within Extended Standard Theory there is a node COMP, sister-adjoined to the left of S, which dominates complementizers and other sentence elements. It is the COMP node which dominates the relative words in sentences (10) and (11) above, for example (see fn. 6). Just as relative words are moved into COMP during *wh*-movement, we maintain that definite subjects and objects are moved into COMP during Subject and Object Adjustment. During Subject Adjustment the definite subject is moved to the leftward COMP position assumed under Extended Standard Theory. For Object Adjustment to apply in a similar manner, we must posit a rightward COMP position, one which is also sister-adjoined to S but which branches to the right. We now interpret (24a) properly to be (27a).

(27) a. $[_{S} [_{COMP} \text{ profesorot}_j] [_{S} [_{NP} \text{ t}_j] [_{VP} [_{NP} \text{ JA}_i] [_{V} \text{ prašuvaše}_j]]] [_{COMP} \text{ studentkata}_i]]$



The definite subject *profesorot* is moved up out of S and into the leftward COMP; the definite object *studentkata* is moved up out of S and into the rightward COMP. Representing (27a) as a tree, (27b) reveals the symmetry afforded by having both a leftward and a rightward-branching COMP. We return to the question of symmetry in section 6.1, where "mirror images" are discussed.

A property of COMP within Extended Standard Theory is that elements may be freely deleted from it.¹⁰ In accordance with this principle of free deletion in COMP, if definite subjects and objects in Macedonian are moved to positions dominated by COMP, then they ought to be freely deletable. This is

indeed the case, a fact which sheds light on other syntactic phenomena.

The movement of definite subjects and objects to COMP accounts for a fundamental difference between languages which have a rule of Subject Pronoun Deletion (Macedonian, Serbocroatian, Czech, Spanish, etc.) and those which do not (English, German, French, Russian, etc.).¹¹ The English sentence, *He is walking in the park*, may be rendered in Macedonian either with the subject pronoun *toj* 'he', as in (28a), or without it as in (28b).

- (28) a. *Toj šeta vo parkot*
 he walks in the-park
- b. *Šeta vo parkot*
 (he)-walks in the-park

If definite subjects and objects are moved into COMP as proposed here, and if we assume that Macedonian, like English, has a rule of free deletion in COMP, then Subject Pronoun Deletion has a straightforward syntactic explanation. Since subject pronouns are always interpreted as definite NPs, they are moved into COMP during Subject Adjustment just like any other definite NP. Accordingly, they may be freely deleted in that position; *toj* (29) may remain in COMP to give (28a) or it may undergo Subject Pronoun Deletion, which is equivalent to free deletion in COMP, to give (28b).

- (29) [_S [_{COMP} *toj_i*] [_{S NP} [_{VP} [*šeta vo parkot*]]]]

The trace of a deleted subject pronoun has an unspecified definite referent just as the pronoun itself has.

The same holds for the deletion of an object pronoun from the COMP position to the right of S. For example, (23) above actually has the structure of (30) before deletion; *nea* 'her' is the full form of the DO pronoun, feminine-singular (see (5) above).

- (30) [_S [_{COMP} *toj_j*] [_{S NP} [_{VP} [_{COMP} [*JA_i prašuvaše_j*]]] [*nea_i*]]

In accordance with the principle of free deletion in COMP, *toj* may undergo Subject Pronoun Deletion or not and, in a similar fashion, *nea* may undergo Object Pronoun Deletion or not. Therefore, (31a-d) are the four possible ways to render the sentence, *He was questioning her*.

- (31) a. *Toj JA prašuvaše nea*
 b. *Toj JA prašuvaše*
 c. *JA prašuvaše nea*
 d. *JA prašuvaše*

We can now reduce in number the kinds of deletion rules assumed by Chomsky (1978, p. 7) to be operative in the grammar. Specifically, we can eliminate the "deletion of specific categories," which Chomsky assumes is necessary to account for Subject Pronoun Deletion, because now the phenomenon may be viewed as free deletion in COMP.

As stated in section 3.4, the verbal ending is the trace of the subject NP which is moved out of the VP to subject position via Subject Placement. In (30), the verbal ending carries the subscript j , indicating that the syntactic features of the subject NP have been manifested in the verbal ending. After Subject Adjustment a second trace, t_j , marks the subject position vacated by *toj* when it was moved to COMP. The CL *JA* is the realized trace of the definite object *nea*, which was moved to the rightward COMP. The trace t_j and the CL *JA* guarantee that their referents are interpreted as definite NPs, whether Subject and Object Deletion apply or not.

4.1 *S languages and \bar{S} languages.* If it turns out that some languages systematically move definite subjects and objects into COMP but that other languages do not, then we can distinguish syntactically two basic kinds of languages: \bar{S} languages and $\bar{\bar{S}}$ languages.¹² In an \bar{S} language like English, \bar{S} expands to COMP \bar{S} and root sentences are dominated by \bar{S} as in Emonds (1976). The basic propositional domain is \bar{S} . But in an $\bar{\bar{S}}$ language like Macedonian, both \bar{S} and $\bar{\bar{S}}$ are propositional domains in the sense that subjects and objects either remain in \bar{S} or are moved out of \bar{S} into the immediate domain of $\bar{\bar{S}}$. In the $\bar{\bar{S}}$ languages, $\bar{\bar{S}}$ expands to TOP $\bar{\bar{S}}$ which expands to COMP \bar{S} . (Compare Chomsky 1977, pp. 90-96. TOP stands for "topic.") This difference amounts to the fact that in an $\bar{\bar{S}}$ language the basic level of syntactic operations is generally one "bar" higher than in an \bar{S} language.

Consider left dislocation, as an example. English differs from Macedonian, as shown in (32), in rendering the sentence, *My father, he's a nice man.*

- (32) a. [_S [my father] [[he] [is a nice man]]]
 S COMP S NP VP
- b. [_S [mojom tatko] [[toj] [[t]
 S TOP S COMP S NP
 [e fin čovek]]]]
 VP
 'the-my father he is nice man

What is ordinarily COMP in English is TOP in Macedonian, and what is ordinarily (subject) NP is COMP.

4.2 *The *{that [NPt]} filter.* These facts shed light on the *[that [NPt]] filter proposed in Chomsky and Lasnik (1977, pp. 450-453).¹³ They discuss Perlmutter's (1968, 1971) observations about the difference in grammaticality between sentences like (33a,b), and they reformulate his suggestions to incorporate trace theory.

- (33) a. Who do you think saw Bill?
 b. *Who do you think that saw Bill?

Under trace theory, (33a,b) are to be rendered as (34a,b), respectively, where t is the trace of *wh*.

- (34) a. Who do you think [[t] saw Bill]
 NP
 b. *Who do you think [that [[t] saw Bill]]
 NP

Given the *[that [t]] filter, (34b) is ruled out.
 NP

In other words, any structure which contains the complementizer *that* followed by the trace of a subject NP is ruled out by the filter as ungrammatical. But because English has a rule of free deletion in COMP, it can delete *that* from (34b) leaving (34a) and hence "escape the effects" of the filter.

An interesting fact about the filter, noted by Perlmutter, is that it applies only in languages which do not have Subject Pronoun Deletion. Spanish, for instance, a language which does have Subject Pronoun Deletion, allows sentences like (35), parallel to ungrammatical (33b) in English.

- (35) *¿Quien creiste que vio a Juan?*
 who you-believed that saw (to) Juan
 'Who did you believe saw Juan?'

Chomsky and Lasnik maintain that *[that [_{NP}t]] is indeed a universal filter and that Perlmutter's observation about languages like Spanish has a logical explanation, assuming trace theory. That is, (35) has the structure (36) before Subject Pronoun Deletion.

- (36) *Quién tú creiste que* [_{NP} t] *vio a Juan*
 who you believed that saw (to) Juan

Deletion applies not only to the subject pronoun *tú* but also to *t*, the subject of *vio* 'saw'. In languages which have Subject Pronoun Deletion, lexical as well as "empty" subjects, that is, *t*, will delete. Then the deletion of *t* in (36) voids the filter.

Under our proposed analysis, which maintains that Subject Pronoun Deletion is, in actuality, free deletion in COMP, the details concerning "violations" of the *[that [_{NP}t]] filter are able to be generalized to an even greater extent. Like Spanish, Macedonian also "violates" the filter as in (37), which permits the complementizer *deka* 'that'.

- (37) *Koj rekovte deka kupil vesnik?*
 who you-said that bought newspaper
 'Who did you say (*that) bought a newspaper?'

In accordance with the basic difference between \bar{S} and S languages, (37) has the structure in (38a); its English equivalent has the structure in (38b).

- (38) a. Koj_i rekovte [_{\bar{S}} [_{TOP} deka] [_{\bar{S}} [_{COMP} t_i] [_S [_{NP} t_i] [kupil vesnik]]]]]
 VP
 b. Who_i did you say [_{\bar{S}} [_{COMP} that] [_S [_{NP} t_i] [bought a newspaper]]]]
 VP

Now it is evident that there is a parallelism between languages which have and those which do not have so-called Subject Pronoun Deletion—in other words, between \bar{S} and S languages. Namely, both types apparently escape the effects of the *[that [_{NP}t]] filter by resorting to a rule of free deletion in COMP. In (38a), the *t* contained in COMP is deleted; in (38b), the *that* contained in COMP is deleted. In neither case does [_{NP}t] contained in S delete, which suggests that the filter should be reformulated as follows, without specific reference to the node

which bounds t : *[that [t]]. If a language has a rule of free deletion in COMP, then it will delete whichever element is contained in COMP, either the complementizer or the trace.

4.3 *Subject/Object Adjustment as an optional rule.* We now return to the matter of the definiteness of subject and object NPs involved in Subject/Object Adjustment. Our analysis maintains that indefinite NPs are not moved out of S by this rule (see (18) and (24b) above) and that the rules of semantic interpretation interpret NPs bounded by S as constituting new information, which is equivalent to saying that they are indefinite. In contrast, definite NPs are moved out of S, the minimal propositional core (see (17), (24a), (27), (29), and (30) above), and are thereby interpreted as constituting old or given information.¹⁴ Within the framework of Chomsky (1978), transformational rules—essentially the one rule, Move α —are considered to be optional. The kind of movement we are calling Subject/Object Adjustment, which effects the placement of definite subjects and objects into COMP, may indeed be regarded as an optional rule.

For example, consider again (22a) and (22d), repeated here as (39a,b), respectively.

- (39) a. *Profesorot JA prašuvaše studentkata*
 'The professor was questioning the student'
 b. *Eden profesor prašuvaše edna studentka*
 'A professor was questioning a student'

If either definite NP in the structure underlying (39a) fails to move out of S, the resulting surface structure (40) will be considered ill-formed and will not be associated with any representation in logical form.

- (40) [_S...[[_S profesorot][_{VP} prašuvaše studentkata]]
 ...]

Similarly, if either indefinite NP in the structure underlying (39b) is improperly moved out of S, as in (41), that surface structure, too, will be interpreted as ill-formed.

- (41) [_S[_{COMP} eden profesor]_i [_S [_{NP} t_i][_{VP} [_{NP} JA]_j]
 [_V prašuvaše_i]]][_{COMP} edna studentka]_j]

Subject/Object Adjustment may apply or not in either case. The rules of semantic interpretation determine whether the resulting configuration is a well-formed structure.

5. Indefinite *wh*-words and Indirect Questions

In section 3 it was noted that some kinds of questions in which the *wh*-words were interpreted as objects did not, in fact, realize traces as CLs (see (14) above). Now that the principles governing Subject/Object Adjustment have been established, such sentences have a logical explanation within our analysis. The *wh*-words in (14) and the NPs to which they may be attached are interpreted as indefinite NPs within S before *wh*-movement. Contrast the *wh*-phrases of (42), which are indefinite NPs, with those of (43), which are definite NPs.

- (42) a. [što] napravi Mitko
 what did Mitko
 'What did Mitko do?'
 b. [kolku biseri] sobra ribarot
 how-many pearls gathered the-fisherman
 'How many pearls did the fisherman gather?'
- (43) a. [koi konduri]_i GI_i nosi
 which shoes THEM he-wears
 'Which shoes is he wearing?'
 b. [čij glas]_i GO_i slušnaa
 whose voice IT they-heard
 'Whose voice did they hear?'

Since they are indefinite, the *wh*-phrases in (42) have no associated CLs. The *wh*-phrases in (43), on the other hand, have coindexed CLs as the result of Subject/Object Adjustment, because they are definite NPs and not because of *wh*-movement. That the *wh*-words in (43) are to be interpreted as definite while those in (42) are not can be justified, aside from the presence of the CLs, by the fact that (43a,b) require definite NPs as answers but (42a,b) do not.

Indirect questions also constitute indefinite NPs on the basis of these same syntactic and semantic criteria. The sentences of (44) illustrate this fact.

- (44) a. *Opiši* [što gledaš na slikata]
 describe what you-see on the-picture
 'Describe what you see in the picture'

- b. *Kaži mi [koj me baraše]*
 tell to-me who me was-looking-for
 'Tell me who was looking for me'

The embedded questions behave like any other indefinite NPs and are retained within the minimal propositional domain, S.

But the moment a definite NP is inserted as the object of the verb, a sentence like (44a) gets a totally new interpretation. Contrast (44a) with (45), in which the demonstrative *toa* 'that' is the object of *opiši* 'describe'.

- (45) *Opiši GO_i [toa_i [što_{i,j} [GO_j gledaš na slikata]]]*
 describe IT that which IT you-see on the-picture
 'Describe that which you see in the picture'

Here *GO_i* is the trace of the entire complex NP of which *toa* is the head. The clause beginning with *što* is a relative clause rather than an indirect question as it was in (44a), and *GO_j* is the trace of the *wh*-word, *što*.

5.1 *Exceptional reduplication of indefinite objects.* Although DO reduplication is the general rule only with definite NPs, it was pointed out in Berent (1977a) that some speakers of Macedonian reduplicate indefinite DO NPs under special circumstances. To be precise, when an indefinite NP can be given a specific, rather than a nonspecific, interpretation, a CL may occur as in (46), though such reduplication is quite rare.

- (46) *Sakamda GO_i pluknam [eden čovek]_i koj beše včera kaj tebe*
 I-want that HIM I-spit-on one man who was yesterday at you
 'I want to spit on a man who was at your place yesterday'

Here the object NP *eden čovek* is reduplicated, whence the CL *GO*, despite the fact that it is indefinite. The sentence would usually exclude *GO*. Apparently, under the specific interpretation the NP is treated as given information and is extracted from S just as a definite NP would be. The existence of the referent of the NP is presupposed, and the relative clause makes such an interpretation even more likely. Therefore, the entire complex NP, which includes the relative clause, is moved out of S, as indicated in (47). The CL trace results as in usual instances of

Object Adjustment.

- (47) [_S ... [_S sakam da GO_i pluknam] [eden čovek koj
beše včera kaj tebe]_i]

In the following example, taken from a children's textbook (see fn. 3), it actually appears as if reduplication results from topicalization, in other words, not from Object Adjustment.

- (48) [_S TOP nekoi nivil]_i [_S COMP zemjodelecot] [[t]
[i [GI_i] ora i [GI_i] see vo esen]]]
VP NP NP
some fields the-farmer both THEM plows and THEM
sows in autumn
'Some fields, the farmer both plows and sows in
autumn'

Nevertheless, *nekoi nivi* 'some fields' (*some* in the sense of *certain*) may be interpreted as a specific indefinite NP, so we assume that even here reduplication is the product of Object Adjustment.

5.2 *The special status of indirect objects.* Having discussed some exceptional cases of reduplication with indefinite DO NPs, we now undertake an explanation of the behavior of IOs in Macedonian. As noted in (2) above, reduplication is normal with both definite and indefinite IO NPs. This fact would seem to contradict the claim of this analysis that, in general, indefinite NPs are not moved out of S by Subject/Object Adjustment (except as noted in (46)-(48)). Indeed, the clitic *ĭ* 'to her' occurs both in (49a), where *onaa žena* 'that woman' is definite, as well as in (49b), where *edna žena* 'a woman' is indefinite.

- (49) a. *Momčeto* [_S *ĭ*_i GO_j *otstapilo*] *mestoto*_j [*na onaa*
žena]_i
the-boy TO-HER IT gave-up the-place to that
woman
'The boy gave up his seat to that woman'
- b. *Momčeto* [_S *ĭ*_i GO_j *otstapilo*] *mestoto*_j [*na edna*
žena]_i
the-boy TO-HER IT gave-up the-place to one
woman

'The boy gave up his seat to a woman'

It certainly seems to be the case that in both sentences the IO NP is extracted from S, because not only does a CL trace appear, but also the NP stands to the right of the DO NP *mestoto* 'the place'.

In general, IOs exhibit a peculiar behavior, which makes a precise formalization of structures containing them difficult. They present problems, for example, to the analysis of the syntactic domains involved in anaphora relations set forth in Reinhart (1976, pp. 155-158). Since coreference between the underlined elements is permitted in (50a) but not in (50b), Reinhart concludes that IOS should be distinguished syntactically from other prepositional phrases.

(50) a. Near him, Don's mother found a gun.

b. *To him, Max's mother gave a book.

She suggests that IOs may be dominated by an NP with a case marker "dative" rather than by a PP. Such an analysis would make the domain relations of IOs the same as those of DOs, and the principles of anaphora relations which she proposes would better account for differences that exist between sentences like (50a,b).

It is even more apparent in Macedonian that IO NPs, which are governed by the preposition *na*, behave differently from other prepositional phrases. CLs are associated with IOs but not with any other kind of prepositional phrase:

(51) a. *IM_i zboruvav [na decata]_i*
TO-THEM I-was-talking to the-children
'I was talking to the children'

b. (**IM_i) zboruvav [za decata]_i*
(*TO-THEM) I-was-talking about the-children
'I was talking about the children'

There is another interesting fact which seems to indicate that IOs have a special status. With regard to grammatical versus natural gender, Macedonian IOs are distinguished from DOs in a significant way. This distinction can be seen in the use of neuter diminutive forms derived from regularly feminine nouns referring to female human beings: *žena—ženče* 'little woman', *devojka—devojče* 'little girl', *kerka—kerkiče* 'little daughter', *kurva—kurviče* 'little whore', *sestra—sestriče* or *sestrence* 'little sister'.

The basic forms in *-a* behave in a normal fashion. That is, their CL traces are always feminine, which is, of course, both the natural and grammatical gender of these nouns. Thus, the form *devojkata* 'the girl' is coindexed with the DO CL *JA* in (52a) and with the IO CL *Ī* in (52b), both feminine.

- (52) a. *JA_i sakam devojkata_i*
 HER I-like the-girl
 'I like the girl'
- b. *Ī_i dadov podarok na devojkata_i*
 TO-HER I-gave gift to the-girl
 'I gave the girl a gift'

However, notice what happens in a sentence where one of the neuter diminutives occurs. Although the literary language requires grammatical gender for both the DO and IO CLs of these forms, some speakers employ the natural gender with the IO forms. In (53a), the DO CL form follows the grammatical gender of the noun; in (53b), the IO CL corresponds to the natural gender.

- (53) a. *GO_i sakam devojčeto_i*
 IT I-like the-little-girl
 'I like the little girl'
- b. *Ī_i dadov podarok na devojčeto_i*
 TO-HER I-gave gift to the-little-girl
 'I gave the little girl a gift'

GO is neuter but *Ī* is feminine. This interesting phenomenon is observable only in these neuters derived from feminines because masculine and neuter CL forms are identical.

It is difficult to know exactly how to interpret the assignment of grammatical gender in (53a) as opposed to natural gender in (53b). One might suggest that the natural gender with IOs is in some way connected with the feature "human" often associated with the recipient of certain verbal actions. But this is only conjecture. Nevertheless, the IO regularly serves as the "subject" of certain "impersonal" constructions in Macedonian such as in (54a-c).

- (54) a. [*na Goran*]_i *MU_i e ladno*
 to Goran TO-HIM is cold
 'Goran is cold'
- b. *Žal IM e za tebe*

sorrow TO-THEM is for you
'They are sorry for you'

- c. *Ī se veruva deka ke vrne*
TO-HER REFL believes that will it-rains
'She believes that it will rain'

Whatever the precise formulation of IOs may be, we assume that their status is different from that of DOs and that they differ syntactically from all other kinds of prepositional phrases. They have some kind of special status, just as subject NPs have a special status, such that both definite and indefinite IO NPs undergo Object Adjustment and leave CL traces.¹⁵

6. Theme-rheme Reflected in Phrase Structure

Throughout the paper it has been assumed that definite NP objects are generated in preverbal position, as in (17b) above, but that indefinite NP objects are generated in post-verbal position as in (18b). For one thing, the preverbal position of definite NPs corresponds to the preverbal position of their traces, which become CLs after movement. Moreover, indefinite objects, which do not move out of S, may be considered to remain in their underlying post-verbal position.

Actually, the underlying order of objects with respect to the verb may be justified on other grounds. It was stated in section 3.3 that Subject/Object Adjustment had the function of distinguishing theme from rheme. Old information was extracted from the minimal propositional domain, while new information remained within it. Frankly, it seems that theme and rheme are distinguished in the base before movement, at least with respect to DOs.

Let us assume that VP expands either as V NP... or as ...NP V, where an NP to the left of V constitutes old information, one to the right new information. Since the most neutral word order in Macedonian is subject-verb-object (SVO), a definite NP object, that is, one to the left of V, is generally moved to the right when it is moved out of S during Object Adjustment. An NP to the right of V in the base, namely an indefinite NP object, already conforms to the usual SVO order. Thus, the underlying and surface positions of *piperki* 'peppers' in (55) are the same, but definite *piperkite* 'the peppers' is derived as in (56).

- (55) [_S jas_i [t_i [pržam_i [piperki]]]
 S S VP NP
 I roast peppers
 'I am roasting peppers'
- (56) a. [_S jas_i [t_i [[piperkite] pržam_i]]...]
 S S VP NP
 b. [_S jas_i [t_i [[t_j] pržam_i]] piperkite_j]
 S S VP NP
 c. [_S jas_i [t_i [[GI_j] pržam_i]] piperkite_j]
 S S VP NP
 I THEM roast the-peppers
 'I am roasting the peppers'

The base rules may very well even generate subject NPs to the left or right of VP depending on whether they represent the theme or the rheme.¹⁶ An indefinite subject NP to the right of VP does not require the indefinite article, which suggests that this is a natural position for rhematic structure. Note (57a,b) (compare Tomić 1971, p. 33, and 1977, p. 675).

- (57) a. *Vo sobata vlezē dete*
 into the-room came child
 b. *Edno dete vlezē vo sobata*
 one child came into the-room
 'A child came into the room'

In (57a), it is not necessary to mark the NP's status as new information through both its position and the indefinite article. But in preverbal position, the absence of the indefinite article would be quite awkward. All in all, the special status of subject position along with the general tendency toward SVO word order obscures the picture of underlying theme-rheme order.

6.1 *Mirror images.* The theme-rheme distinction is reflected more clearly where DOs are concerned perhaps because they display greater "inherent entailment" with verbs than other NPs do, as claimed in Smith (1978, p. 101), where the phenomenon of "mirror images" is studied. In any event, it is not unreasonable to assume that phrase structure rules operate on the general principle of generating alternative orderings of constituents on the basis of theme and rheme and that these orderings are mirror images of each other: $\bar{S} \rightarrow \text{COMP S}$, $\bar{S} \rightarrow \text{S Comp}$, $\text{S} \rightarrow \text{NP VP}$, $\text{S} \rightarrow \text{VP NP}$, $\text{VP} \rightarrow \text{V NP}$, $\text{VP} \rightarrow \text{NP V}$, etc. Indeed, mirror images

whether by Subject/Object Adjustment or by other types of NP movement. The sentences of (60) show only two of numerous possible non-SVO orders.

- (60) a. *Porano luĝeto potrebnite predmeti; GI; izrabotuvale so raka sami doma ili kaj zanaetĉii*
 earlier the-people the-necessary objects THEM made by hand themselves at-home or at craftsmen's
 'Earlier the people themselves made necessary objects by hand at home or at craftsmen's (shops)'
- b. *Za da ŝivee, na ŝovekot; MU; se potrebni xrana, obleka i drugi potrebi*
 for that he-lives to the-man TO-HIM are necessary food clothes and other needs
 'In order to live, man needs food, clothes, and other necessary items'

Example (60a) exhibits SOV word order; (60b) has the order—IO V S.

It is the realization of trace in the form of CL pronouns which gives such freedom to NP movement in Macedonian. The coindexing of an NP and its CL trace, which marks the position from which the NP is moved, guarantees the proper interpretation of thematic relations. The features of gender, person, number, and case are transferred from the NP to its trace, assuring the proper interpretation of coreferential CL/NP pairs. If a sentence contains both an indefinite subject and object, the SVO tendency takes over to insure that subject and object relations are properly interpreted.

6.2 *The equivalent of the English passive.* The functional equivalent of English passivization or topicalization is obtained in Macedonian simply by moving an object NP to the left out of S during (or after) Subject/Object Adjustment. Such NP-preposing may be accompanied by NP-postposing of the subject NP or not. The sentences of (61) illustrate the phenomenon (compare the discussion in Tomić 1977).

- (61) a. *Pismata; od poštenskite sandaĉinja GI; sobiraj poštarot; j*
 the-letters from the-postal little-boxes THEM gathers the-postman
 'The letters are gathered from the mail-boxes by the postman'

- b. *Nego_i GO_i koristime najčesto za itni slučai*
 it IT we-use most-often for urgent cases
 'It, we use most often for emergencies' -or-
 'It is used (by us) most often for emergencies'
- c. *Nea_i lugetoj JA_i pijatj*
 it the-people IT drink
 'It, the people drink'

In each of these sentences the constituents coindexed with subscript "i" are the object NPs of the verb. The NP-preposing (and postposing) analysis of these passive equivalents is much simpler than NP-preposing and/or postposing analyses of English passives, because there is no *by*-phrase to reckon with and no change in the verb form. Compare the discussions and problems of the analysis of passive in Fiengo (1977), Hornstein (1977), and elsewhere.

7. *Trace Analysis Versus the Generation of Clitics in the Base Component*

The analysis of Macedonian CL pronouns which has been proposed here maintains that CLs are the product of NP movement. NPs are generated by the phrase structure rules to the left of V if they constitute old information and to the right of V if they constitute new information. Those constituting old information, in other words, definite NPs, are moved out of S during Subject/Object Adjustment and into the immediate domain of \bar{S} . The extraction of an NP from S leaves a trace which marks the position from which that NP was moved. The trace preserves the syntactic features of gender, number, case, etc., of the original NP. If a trace represents an extracted object NP, it is converted into a CL pronoun which is coreferential with the object NP itself.

The incorporation of traces into Revised Extended standard Theory enables grammatical relations to be determined from surface structures containing traces, rather than from deep structures. This is a great simplification of the grammar in that it significantly decreases the power of the transformational component and allows all transformational rules to be considered optional. The well-formedness of a sentence will depend on whether certain conditions on surface structure are satisfied (for details see Chomsky 1973, 1976, 1977, 1978, etc.). Under our proposed analysis surface structures contain two kinds of traces: those which are phonetically null (for example, the product of Subject

Adjustment) and those which are phonetically real, that is, CLs (the product of Object Adjustment). Both types mark grammatical relations and are responsive to the rules of the interpretive component.

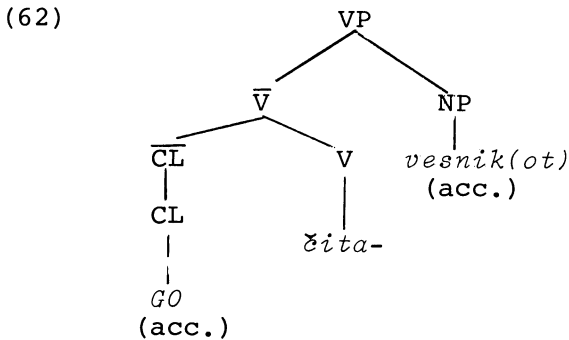
A different analysis of CL pronouns has been proposed by Rivas (1977). According to Rivas, CLs are generated in the base component, within the VP at phrase structure level. While his study elaborates a theory of Romance CLs, it makes general theoretical claims which one might want to adopt in analyzing Macedonian CLs.

Briefly, Rivas maintains that CLs are generated freely along with lexical NPs inside the VP. (For Macedonian this would mean that a CL would be generated along with each NP regardless of the definiteness of the NP.) Next a series of Extension Rules assigns the features of case, person, number, and gender to the CLs and NPs. Case Matching checks for the correct number of objects, depending on the verb, and for the correct cases of these objects. A rule of CL/NP Agreement checks to see that CLs and NPs agree in case, person, number, and gender. In other words, each object NP which is marked for case must have a corresponding coreferential CL.

After the Extension Rules have applied, the sentence goes through the transformational component. All CL/NP pairs are maintained throughout the derivation. In the Romance languages there are many rules moving CLs to various positions, attaching them to infinitives, etc., which are not relevant in Macedonian. These rules (Verb Adjunction, Clitic Gliding, Clitic Attraction), unlike the pre-transformational Extension Rules, are expressed as typical transformational movement rules. Finally, a post-syntactic rule of CL/NP Deletion applies after all other transformational rules. This rule, which applies within the VP, affects each CL/NP pair and deletes either the CL, the NP, or neither, depending on the case of the CL/NP pair, on whether the NP is a full pronoun or a lexical NP, and sometimes on the animacy of the NP.

If we were to adopt Rivas' analysis of CLs, then the Macedonian sentence *čitav vesnik* 'I was reading a newspaper' (= (18a) above) would contain a CL copy of the indefinite NP *vesnik* just as the sentence *GO čitav vesnikot* 'I was reading the newspaper' would contain a CL copy of the definite NP *vesnikot* at the level of deep structure. The phrase structure rules would generate structures for the two sentences with identical VPs except for the definite article on the noun in the latter sentence. The VP structure would

look like (62).¹⁷



The post-syntactic rule of CL/NP Deletion would delete *GO* from the sentence containing indefinite *vesnik* but would maintain it in the sentence containing *vesnikot*.

Clearly, the trace analysis is superior to a theory of base-generated CLs. It eliminates the need for a special class of Extension Rules which are necessary to match CLs and NPs properly after the VP has been expanded. Under our movement analysis a trace is a clone, so to speak, of an NP which perpetuates the syntactic features of that NP. Matching is automatic. There is also no need for a post-syntactic CL/NP Deletion rule, for under the trace analysis there is no overgeneration. An indefinite object NP is not extracted from S; hence it never leaves a trace. There is nothing to be deleted. A CL appears only when a definite NP object has been moved out of S.

We have accounted for Macedonian CL pronouns, object reduplication, subject-verb agreement, and other phenomena by showing that they are the by-products of NP movement. We have eliminated the need for the unnecessary overgeneration of constituents and for superfluous minor and post-syntactic rules in this context. The incorporation of trace theory into linguistic analysis leads not only to significant generalizations about movement rules but also to an overall simplification of the grammar.

NOTES

¹Macedonian is the official language of the Socialist Republic of Macedonia and one of the three official languages of Yugoslavia, along with Serbocroatian and Slovenian. It is a South Slavic language, closely related to Bulgarian to the east and to Serbocroatian to the north, but it shares many

features with the other, non-Slavic languages of the Balkans.

²For exceptions to this principle see Berent (1977a) and section 5.1 below.

³Some examples were taken from the following sources, where the page number of each source follows the number of the example. From Vladimir Kostov, *Učitelot*, Skopje: Mislá, 1976: (6a), p. 57; (6b), p. 7; (6c), p. 580. From Klime Sekulovski, *Zapoznavanje na prirodata i opštествoto (za II oddelenie)*, Skopje: Prosvetno Delo, 1974: (7), p. 84; (9), p. 88; (48), p. 76; (60a), p. 99; (60b), p. 45; (61a), p. 50; (61b), p. 49; (61c), p. 22. From Koneski (1967): (8), p. 333; (16), p. 541.

⁴On trace theory see Wasow (1972), Chomsky 1973, 1976, 1977), Fiengo (1977), Lightfoot (1977), and elsewhere.

⁵The relative pronoun *koj* agrees with a singular antecedent in gender (*koj*, *koja*, *koe*) and with a plural antecedent in number (*koi*). There are also a remnant accusative (*kogo*) and dative (*komu*) in the masculine. Unlike *koj*, *što* does not change in form. The composite forms are *kojšto*, *kojašto*, *koešto*, and *koišto*.

⁶An explanation for the preverbal position of t_i in (11b), versus the postverbal position of t_i in (10b), is given in sections 3.1 and 6. As in English, a fully lexicalized Macedonian NP object usually follows rather than precedes the verb: *Marko JA_i vide ženata_i; vo parkot, Marko HER saw the-woman in the-park*. The NP *ženata* 'the woman' follows *vide* 'saw'.

⁷We are assuming $\bar{S} \rightarrow \text{COMP } S$, following Bresnan (1972). COMP, the sister node to S, is the node dominating the relative words here. See also fn. 10.

⁸It may be that languages which give traces phonetic representation to a greater extent are languages which exhibit freer word order, since the necessity of having fixed positions in surface structure to indicate the grammatical function of a trace is lessened by the functional morpheme which now represents that trace. See sections 6.1 and 6.2

⁹This is not a statement about discourse grammar but a claim consistent with theories of sentence grammar and the autonomy of syntax. All that is claimed is that, in the interpretation of (23), *JA* may have any likely known, human, female referent and that *-šje* may have any likely known, human referent. As a statement on coreference, this claim is consistent with Lasnik (1976).

¹⁰Chomsky and Lasnik (1977, p. 434ff. and p. 444ff.) discuss the properties of the complementizer system including the principle of free deletion in COMP. Briefly, one may say (a) or (b), or he may delete the complementizer or the *wh*-word to get (c).

(a) the man that I saw

(b) the man who I saw

(c) the man I saw

A system of "filters" and other restrictions prevent the co-occurrence of both the *wh*-word and the complementizer as in

(d) or the deletion of *who* or *that* in (e) and (f), which would leave (g).

(d) *the man who that I saw

(e) The man who met you is my friend.

(f) The man that met you is my friend.

(g) *The man met you is my friend.

The theory of filters discussed in Chomsky and Lasnik accounts for the facts associated with the complementizer system in accordance with perceptual strategies and with principles of universal grammar. Filters account for the facts, without complicating the grammar by enriching the transformational component.

In the context of Macedonian CL pronouns, our proposals support the principle of free deletion in COMP and shed light on the nature of COMP in general.

¹¹ Subject Pronoun Deletion behaves differently in different languages. Macedonian seems to retain the pronoun to a greater extent than Serbocroatian, for example. Also, Russian allows deletion under certain circumstances even though Subject Pronoun Deletion is not the general rule.

¹² That is, there are S languages and S-bar languages. X-bar theory, first proposed in Chomsky (1970), is an attempt to constrain the theory of the base component by showing the syntactic parallelism among the major constituents. In Hornstein (1977) the expansion of all of the following is essentially the same: noun phrase, verb phrase, prepositional phrase, quantifier phrase, adverbial phrase, adjective phrase. There is debate over whether S is to be included in the X-bar system.

¹³ Chomsky and Lasnik actually formalize their filter as * $[\text{that } [\text{ e}]]$, where $[\text{ e}]$ is the identity element, in this

NP

NP

case, *t*. They have a further qualification on the filter to distinguish relative *that* from nonrelative *that*. Since the two complementizers are distinct in Macedonian, no qualification is needed here.

¹⁴ Then the definite or indefinite determiner generated by the phrase structure rules is not a proper indicator of the definiteness or indefiniteness of the NP except in conjunction with Subject/Object Adjustment. If a definite NP is not moved out of S, then the sentence is ill-formed (see below).

¹⁵ For some interesting comments on the development of personal verbs from impersonal constructions involving dative NPs in earlier English, see the NP-preposing analysis in Lightfoot (1977, pp. 229-234).

¹⁶ In some languages, the basic function of word order is to distinguish theme from rheme. As discussed in Launer (1974, pp. 45-52), in Russian, constituents placed toward the beginning of the sentence represent old information; those placed toward the end represent new information. Since Russian lacks definite and indefinite articles, an NP placed toward the beginning is generally interpreted as definite, one toward the

end as indefinite. Such is the case with the subject NP *kniga* 'book' in (a) and (b).

- (a) *Kniga* ležit na stole
book lies on table
'The book is (lying) on the table'
- (b) Na stole ležit *kniga*
on table lies book
'A book is (lying) on the table'

¹⁷ Within the framework of Rivas (1977, p. 34), the VP expands as follows: $VP \rightarrow \bar{V} NP \dots$ (we omit here details on the number of NP objects and the status of PP (prepositional phrase)). The super-verb node \bar{V} expands as follows: $\bar{V} \rightarrow CL V$. The super-clitic node CL dominates the individual CLs. In (62), the Extension Rules would assign the features "accusative," "masculine," "singular," and "third person" to both the CL and the NP and would guarantee that the CL and the NP matched, that is, that they were coreferential.

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ON AGREEMENT, AFFIXATION AND
ENCLISIS IN POLISH*

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Recent investigations into problems of agreement have shown not only that the facts of agreement are not as straightforward as they were formerly thought to be, but also that they present certain difficulties for the formulation and justification of more general grammatical rules¹ A separate, and partly related, issue is the grammar of the word, and the status of various types of word—especially in such problematical areas as enclisis—in syntax and morphology.² The present paper brings these two areas together in an analysis of a complex variety of affixal agreement in Polish, and suggests some of its implications for a grammar of Polish, the linguistic typology of the Slavic languages, and the abstract typology of grammatical rules.

Verbal agreement in Polish is manifested in one of two ways: in the Past Tense and in forms morphologically related to it, Gender and Number are expressed in a suffix which follows the Past Tense marker -ł-:

(1) SINGULAR

Masculine: -ł-∅ Feminine: -ł-a Neuter: -ł-o

PLURAL

Virile:³ -ł-i Nonvirile: -ł-y

(The appearance of -ł- rather than -ł- in the Plural Virile forms is due to a general phonotactic rule of Polish whereby *łi and *ły are impossible, and /ł+i/ > łi.)

Person and number occur in all tenses in Polish, and in the Past Tense forms they follow the Gender-Number marker:

- (2) Sample verb: *czytać* 'read'
Morphotactic structure:

		Root+Thematic vowel ⁴ +Past+Gender-Number+Person-Number		
		1 Person	2 Person	3 Person
SINGULAR	M	<i>czyt-a-ł-e-m</i> ⁵	<i>czyt-a-ł-e-ś</i>	<i>czyt-a-ł-∅</i>
	F	<i>czyt-a-ł-a-m</i>	<i>czyt-a-ł-a-ś</i>	<i>czyt-a-ł-a</i>
	N ⁶	<i>czyt-a-ł-o-m</i>	<i>czyt-a-ł-o-ś</i>	<i>czyt-a-ł-o</i>
PLURAL	Vir.	<i>czyt-a-ł-i-śmy</i>	<i>czyt-a-ł-i-ście</i>	<i>czyt-a-ł-i</i>
	Nonvir.	<i>czyt-a-ł-y-śmy</i>	<i>czyt-a-ł-y-ście</i>	<i>czyt-a-ł-y</i>

Person-Number and Gender-Number occur in Polish verbal agreement in five different patterns, depending on the tense and aspect. These will be designated A, B, C, D, E. These types of agreement are also found in other Slavic languages. Polish has an additional pattern, with an "ubiquitous" affix.

Type A.

Person-Number occurs as a suffix on the verb; there is no Gender-Number agreement, and Gender is represented, if at all, in the Subject Noun Phrase. This happens in the Present and in the Future Perfective:

(3) (*ja*) *czyt-a-m* 'I read'

read+Thematic vowel+1 Person Sing.

Type B.

Gender-Number agreement occurs as a suffix on the verb. There is no Person-Number agreement, and Person is represented in the Subject NP. This patterning is found in the 3rd Person of the Past and Conditional:

(4) PAST, 3 Person Sing: *on czyt-a-ł-∅* 'he was reading'
ona czyt-a-ł-a 'she was reading'
ono czyt-a-ł-o 'it was reading'

3 Person Pl: *oni czyt-a-ł-i* 'they (Vir) were reading'
one czyt-a-ł-y 'they (Nonvir) were reading'

Type C.

Gender-Number agreement occurs as in Type B, but an Auxiliary is added, carrying Person-Number agreement:

(5) FUTURE: *będe robił* 'I will do'

będ-ę = be-Future + 1 Person Sing.

rob-i-ł-ø = do+Thematic vowel+Gender-Number

Type D.

There is no Gender-Number agreement, and Person-Number operates on the Auxiliary as in Type C:

(6) FUTURE (alternative form): *będe robić* 'I will do'

będ-ę = be-Future+1 Person Sing.

rob-i-ć = do+ Thematic vowel + Infinitive

Type E.

Gender-Number operates as for B and C, and Person-Number as for Type A, with both affixed to the Verb, and in that order; a sample paradigm is presented in (2) above. In compound tenses (Conditional, Past Conditional, Pluperfect) an Auxiliary is added, also bearing Gender-Number agreement; Person-Number then follows Gender-Number on the Auxiliary, and, unlike Gender-Number, is only specified once in the sentence. In the Conditional, the Auxiliary is orthographically and phonologically affixed to the verb; elsewhere it regularly precedes the verb as an autonomous word:

(7) PAST:

przeczytałam dokumenty

'I (F) read the documents'

(8) a. CONDITIONAL:

przeczytałabym dokumenty

'I (F) would read the documents'

b. PAST CONDITIONAL:

byłabym przeczytała dokumenty

'I (F) would have read the documents'

c. PLUPERFECT:

byłam przeczytała dokumenty

'I (F) had read the documents'

In addition to the above types A B C D E, which are found in other Slavic languages as well, Polish allows still another type, the inverse of the unmarked forms of (8a-c): the Person-Number affix in Type E agreement can occur also on the verb (Past Conditional

and Pluperfect), or separately to form a word when affixed to the Auxiliary form of 'be' (Conditional):

- (9) a. **CONDITIONAL** (cf. (8a):
ja bym przeczytała dokumenty
 'I (F) would read the documents'
- b. **PAST CONDITIONAL** (cf. 8b):
przeczytałabym była dokumenty
 'I (F) would have read the documents'
- c. **PLUPERFECT** (cf. 8c):
przeczytałam była dokumenty
 'I (F) had read the documents'

Polish is also unique—with the marginal exception of Czech—in that the Person-Number affix may even occur as a suffix attached to another constituent (in the Past, Conditional, Past Conditional and Pluperfect). This usage is regular with complementizers like *aby* 'in order to/that' and the Conditional *gdyby* 'if'—see (14) and (15) below—and is standard-colloquial in other instances:

- (10) a. *ale przyjechaliśmy do domu o piątej dzisiaj*
 ≅ b. *aleśmy przyjechali do domu o piątej dzisiaj*
 'But we came home at five today'
- c. *dzisiajśmy przyjechali do domu o piątej*
 'Today we came home at five'
- (11) a. *(ty) kupiłas książkę?*
 'did you buy the book?'
- b. *tys kupiła książkę?*
 you bought book
- (12) a. *(wy) byliscie w mieście?*
 'were you in town?'
- b. *wyscie byli w mieście?*
 you were in town'
- (13) a. *gdzie byliscie?*
 'where were you?'
- b. *gdziescie byli?*
 where were

- (14) *gdybyśmy dziś nie skończyli, tobyśmy jutro skończyli*
 'If we had not finished today, we would have finished tomorrow'

Brooks 1975:264)

- (15) *abyś kupić książkę*
 'In order that you might buy the book'

Czech is apparently the only other Slavic language to possess a comparably versatile suffix. But in Czech the host constituent can only be the conditional complementizer *aby* or *kdyby* (corresponding to the Polish *aby*, *gdyby* illustrated in (14) and (15) above).⁷ The greater versatility of the affix in Polish is still controlled by fairly rigorous constraints. The Person-Number affix can only attach to constituents preceding the verb:

- (16) a. *ale kupiliśmy książki*
 'but we bought the books'
- b. **ale kupili myśmy książki*
 but bought we the books
- c. **ale kupili w mieścieśmy książki*
 but bought in the town-we the books
- d. **ale kupili książkiśmy*
 but bought the books-we
- e. **ale kupili dzisiajśmy książki*
 but bought today-we the books

But not all preverbal constituents can carry the affix:

- (17) a. **książkiśmy kupili?*
 the books-we bought?
- b. ?*do domuśmy wrócili?*
 home-we returned?
- c. ?*dokądście wrócili?*
 whither-you returned?
- d. ?*do naszego domuście wrócili*
 to our house-you returned
- e. **dośmy naszego domu wrócili*
 to-we our house returned

And there are restrictions which prohibit an alternative affix placement which would leave a bare *by*:

(18) a. *ale czytabyś*

≅ b. *ale byś czytała*
'but you would read'

c. **aleś by czytała*

d. **ale by czytałaś*

But

e. *on by czytał*
'he would read'

is grammatical, for reasons concerning the enclitic status of *by* and the permissible ordering of enclitics (see below).

This phenomenon of the alternative affix-location recurs, though under more severe restrictions, in the Polish COPULA *być* 'be'. Once again, the alternative position is towards the beginning of the sentence, and we find the same restrictions on the host constituent. But with *być* additional complications arise. There are two results of the relocation of the agreement suffix. In one pattern the subject pronoun is deleted (or does not surface), and the root *jest-* 'be (Present)' is left bare; this usage is now archaic-poetic, and is restricted to exclamatory sentences in the present and past tense:

(19) a. *Oh, jam Peruwianka jest (ja jestem)*
I[+1 Person Sing.] a Peruvian woman am
(Song, W. Budzyński)

b. *tyś jest łobuz! (ty jesteś)*
you[+2 Person Sing.] are a scallywag

c. *jam jest głupi! (ja jestem)*
I[+1 Person Sing.] am stupid

Once again, by definition, this relocation does not apply to 3rd Person structures, which do not have any Person-Number affix to detach; more surprisingly, the 1st-2nd Plural affixes cannot leave a bare *jest*. The only apparent explanation for this restriction is that in the 1st-2nd Person Singular affixes can be reduced to a single phoneme, but I do not see why this should be relevant only in the case of *być*:

- (19) d. *myśmy jest mądrzy (my jesteśmy)
we[+1 Person Pl.] are wise
- e. *wyście jest nieszczęśliwi (wy jesteście)
you[+2 Person Pl.] are unfortunate

The second pattern deletes the *jest* in a manner reminiscent of present-tense copula deletion in East Slavic languages (Russian, Ukrainian, Belorussian). This usage is standard-colloquial:

- (20) a. aleś ty łajdak (ale ty jesteś łajdak)
but[+2 Person Sing.] you rascal 'but you are a rascal'
- b. alem ja głupi (ale ja jestem głupi) (cf. 19c)
but[+1 Person Sing.] I stupid 'but I am stupid'
- c. aleście wy głupi (ale wy jesteście głupi)
but[+2 Person Pl.]you stupid 'but you are stupid'
- d. teraz toście mądrzy (teraz to jesteście mądrzy)
now[Particle +2 Person Pl.] wise 'now you are wise'

This kind of affix relocation also occurs in the Past tense:

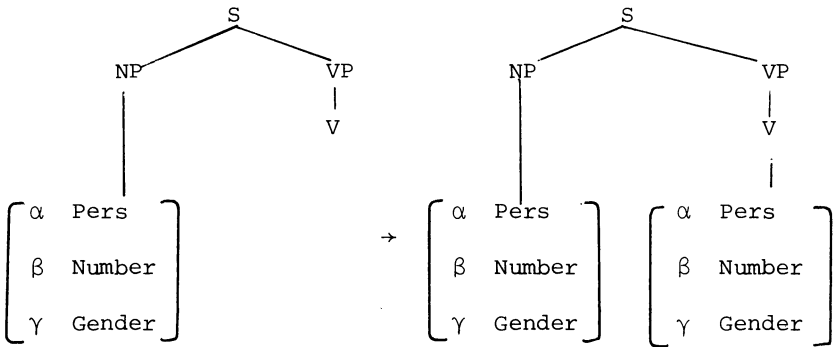
- (21) aleś ty był łajdak (cf. 20a)
but[2 Sing.] you were rascal 'but you were a rascal'

and is found in the locative, non-copulative use of *być*:

- (22) alem ja był w ogrodzie (ale ja byłem w ogrodzie)
but[+1 Sing.] I was in the garden 'but I was in the garden'

So far I have deliberately tried to avoid referring to "affix-movement" or "affix-fronting" in order not to prejudge the issue. But the question of how the "alternative suffix position" is to be handled by the grammar poses certain intriguing problems for the standard transformational analysis, with its conventional method of handling "alternative positions" by means of movement rules.

The standard analysis of English verbal agreement has Person and Number (and Sex) entered as features on the subject Noun Phrase. These features are subsequently copied onto the Verb by a late copying-addition rule, which provides the information necessary for Person-Number agreement.



The Person (and Gender) marker on the subject Noun Phrase is overt if this NP is a Pronominal in surface structure; otherwise it is subsequently deleted along with other unused information, by automatic "house-keeping rules." Number (and, in Slavic, Gender as well) are retained on the subject NP as inputs to the morphophonological component, the block of rules which follows the grammatical-syntactic rules proper and which handles, *inter alia*, the forms of the Noun suffixes.

In Polish the Gender-Number marker is indissolubly attached to the Verb. The Person-Number marker, on the other hand, is mobile, and can appear in the post-Auxiliary, post-Verb or "fronted" positions. In each of its permissible positions the affix exhibits:

- a. identity of co-occurrence restrictions as to subject
- b. identity of meaning, stylistic effects apart
- c. substantial similarity of form

These factors are consistent with two kinds of grammatical analysis: a movement rule and a copying-deletion routine. The typical derivation of multi-positional constituents in standard transformational-generative grammars is by means of a movement rule: a base form is identified, and then moved to specific alternative locations in the sentence. The alternative is to copy the necessary information, by an extension of the copying rule (23), onto appropriate host constituents, and then to use housekeeping rules to delete the occurrences of the information which do not have overt phonological forms.

Current linguistic theory is uncertain about the epistemological and methodological status of these two strategies; there are some instances—like certain trace-leaving rules—where they may indeed be merely terminological variants. The position I wish

to argue here is that the data of Polish "ubiquitous affixes" described above support an analysis in terms of a movement rule. This question, however, is intimately linked to the linguistic status and nature of the affixes themselves. Movement rules are characteristically syntactic; if it turns out that the mobile affixes are primarily a syntactic phenomenon, then the movement rule would gain in credibility as opposed to the copying analysis.

One aspect of this problem is explicable in fairly simple terms. The post-Verb or post-Auxiliary position of the affix can be handled both synchronically and diachronically in terms of parallel structures and analogy. In the Past and Conditional the unmarked position for the affix is post-Verbal, as in (7) and (8a); in the compound tenses it is post-Auxiliary, as shown in (8b-c). The alternative forms (9a-c) are fully productive and morphologically regular. There is no clear evidence here in favour of a movement rule over a copying rule, or *vice versa*. Copies of the subject NP's features are needed in any case, two copies of Gender-Number (in the compound tenses) and one of Person-Number. One could either copy Person-Number twice and delete the superfluous occurrence, or move the single copy as required between the Verb and Auxiliary. It is only further external evidence which suggests a preference for one of these alternatives.

This external evidence depends on the "fronted position" of the affix. The affixes are unstressable, and thus fulfill one of the prime criteria for clitic-hood (Zwicky 1977). In addition, they satisfy the main conditions for enclitics by occurring—broadly speaking—after the first accented constituent of the sentence (Browne 1974a-b). They also obey the general principle of ordering among clitics: our "relocated" affixes follow emphatic and contrastive particles like *to* and *ż(e)*, the Conditional enclitic *by*, and all enclitic pronouns.⁸

- (24) a. *ależeś (ale-ż-e⁵-ś) to⁹ spiewał pięknie*
 but+Contrastive enclitic+fill vowel + 2 sing. it sang
 beautifully
 'but you sang it beautifully'
- b. *gdzieżeście (gdzie-ż-e⁵ -ście) go kupili?*
 where+Contrastive enclitic+fill vowel +2 Pl. 3 Non-F
 enclitic pronoun bought
 'where did you buy it?'

- (24) c. *zdało mi się,¹⁰ że ... (zdać się 'seem)*
it seemed to me reflexive enclitic that...
'it seemed to me that...'
- d. *teraz tośmy (to-śmy)* *go* *mu* *posłali*
now Contrastive enclitic 3 Non-F 3 Non-F sent
+ 2 Sing. enclitic enclitic
 pronoun pronoun
 Acc. Dat.
- 'now we have sent it to him'

Note that the same order of Agreement-affix and enclitic pronouns is preserved in Verb-initial sentences where the agreement-affix occupies its "regular" position:

- (24) e. *posłaliśmy go mu* 'we sent it to him'

Orthographical conventions—as in (24d)—should not obscure the fact that from the phonological point of view we are dealing with a single word. See also:

- (24) f. *dawno żeśmy (że-śmy)* *nie widzieli* *Jana*
long Contrastive enclitic not seen Jan
+ 1 Pl.
'we haven't seen Jan for a long time'

The ordering of these clitics is clearly a syntactic matter. We find further syntactic factors, and some unpredictable lexical exceptions, in the restrictions on the possible host constituents for the relocated affixes. Affixes may be attached to complementizers (*że* 'that', *aby* 'in order to/that', *gdyby* 'if', the particles *czy*'?' and *by* (Conditional), the conjunctions (*ale* 'but', *albo* 'or', *jeżeli* 'if'), 1st-2nd Person subject pronouns (*ja* 'I', *ty* 'thou', *my* 'we', *wy* 'you'), other pronouns (*kto* 'who', *co* 'what'), enclitic particles (*to*, *że*), and adverbs (*dawno* 'long', *dzisiaj* 'today', *gdzie* 'where', *jeszcze* 'yet', *już* 'already', *kiedy* 'when', *nazajutrz* 'the next/tomorrow morning', *nieraz* 'quite often', *teraz* 'now,' *trochę* 'a little'). They may also be attached to nouns, provided that the noun is the last constituent of a prepositional phrase functioning as an adverbial:

- (25) *w kawiarniśmy jedli lody, albo pili kawę*
(Schenker 1973)
'in the coffee house we ate ices or drank coffee'

Affixes may be attached to subject, object, or indirect object nouns, but not to some lexical items

which categorically should allow affixation, like *i* 'and' and *no* 'well' (nonadverbial).

On the other hand, the acceptability of hosts is also partly conditioned by phonological factors. As a rule, hosts ending in a vowel are more frequent, more acceptable and less colloquial with a relocated affix; hosts ending in a consonant require a fill-vowel, and are less common and more colloquial:

- (26) a. *coście* (*co-ście*) *powiedzieli?*
'what did you say?'
- b. *jeszczem* (*jeszcze-m*) *nic nie jadł*
yet+ 1 Sing. nothing not eaten
'I haven't eaten anything yet'

Compare:

- (27) a. *jużes* (*już-e-ś*) *zjadł jabłka*
already+fill vowel+2 Sing. eaten apples
'you have already eaten the apples'
- b. *nazajutrzem* (*nazajutrz-e-m*) *wyjechał*
the morning after +fill vowel+ 1 Sing. left
'I left the morning after'

And of course the whole question of the definition of "enclitic position" has now become one of the archetypal examples of the meeting point of syntactic and phonological criteria.

The problems of the Polish agreement enclitics, however, are not restricted to syntax and phonology. In the older models of generative grammar, it was difficult enough to handle clitics, which had valid claims on both syntactic and phonological analyses. But with the re-emergence of a level of morphology, clitics are involved in a three-way division, with the borderline cases being of particular interest. Polish agreement clitics turn out to have a special relevance to generative morphology, since the phenomenon of agreement in Polish is linked not only to affix-level entities, but also to the general question of Person-Number specification at sentence level. There is a general rule in Polish which states the following approximate generalization:

- (28) There is normally only one specification of Person-Number per sentence. If Person-Number is specified on the verb, subject pronouns are deleted (or do not surface); conversely, if the verb cannot carry Person-Number specifica-

tions, the pronoun must remain. Any violation of this generalization is classed as emphatic.

We therefore have a clear connection between the grammar of the word (pronouns) and the grammar of subword entities, which a grammar must be able to handle economically and in an essentially homogeneous fashion. Our analysis of Polish agreement enclitics provides us with one set of examples (19)-(20), which require an extension of this general principle of one Person-Number specification per sentence. These sentences are not emphatic in the same way that *ja jestem* 'I am' is; they are exclamatory rather than emphatic. A second set of counter-examples occurs briefly in footnote 10 and will be repeated below. Here the subject pronoun must be present when CLITIC PROMOTION operates, in order for the promoted clitic to have a suitable host. This structure is not emphatic either:

- (29) a. *(ja) idę się kąpać* 'I'm going to bathe'
 I go+1 Sing. self enclitic bathe
- b. *ja się idę kąpać*
 c. **się idę kąpać*

These examples illustrate the complex way in which Polish agreement enclitics are bound up with questions of morphophonology, morphology and syntax.¹¹

We may now return to the relative merits of movement and copying rules in the description of Polish agreement enclitics. Our data do not provide sufficient evidence to decide between a conventional movement rule, and a movement rule which leaves a trace—which is tantamount to a restricted copying rule. On the other hand, there is some evidence to suggest that we are not dealing with the broader type of copying suggested by Kayne (1975), who proposes that a clitic should be associated with each NP just in case it is required; unrequired clitics are subsequently deleted by housekeeping rules. We could easily adapt this method to Polish agreement. But superfluous copies of information are poorly supported by Polish data. Not only are the hosts more restricted than in Kayne's data, but the full copying routine, when applied to Polish, would place great strain on the housekeeping rules themselves. Until more is known about the linguistic justification of such rules, it seems wiser to avoid this overly powerful device and follow Zwicky (1977:22):

Standard assumptions about these alternatives and variants for locating clitics are that they involve either distinct rules of clitic movement (move clitics to such-and-such a position under certain conditions, otherwise to another position) or else movement rules applying in sequence (first move clitics to such-and-such a position, then move some of them to another position).

It is also worth noting that clitic movement rules like those required for Polish will not affect the Theme-Rheme structure of the sentence.

There is, however, more positive evidence for a movement rule. One general argument in favour of the broad-copying stratagem is that base forms are not always evident. But in the case of Polish agreement there is little doubt. The post-verb or post-auxiliary position is the least restricted environment in terms of host constituents; the affixes are morphologically productive and formally predictable, and exhibit a similarity of co-occurrence and meaning in all their permissible positions. We can, I think, go even further: the "copy" of features from the subject NP, so to speak, occurs on the auxiliary if it is present; otherwise it occurs on the verb. The Conditional (8a) (9a) is an exception precisely because the *by* is itself an ordered enclitic (18) and because Polish possesses a general rule of "one occurrence of Person-Number per sentence, *ceteris paribus*." The alternative positions on verb or auxiliary are therefore handled by optional movement rules: the fronted affix is handled by a conditioned movement rule. The form of these conditions is difficult to establish from the Polish data. The fact that both regular verbs and *być* 'be' are involved in affix-movement points to a Surface Structure Constraint (Perlmutter 1971); alternatively, the movement rule would have to be sensitized to some higher node dominating either V or *być* at the appropriate point in the derivation. (Or maybe *być* is a Main Verb after all. We must leave this question unanswered, since this paper is concerned only with a restricted problem on the boundaries of syntax, morphology, morphophonology and phonology.)

On the other hand, there is no doubt that Polish agreement enclitics belong on the syntactic, rather than the phonological, side of enclisis rules. We are not dealing here with enclitics governed principally by phonological sandhi, like the French *le* *home* > *l'homme*, nor with the freer type of syntactic

enclisis where the enclitics are moved to the end of the NP, as in *the lady in the hat's husband* (*the lady's husband*). The Polish data, which show a close relationship between word-level units and affixes in the Person-Number structure of the sentence, also interact with other rules, such as CONJUNCTION REDUCTION (in (25), for instance, one suffix serves both conjoined verbs) and CLITIC PROMOTION (as in (29)). The Polish data also support Zwicky's remark that

It must be possible for syntactic rules to pick our specific clitics or classes of them, which is to say that clitics must be distinguished in some way from genuine affixes and independent words at the point in derivations at which clitic movement transformation apply (and the rules moving these clitics would be "syntactic" ... (op. cit., pp. 22-23)

Nevertheless, Polish enclitics are not as exotic as some of Zwicky's examples (particularly in section 4.2), where "certain syntactic and morphological rules can thus be seen to apply after clitic placement" (p. 17). In Polish, the clitic-placement rules are late-syntactic, and must certainly follow late word-reordering rules of primarily stylistic function. The clitic placement rules move feature bundles of Person-Number specifications, and the morphophonological rules then assign them their proper phonological shape.

The Polish "ubiquitous affixes" have been shown to be a syntactic phenomenon, best describable in terms of a movement rule rather than a copying rule. The Polish data provide no support for the powerful device of multiple copying and deletion by "house-keeping rules." A Surface Structure Constraint appears to be needed to do the work of the generalization (28), which applies not only to Polish but to other Slavic languages (other than Russian and Bulgarian). This paper has examined a phenomenon that crosses the boundaries between syntax, phonology and morphology. Such boundary cases have an important role to play in typology. In (29) we saw how Polish *się*, an enclitic pronoun, interacts with Person-Number specification; the cognate Russian *-sja* is a bound form, traditionally termed a suffix, though it is to the right of agreement morphemes, and the alternation *-sja/-s'* is determined by the phonological shape of these inflectional affixes. An even more eloquent example concerns definiteness specification

in Noun Phrases. Bulgarian shares the Balkan areal postposed definite article, a bound form (affix?) attached to the first element of the Noun Phrase: *gradə̀t* 'the city', but *golemi_jat xubav grad* 'the big beautiful city'. (See Scatton, in this volume, for details on these forms.) In Swedish, on the other hand, the article is a bound form when attached to a noun, but a word as well when in Adjective-Noun collocations: *huset* 'the house', *det vacra huset* 'the big house'. While some North Russian dialects have a postposed article similar to Bulgarian, Standard Russian, like Polish, lacks an article. Definiteness in Russian is marked either by "overdefinitization" (Sussex 1976) or by alterations in word order reflecting the Theme-Rheme structure of the sentence. Any grammar which is forced to handle these examples in terms of self-insulated "levels" or "components" is clearly going to miss some essential generalizations.

NOTES

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¹See in particular the discussions of grammatical agreement in Comrie (1975); Corbett (1976a, 1976b, 1978); Crockett (1976); Chvany (1975: Chapter 4). For related problems see the papers by Rothstein and by Scatton, in this volume.

²The implications of clitics for syntactic theory (their underlying representations, derivation and surface ordering) are discussed by Perlmutter (1971), Roldán (1974), Kayne (1975), Hetzron (1977), Zwicky (1977). Specifically Slavic data are analyzed by Decaux (1955), Browne (1974a, 1974b), George and Toman (1976), and the paper by Berent in this volume. For problems of clitics in a theory of word formation included in a "lexicalist" approach to syntax, see Aronoff (1976); Brecht (1977) and Chvany (1977) for Russian surface words with clitics as bound forms. Also relevant is Scatton's discussion of Bulgarian articles, in this volume.

³This term is used by Schenker (1973) and Brooks (1975) to refer broadly to non-infant masculine animates.

⁴The "thematic vowel" specifies the conjugation class of the verb.

⁵The /e/ is the so-called "fill vowel," which has many other functions in Polish morphophonology and phonology.

⁶The neuter forms of this verb are not found in practice, but are given here for the sake of illustration within the paradigm.

⁷The cliticization of *bych* to the complementizers in Czech is illustrated in the examples below:

(i) *abych nevěděl* 'so that I should not know'

(ii) *kdybych byl měl čas, byl bych šel a tebou*

'if I had had the time, I would have gone with you'

In (ii) the second clause has an instance of free *bych*.

⁸Polish is very similar to French in its inventory and use of clitic and nonclitic pronouns.

⁹*To* is a curious word. As the Neuter Singular Non-Accusative of *ten* 'this', it is often used as a subject or object pronoun in place of the regular 3rd Person pronoun. But as a contrastive particle it is clearly enclitic.

¹⁰The Polish reflexive enclitic *się* is not unique among Polish clitics in undergoing CLITIC PROMOTION: (*ja*) *idę się kąpać* 'I'm going bathing' [lit: I go self to-bathe] has the alternative form *ja się idę kąpać*. Polish *się* corresponds to the Russian bound clitic or suffix *-sja*, on which see Chvany (1977) and references therein.

¹¹It is easy to cite other examples of linguistic phenomena which appear to cross the boundary between syntax and morphology. Slavic has a rich store of aspectival prefixes which often have the same effect as verbs, like the Inchoative *za-* in Russian (*plakat* 'weep', *zaplakat* 'burst out weeping', *načat*/'*načínat*' *plakat* 'begin (Perf/Imperf) to weep').

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ON THE SHAPE OF THE BULGARIAN
DEFINITE ARTICLE*

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This paper considers the way in which the orthographic reform of 1945 affected the views of Bulgarian linguists towards one of the most important morpho-syntactic units of the language, the definite article. Within this context, two alternative descriptions of the form of the definite article are presented and evaluated. The arguments I use are primarily phonological, but the decisions based on phonological evidence also are motivated by the syntax and inflectional morphology of the language.

The basic intent of the 1945 reform was to eliminate a number of vestigial "historically" or "etymologically" motivated spellings and thereby make the Bulgarian spelling system, as a whole, "more suitable, more economical and easier to master" (Stojanov 1977:130, my translation). In connection with his discussion of the important Bulgarian phonological alternation of /a/ with /e/ (the *jatovijat preglas*), Van Campen (1962) has observed that the reform of 1945 was in fact retrograde: by eliminating *† jat*, it destroyed what had been a fairly sophisticated treatment of the *jatovijat preglas* and, contrary to expectations, led to spelling difficulties.

It is striking that all descriptions of the form of the Bulgarian article have followed one or the other of two general approaches. If we confine our attention to works done since 1945, one of the descriptions can be called, with some justification, the standard treatment (ST), for, as far as I am aware, it is found in every discussion of the article except those in Scatton 1975 and 1978. Limited to the singular and ignoring a number of complicating details for the sake of discussion, a structural version of the ST would take the following form.

The Bulgarian noun is inflected for Number, singular vs. plural. In the singular it is also inflected for Grammatical Gender, masculine vs. feminine vs. neuter. According to the ST, the following gender markers are observed in the singular:

- (1) masculine {-∅}
feminine {-a}
neuter {-o}¹

So for example:

- (2) masculine singular {most- \emptyset } : /most/ 'bridge'
 feminine singular {knig-a} : /kniga/ 'book'
 neuter singular {sel-o} : /selo/ 'village'

The definite article is postposed to the first fully stressed nominal constituent of the noun phrase (either a noun, adjective or numeral). With nouns, it takes two canonic shapes, VC and CV. The first is specifically {- \emptyset t}, it is postposed to masculine singular nouns in {- \emptyset }:

- (3) masc sing {most- \emptyset } : /most/ 'bridge'
 {most- \emptyset - \emptyset t} : /most \emptyset t/ 'the bridge'

With feminine and neuter forms, however, the article takes the shape CV, where C is {t} and V reflects the gender marker of the noun:

- (4) fem sing {knig-a} : /kniga/ 'book'
 {knig-a-ta} : /knigata/ 'the book'
 neut sing {sel-o} : /selo/ 'village'
 {sel-o-to} : /seloto/ 'the village'

The second, nonstandard treatment (NT) was proposed first (since 1945) within a generative analysis of Bulgarian phonology (Scatton 1975). The generative treatment was reformulated within a structural framework in Scatton 1978, and in this form it can readily be compared to the description of the ST given above.

The NT claims that the canonic shape of the definite article is everywhere CV, where the consonant is {t} and the vowel reflects the number and gender marker of the noun to which the article is postposed. In the case of feminine and neuter nouns, this treatment in no way differs from the ST: the relevant forms are exactly like those given in (4). The masculine singular form, however, is substantially different; and both its shape and phonological behavior are closely connected with the characteristic *vowel-zero alternation* in Bulgarian.

In Bulgarian there are two vowels which commonly alternate with zero, /ə/ and /e/. Since there are many instances of both vowels which do *not* alternate in this way, it is necessary to distinguish somehow the morphophonemic representations of those that do alternate from those that do not. For the purposes of this paper, it will suffice to accomplish this by

associating with alternating vowels some ad hoc diacritic, represented here by an asterisk. The regular masculine singular marker, further, is a vowel (just like other gender-number markers); it, however, is {-*ə}, one of the two vowels that are subject to the vowel-zero alternation. Given the appropriate morphophonemic representations, the rules that introduce the alternation take the following shape:

- (5) {*ə} is /ə/ and {*e} is /e/ when followed by a syllable containing {*ə} or {*e}; otherwise {*ə} and {*e} are deleted.

Compare now the following examples, which illustrate the application of these rules to singular and plural masculine nouns:

- (6) masc sing {teat*ər-*ə} : /teatər/ 'theater'
 masc pl {teat*ər-i} : /teatri/ 'theaters'
 masc sing {glup-*ec-*ə} : /glupec/ 'fool'
 masc pl {glup-*ec-i} : /glupci/ 'fools'

Now it is possible to treat the masculine singular form of the definite article in exactly the same way as the feminine and neuter. Its shape too is {-tV}, where the vowel reflects the gender-number marker {*ə}. As a consequence of the addition of the article containing {*ə}, the masculine singular marker {*ə} is in a position to be retained according to (5): it is followed by a syllable containing another alternating vowel. On the other hand, the same rule predicts the disappearance of the word-final vowel. Consider the following examples which illustrate this:

- (7) masc sing {most-*ə} : /most 'bridge'
 {most-*ə-t*ə} : /mostət/ 'the
 bridge'
 masc sing {teat *ər-*ə} : /teatər/ 'theater'
 {teat *ər-*ə-t*ə} : /teatərət/ 'the
 theater'²
 fem sing {knig-a-ta} : /knigata/ 'the book'
 neut sing {sel-o-to} : /seloto/ 'the vil-
 lage'

* * *

What can be said about the relative merits of these two descriptions? It seems to me that regardless of whether one works in structural or generative theory, the NT is preferable for several compelling reasons. First, the NT posits a single, unitary canonic shape for all forms of the definite article,

namely {-t-}. Second, this generalization (and simplification with respect to the ST) is accomplished in a non-ad hoc fashion: the NT takes advantage of rules motivated by independent facts of vowel-zero alternation, it demonstrates that the masculine singular marker and the vowel of the masculine singular definite article are special cases of this alternation, and at the same time it provides additional support for the particular treatment proposed for the vowel-zero alternation. Third, the NT shows that in principle the definite article behaves in a way parallel to that of other Bulgarian adnominal modifiers (adjectives and pronouns): all are inflected with respect to the number and gender of their head nouns by the same rules of concord. In short, the NT makes a number of interesting claims about the phonological, morphological and syntactic aspects of the article in relationship to other phenomena on these levels.

Arguments of this sort notwithstanding, the only previously published comparison of the two competing solutions raises, albeit very briefly, an objection to the NT, which will serve to bring us to the main point of this paper. Referring to the form of the masculine singular definite article, Elson (1976:279) claims that "[s]ince native scholars consistently assign the vowel in question [i.e., the /ə/ in /mostət/ for example; EAS] to the article, this alternative [the NT; EAS] loses much of its appeal." Presumably this means that unanimity among native scholars tells us something about their native intuitions and therefore provides independent, indirect support for the standard treatment. Unanimity in this case is only apparent, however: it actually goes back only so far as 1945. Prior to 1945, both views were widely held; and the disappearance of the NT appears to be closely tied to one of the specific reforms that took place in this year and to the fact that native Bulgarian linguists have perhaps been guided more by orthographic representations than by their naive linguistic intuitions.

For purely historical reasons, in the pre-1945 orthographic system, all Bulgarian words terminating phonetically in a consonant were actually *spelled* with an additional final symbol, one or the other of the two 'jers', ъ or ѝ. Accordingly, the masculine examples which we have been considering were written:

- | | |
|-----------|---------------|
| (8) мостъ | 'bridge' |
| мостътъ | 'the bridge' |
| театъръ | 'theater' |
| театърътъ | 'the theater' |

By comparing these masculine forms to one another and to feminine and neuter singular nouns (which were spelled in essentially the same way as now, книга 'book, село 'village'), it is possible to recognize -ъ as the marker of the masculine singular and -ТЬ as the masculine singular definite article. Further, it is possible to formulate the notion of a rule which vocalizes word-internal ъ as /ə/, but disregards it in word-final position: wherever it was written word-internally ъ was in fact pronounced as /ə/, masc sing пътъ /pət/ 'road'.

As long ago as 1848, in one of the earliest Bulgarian grammars, Ivan Bogorov's *Prvična bēlgarska slovnica*, all of the components of this solution, which belong to the NT, can be identified: the concept of a vowel that is pronounced in some environments but not in others, the identification of this vowel with the marker of the masculine singular noun, and the replication of this vowel as the *final* segment of the masculine singular definite article. Not only did this view persist until 1945 in the works of individual linguists (e.g., Mladenov and Vasilev 1939), but it also figured prominently in persistent orthographic disputes, always closely tied to political issues. For example in 1921, as part of the presumably progressive orthographic reform introduced by the new Agrarian government, final, nonvocalized jers were discarded. In 1923, when the Agrarian government was replaced, another reform put them back again. According to one of the protocols of the latter reform (quoted after Kalkandžiev 1938:87; my translation): "Writing word-final jers in masculine singular nouns is in fact an orthographic tradition, but it is, nevertheless, phonetically justified since they are vocalized when the article is added."

Once again (and probably once and for all) word-final jers were eliminated in 1945, again accompanying a change of government. As a consequence, the examples in (8) came to be spelled as they currently are:

- (9) МОСТ
МОСТЪТ
ТЕАТЪР
ТЕАТЪРЪТ

Considering only these forms, the most obvious segmentation of those with the article is: МОСТ-ЪТ, ТЕАТЪР-ЪТ. This is the standard treatment; and no native Bulgarian linguist since 1945 has held any view other than this.

To summarize, if the views of native grammarians can be given any special consideration with regard to the question of which of the two descriptions of the definite article is correct, then there is certainly evidence in favor of the nonstandard treatment as well as the standard treatment. The fact that both views coexisted prior to 1945 but that one of them totally disappeared after this date merely emphasizes the extent to which native Bulgarian linguists have always based their study of Bulgarian phonology and morphology on orthographic representations. Under these circumstances, the reforms of 1945 put the nonstandard description beyond their reach. In general, to the extent that Bulgarian orthography is more phonetic or phonemic, as opposed to morphophonemic or morphological, the more likely it is to impede their understanding of morphophonemic alternations and to obscure their view of the underlying, canonic shapes of lexical and morphological items and of their phonological and syntactic behavior.

This analysis of the definite article may also be preferred for morphological and syntactic reasons. In the first place, it allows for a uniform treatment of agreement phenomena for all noun classes. Morphemic analysis assigns the meaning "definite" to *t-* while the affixes illustrated in (1)-(4) carry the gender-number features. As a bound form which "spells out" a bundle of features, the article is very similar to an inflectional ending. However, the fact that it attaches to the right of the noun's gender-number inflection and redundantly carries the same inflection suggests another source. Further, the mobility of the article within a Noun Phrase suggests that it is a clitic rather than an affix: in a noun-adjective collocation, the article attaches to the first major constituent of the Noun Phrase:³

- | | | |
|----------------------------|---|---|
| (10) /mostət/ 'the bridge' | : | /novijət most/ 'the
new bridge' |
| /teatərət/ 'the theater' | : | /starijət teatər/ 'the
old theater' |
| /knigata/ 'the book' | : | /starata xubava kniga/
'the old beautiful
book' |
| /seloto/ 'the village' | : | /malkoto xubavo selo/
'the small beautiful
village' |

The stem *t-* must be listed in the lexicon of Bulgarian as a member of two sets of "grammatical" words, the pronominal series beginning with *t-*, of which the

article is the least marked member, and the set of Bulgarian enclitics, with which the article also shares certain properties. The article acquires gender-number features via agreement with the head noun of its Noun Phrase. Its location in the Noun Phrase is determined by rules that govern clitic placement in Bulgarian and other Slavic languages.⁴

NOTES

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¹Among the details ignored here are masculine personal nouns which may select the singular markers {-a} or {-o}, feminine nouns which select singular {-ø}, the alternation of /o/ and /e/ in the neuter singular marker, and stress. These are described in Scatton 1978, Chapter IV.

²Masculine definite forms terminating in /t/ are in free variation with forms without /t/, e.g. /mostə/, /teatərə/. Forms of this sort are introduced by the application of a highly constrained, optional rule which deletes /t/ in this particular place: most-*ə-t*ə → /mostət/ → /mostə/.

³Notice that 'major constituent' excludes Adverbs: /mnogo starijət teatər/ 'the very old theater'.

⁴For discussion of clitics and other phenomena that cross the boundaries between phonology, morphology and syntax, see Sussex, 1979.

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NOMINALIZATIONS IN RUSSIAN: LEXICAL NOUN PHRASES OR TRANSFORMED SENTENCES?*

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The relationship between verbal nouns and sentences with a finite verb has often been treated within the framework of traditional grammar. One may compare the terms 'subjective genitive' (e.g. *the arrival of the train*) and 'objective genitive' (e.g. *the destruction of Carthage*), which point to an implied relation between the genitive of *the train* and the subject of the sentence *the train arrives*, between the genitive of *Carthage* and the direct object of the sentence *(someone) destroys Carthage*.

One of the aims of transformation-generative grammar is to systematize and make explicit this relationship. A description of this kind explains two important parts of syntax in their mutual interconnection: the structure of the simple sentence and the structure of the noun phrase. In the development of the transformational description of other languages, nominalizations (albeit in a somewhat wider sense than here) have played an important role: the first more or less comprehensive description of English within this theory is Lees (1960); see now also Chomsky (1970).

The verbal noun, and more particularly the action nominal, presents various problems, e.g. morphological problems (the relation between productive suffixes like *-nie* and nonproductive suffixes like *-ba*), semantic problems (the action nominal per se, as description of an event, as contrasted with concrete verbal nouns such as *izobretenie* in the sense of a concrete invention). In the present article, we are concerned however with the syntax of the verbal noun, especially with the internal structure of noun phrases containing a verbal noun. For a discussion of the syntactic functions of such noun phrases within the sentence as a whole, see Adamec (1971; 1973).

In the transition from sentence to verbal noun, several verbal categories are totally or partially lost. The Russian verbal noun cannot differentiate tense: corresponding to the verb forms *ja priezžaju*, *ja priezžal*, *ja budu priezžat'* there is only the one verbal noun *moj priezd* (cf. Zimmermann 1972). There are verbal nouns that can reflect the morphology of the aspect distinction, e.g. *rassmotrenie* and *rassmatrivanie* 'examination, scrutiny', cf. *rassmotret'* (perfective) and *rassmatrivat'*

(imperfective). However, the morphological distinction only exceptionally corresponds to the semantic distinction of verbal aspect. In the example cited, the perfective verbal noun refers rather to an abstract action (e.g. *rassmotrenie del v sude* 'examination of the documents in court'), where the imperfective verbal noun refers to a concrete action (e.g. *rassmatrivanie gravjur* 'examination of the etchings'). Moreover, the distinction between the two forms is by no means systematic (Xoxlačeva 1969, 51). The behavior of verbal nouns is similar with regard to negation with *ne-*. There are negative forms like *nesobljudenie norm ruskogo jazyka* 'nonobservance of the norms of the Russian language', but one cannot always create new forms of this type: **nečtenie ètoj knigi*.

The category of voice is somewhat more complicated with verbal nouns, and we return below to the difference between active and passive. In any case, there is no morphological voice distinction: *pročitali knigu* '(someone) has read the book', *kniga pročitana* 'the book has been read', but only *čtenie knigi* 'the reading of the book'. In Russian, the difference between active and reflexive is also neutralized in the verbal noun: *otkryvajut dver'* '(someone) opens the door', *dver' otkryvaetsja*, but only: *otkrytie dveri* 'the opening of the door'. (Under 'reflexive voice' we include the reflexive form in *-sja*, but not verbs with the object *sebjä* as a full pronoun.) Not all Slavic languages have this neutralization consistently. In Czech, for instance, one distinguishes between *učení cizím jazykům* 'the teaching of foreign languages' and *učení se cizím jazykům* 'the learning of foreign languages'. For further comparison between verbal nouns in Russian and other Slavic languages, see Růžička (1963), Revzin (1973), and Comrie (1976).

In this way we see that many typically verbal categories—aspect, tense, voice, negation—have no systematic expression in the verbal noun. The majority of verbal nouns do, however, have objects of the same form as the corresponding finite verb has, i.e. objects in the same case or infinitival or sentential complements. Representative collections of examples are cited in the following works: Vinogradov et al. (1960, vol. II.1, 231-300), Papp (1961), Galkina-Fedoruk (1958, 62-78), Zimmermann (1967), Comrie (1969). In the following list, nouns derived from adjectives are also cited for comparison, since these behave here like verbal nouns. Examples are:

(i) with the genitive: *izbegat' znakomyx* 'to avoid acquaintances'—*izbeganie znakomyx*;

(ii) with the dative: *služit' interesam Partii* 'to serve the interests of the Party'—*služenie interesam Partii*; *vernyj svoemu slovu* 'true to one's word'—*vernost' svoemu slovu*;

(iii) with the instrumental: *upravljat' zavodom* 'to manage a factory'—*upravlenie zavodom*; *nedovol'nyj synom* 'dissatisfied with one's son'—*nedovol'stvo synom*;

(iv) with various prepositions: *otkazat'sja ot ošibok* 'to recant one's errors'—*otkaz ot ošibok*; *trebovatel'nyj k studentam* 'demanding of students'—*trebovatel'nost' k studentam*; *igrat' v šaxmaty* 'to play chess'—*igra v šaxmaty*; *vstretit'sja s podrugoj* 'to meet one's girl-friend'—*vstreča s podrugoj*; *uverennyj v svoix silax* 'convinced of one's strength'—*uverennost' v svoix silax*;

(v) with the infinitive: *obeščat' prijeti* 'to promise to come'—*obeščanie prijeti*; *gotovyj učit'sja* 'ready to study'—*gotovnost' učit'sja*;

(vi) with sentential complement: *ob"jasnit', što zemlja krugla* 'to explain that the Earth is round'—*ob"jasnenie, što zemlja krugla*;

(vii) with several objects: *predstavit' razvitie obščestvennyx formacij estestvenno-istoričeskim processom* 'to present the development of social formations as a natural-historical process'—*predstavlenie razvitiija obščestvennyx formacij estestvenno-istoričeskum processom*; *vručit' premiju znamenitomu akademiku* 'to present a prize to a distinguished academician'—*vručenie premii znamenitomu akademiku*. (For the objective genitive in the last two examples, corresponding to an accusative object, see below.)

In a limited number of cases, this correspondence is not retained: *ljubit' otca* 'to love one's father'—*ljubov' k otcu*; *interesovat'sja muzykoj* 'to be interested in music'—*interes k muzyke* (not **interes muzykoj*); *doverjat' drugu* 'to trust a friend'—*doverie k drugu*. Some of these are surely to be considered as exceptions; with many one even finds doublets: *služit' muzam* 'to serve the muses'—*služenie muz* (but preferably: *služenie muzam*); *udivit'sja mode* 'to be surprised at fashion'—*udivlenie mode, k mode, nad modoj*; *bojat'sja volkov* 'to fear wolves'—*bojazn' volkov, pered volkami*. Among these exceptions one can, however, isolate a

semantic group, containing 'psychological' verbs, such as *ljubit'*, *interesovat'sja*, *udivit'sja*, whose verbal noun requires or at least prefers an object with the preposition *k*. Within the irregularities there are partial subregularities. (See also Veyrenc 1974.)

A larger group comprises verbal nouns corresponding to verbs which take a direct object (is the accusative), as well as verbal nouns which have an expressed subject. In a sentence with a finite verb, one has here accusative and nominative respectively, whereas with the verbal noun both subject and direct object appear in the genitive: *čítat' roman* 'to read a novel'—*čtenie romana*; *gost' priexal* 'the guest arrived'—*priezd gostja*. The same applies to the subject of verbs with a nonaccusative object: *Nataša otkazalas' ot svoix ošibok* 'Nataša recanted her errors'—*otkaz Nataši ot svoix ošibok*; *Pavel obeščal prijti* 'Pavel promised to come'—*obeščanie Pavla prijti*. Where a verb can be used both subjectless and objectless, e.g. *čitajut Majakovskogo* '(someone) reads Majakovskij', *Majakovskij čitaet* 'Majakovskij reads', there are ambiguous verbal nouns, since the genitive in *čtenie Majakovskogo* can be both subjective and objective genitive (i.e. 'the reading of Majakovskij's works'). Transformational analysis, which explicitly relates verbal nouns to the corresponding sentence, is capable not only of observing this ambiguity, but also of explaining it.

An explanation is also required for the fact that such verbal nouns require a subject or direct object in the genitive, and not in the nominative or accusative, as with the corresponding finite verbs. This is a completely regular feature of Russian syntax, as well as of many other languages (including English). An explanation for this can be found if one compares the internal structure of the sentence with that of the noun phrase, irrespective of whether the noun phrase includes a verbal noun or not. The unmarked arguments of the finite verb are the subject in the nominative and the direct object in the accusative; all other objects (dative, instrumental, prepositional objects) are marked, i.e. an object is accusative when there is no specific mention of the case of the object; every other object requires such a specification. The unmarked noun phrase adjunct of a noun is the genitive, which appears not only with verbal nouns, but also in possessive meaning: *dom oca* 'the father's house'. In the transition from finite verb to verbal noun, the unmarked arguments do indeed remain unmarked, but their lack of marked-

ness undergoes a different interpretation in the finite clause than with the verbal noun; unmarked as argument of a verb means nominative (if the noun phrase is in subject position) or accusative (if it is in object position); for the nominal adjunct of a noun, unmarked means genitive, irrespective of the position of the adjunct. Confirmation of this hypothesis can be found in Old Russian, where the unmarked noun phrase adjunct of a noun could be not only genitive but also dative (this applies to the older Slavic languages generally). This dative could be possessive, but also subjective or objective, and corresponds exactly in its usage to the adnominal genitive as unmarked adjunct of a noun. For an analysis of the Old Russian verbal noun, see Nilsson (1972); examples with the dative are to be found on page 39.

In Russian, there are sentences with two unmarked arguments of the finite verb, a nominative and an accusative: *Ivan čitaet knigu* 'Ivan reads the book'. Noun phrases with two unmarked adjuncts, however, are impossible, i.e. one cannot say **čtenie knigi Ivana* 'Ivan's reading of the book'. The expression *čtenie knigi Ivana* is, of course, correct in a different meaning, namely 'the reading of Ivan's book'. Here, however, we are dealing not with a noun having two unmarked adjuncts, but with two noun phrases, the one embedded within the other. The possessive genitive *Ivana* is adjunct to *knigi*. The whole noun phrase *knigi Ivana* is then used as adjunct in the genitive (objective genitive) to the noun *čtenie*; the latter has thus only one unmarked attribute, namely the noun phrase *knigi Ivana* in the genitive.

In this connection, one should note that the partitive genitive in Russian does not function like other adnominal genitives, since it permits the presence of an unmarked genitive adjunct: *kusok xleba Ivana* 'Ivan's piece of bread' (though this expression can, of course, also mean 'a piece of Ivan's bread'). In Old Russian and in the older Slavic languages generally there is no partitive dative, but only the partitive genitive, from which one can conclude that the syntactic role of this genitive is different from that of the other genitives.

There are languages which do have two unmarked adnominal positions, which can reflect subject and direct object in the verbal noun. This is very clear in English, where the two adnominal 'genitives' are quite distinct formally, as in *the enemy's destruction of the city* (genitive in 's before the head noun, genitive with *of* after the noun). In the

Slavic languages there is only one genitive, and possibilities of free word order are not used to distinguish subjective and objective genitives. In order to translate such expressions into Russian, the subjective genitive has to be replaced by a noun phrase in the instrumental: *čtenie knigi Ivanom* 'the reading of the book by Ivan', *razrušenie goroda vragom* 'the destruction of the city by the enemy'. Such constructions are very similar to passive constructions, for there too the logical subject appears in the instrumental: *kniga byla pročítana Ivanom* 'the book was read by Ivan', *gorod byl razrušen vragom* 'the city was destroyed by the enemy'. If one accepts that the passive transformation plays a role in the derivation of these verbal noun constructions, then one has an explanation for why the logical subject in both stands in the instrumental. (The passive is, however, not expressed morphologically in the verbal noun, but one can assume that the form of the verbal noun of a transitive verb is syntactically ambiguous.)

Some verbs which have nonaccusative objects still permit the formation of passive sentences (Růžička 1967, 1730), e.g. *čifry ne upravljajut mirom, no pokazyvajut, kak upravljaetsja mir* 'figures do not rule the world, but they show how the world is ruled'; similarly, they allow verbal nouns with objective genitive and subjective instrumental: *upravlenie zavoda direktorom* 'the management of the factory by the director'.

Another possibility, which is used quite widely in the older language and in some other Slavic languages, is to use the possessive adjective instead of the subjective genitive, e.g. *Kleistovo trebovanie bessmertija* 'Kleist's demand for immortality' (Revzin 1973, 90-91); this example occurs in a translation from the German (*die Kleist'sche Forderung nach der Unsterblichkeit*) and sounds rather artificial. At least it indicates the possibility in principle of such constructions, where the presence of two genitives is avoided by the use of an adjective.

With one group of noun phrases, namely personal pronouns, however, this construction is used almost exclusively—here the adnominal genitive (except in partitive use!) is virtually excluded: *moj, tvoj, naš, vaš, čej*, also *ego, ee, ix*. These can be used as both subject and object: *moj priezd* 'my arrival', *moe čtenie knigi* 'my reading of the book', versus *moe osvoboždenie* 'my release'. The pronoun in the genitive could be used at best as an objective genitive, and apparently only after verbal nouns with the

productive suffix *-nie*, e.g. *isključenje tebjá iz Partii* 'your expulsion from the Party', where *tvoe isključenje iz Partii* is also possible (and stylistically preferable). But one would hardly say **ubijstvo tebjá* for *tvoe ubijstvo* 'your murder'. The reflexive *sebjá* can also be used in this way: *otkrytie sebjá* 'discovery of oneself'. The possessive pronoun *svoj* with a verbal noun is not understood as coreferential with the subject of the verbal noun, but as coreferential with the subject of the sentence: *svjaščennik ne odobrjaet svoego ubijstva* 'the priest does not approve of his (own) murder', and not 'the priest does not approve of self-murder/suicide'. In order to express the second meaning, one must use a derived noun with the prefix *samo-*: *svjaščennik ne odobrjaet samoubijstva*.

Although the Russian possessive pronouns *ego*, *ee*, *ix* are morphologically genitives and not adjectives like *moj*, etc., they still function as adjectives, i.e. they normally stand before the verbal noun, and their appearance together with an objective genitive is not excluded: *ego priezd* 'his arrival', *ego čtenie knigi* 'his reading of the book', cf. **čtenie knigi Ivana*. Only as objective genitives do these forms occasionally stand after the verbal noun in ordinary prose, e.g. *čtenie ix* (sc. *knig*) 'the reading of them (sc. the books)'. In Russian one observes here a certain tendency to have the position before the verbal noun correspond to the subject position, and the position after the verbal noun correspond to the object position (in the modern language possessive adjectives—with the exception of the pronouns—are only used as subjects (Revzin 1973, 90-91)); where both constituents are present, only the one interpretation is possible whereby the subject stands before the verbal noun, the object after it: *naše čtenie Majakovskogo* 'our reading of Majakovskij ('s works)', and not 'Majakovskij's reading of our works'. Word order in the verbal noun noun phrase has thus a tendency to follow the normal word order, subject - verb - object, of the simple sentence in Russian.

A final difference between the internal structure of finite sentences and that of verbal noun noun phrases lies in the expression of adjuncts of manner, where one finds an adverb in the finite sentence, but an adjective in the noun phrase, e.g. *Kolja poet čudesno* 'Kolja sings wonderfully'—*čudesnoe penie Koli*.

In this article we have tried to show how the internal structure of the verbal noun construction

differs from that of the finite sentence in that many typically verbal categories are neutralized in the verbal noun (tense, aspect, negation, to a certain extent also voice), while others are assimilated to the internal structure of noun phrases (unmarked noun phrase adjuncts in the genitive, adjectives rather than adverbs). A small number of rules serves to transform the deep structure of the verbal noun, where verbal categories are still expressed, into a surface structure which has the majority of properties of the internal structure of the noun phrase.

NOTE

*This article originally appeared in German, under the title "Transformationsanalyse russischer Nominalisierungen," in *Notizen und Materialien zur russistischen Linguistik, Unterlagen für die Seminararbeit*, Nr. 2, ed. by Gerd Freidhof (= *Specimina Philologiae Slavicae* 6), Frankfurt am Main, 1974, pp. 38-46. We are grateful to the editor for permission to publish this English translation. The translation is by the author, who has also introduced a small number of minor changes to suit an English-speaking audience.

This paper grew out of an interest in comparing the syntactic structure of derived nominals in a range of languages with the structure of both noun phrases and sentences in these languages, the main impetus for this kind of work having come from Chomsky's advancement of the Lexicalist approach to derived nominals (Chomsky 1970) in opposition to the earlier Transformationalist approach (e.g. Lees 1960). Russian turns out to illustrate a language type where the internal structure of derived nominals is almost identical to that of other noun phrases, and very different from that of sentences, which is thus consistent with the Lexicalist hypothesis. However, some other languages combine aspects of noun phrase and sentence syntax in their derived nominals (see, for instance, Comrie 1976), thus providing problems for the Lexicalist approach; for this reason, a Transformationalist approach is adopted in this paper, even with respect to Russian, in order to provide a uniform treatment of derived nominals across languages of different types.

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WORD ORDER, CASE, AND NEGATION IN
RUSSIAN EXISTENTIAL SENTENCES

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1.0 *Introduction*

It is a well known fact that existential sentences (ES) tend to develop a cluster of morphological, syntactic, and lexical properties that formally set them off from other types of sentences. This process of differentiation has gone further in Russian than it has in most languages: ES in Russian have a number of morpho-syntactic properties that formally differentiate affirmative existential sentences (AES) from negated existential sentences (NES). In this paper we will be concerned with the following differences between AES and NES:

- (1) a. Word order. AES have "fixed," verb-subject word order (w.o.) (Karcevsky 1927: 125-6; Dahl 1969:37). In NES, however, the w.o. is "free," i.e., the subject NP can either precede or follow the verb (compare 2 and 3).
- b. Subject NP's case. AES have nominative subjects, while the subject NP in NES is regularly marked with the genitive case¹ (Ickovič 1974; Lobanova 1975; Chvany 1975).
- c. Subject-verb agreement. In AES the verb agrees with the subject; in NES, however, the verb has the neuter third singular ending, which is the form regularly assigned to adjectives and verbs in the absence of subject-verb agreement.²

The differences enumerated in 1 are illustrated in 2-4.

- (2) a. *V reke vodjatsja sazanj.*
'There are carp in the river.'
- b. *V reke sazanov ne voditsja.*
'There are no carp in the river.'
- (3) a. *Zdes' vodjatsja losi.*
'There are elk here'
- b. *Zdes' ne voditsja losej.*
'There are no elk here.'

- (4) a. *Proizošlo stolknovenie.*
 'There was a collision.'
 b. *Stolknovenija ne proizošlo.*
 'There wasn't a collision.'

The primary goal of this paper is to: i) explain why AES have 'fixed' w.o. while the w.o. in NES is 'free'; ii) determine the extent to which this difference in w.o. correlates with the difference in subject case marking noted in (1b); and iii) state the principle governing the verb-subject vs. subject-verb w.o. in NES.

2.0 *The function of ES.*

The primary function of an ES is to make an assertion about the subject NP's referent (Ickovič 1974:72; Chvany 1975:47; Katz and Langendoen 1976:3; Popov 1977). AES assert that the subject has a referent, while NES assert that the subject does not. An assertive sentence may therefore be said to be "existential" only if its subject NP as well as its verb is in the "scope of assertion" (Givón 1975), i.e. belongs to the asserted part of the sentence.³

The subject NP in nonexistential assertive sentences stands outside the scope of assertion and normally carries an existential presupposition (Chvany 1973; Babby 1978). The function of this type of sentence, which we will refer to here as "declarative" (Givón 1976:173), is to make an assertion about the action denoted by the verb: affirmative declarative sentences (ADS) assert that the action is realized while in negated declarative sentences (NDS) it is asserted that the action denoted by the verb is not realized (Arutjunova 1976:214,225).

3.0 *ES and functional sentence perspective*

Each sentence in Russian must be assigned a syntactic structure (subject/predicate) and a theme/rheme structure.⁴ These two bipartitions of the sentence are independent of each other, e.g. the subject NP can be part of either the theme or the rheme.

The *rheme* is usually defined as the communicative center of the sentence, i.e. that part of the sentence which contains information that the speaker considers to be unknown to the hearer. It is often claimed that the rheme contains "new information."⁵ The *theme* is usually defined as that part of a sentence which is already known to the hearer, either because it was mentioned in the preceding discourse or because it is clear from the immediate situation.

The theme is often said to contain the "given" or "old" information.

One of the reasons that definitions of theme and rheme like the one above give the impression of being vague or overly abstract is that they attempt to provide a single, invariant meaning for theme and rheme that is valid in all types of sentences (assertive, interrogative, imperative, etc.). Since we are concerned here only with ES, we will limit our discussion of theme and rheme to assertive sentences, where it is possible to give a more concrete definition: The rheme of an assertive sentence can be defined quite simply as the asserted part of the sentence (Ščeglov 1970:181; Givón 1975, Babby 1978). The theme can then be defined as the unasserted portion of the sentence, and it is normally interpreted as being part of the sentence's presupposition.

3.1 ES are classified in the literature as *nerasčlenennoe predloženie* (literally) 'unpartitioned sentence', i.e. sentences which have no theme (Dahl 1969:37). This fact corresponds to the functional definition of ES given in §2.0. It will be demonstrated below that the fact that both the subject NP and the verb are part of the rheme in ES plays a crucial role in accounting for the morpho-syntactic differences between AES and NES listed in 1.⁶ In "declarative" sentences the subject is part of the theme and the verb is part of the rheme.

4.0 AES

Russian employs a number of different morphological and syntactic devices in order to formally mark a sentence's division into theme and rheme: the most important among them are intonation and word order. Our analysis of ES will be concerned with the latter device only.⁷

4.1 Word order in AES

The function of the 'fixed' verb-subject w.o. in AES is to signal that the subject NP and the verb are both part of the rheme (Dahl 1969:37; Zolotova 1978: 145).

It is not difficult to demonstrate that it is indeed the verb-subject w.o. that is responsible for an AES's existential interpretation. If we change an AES's w.o. from verb-subject to subject-verb, the resulting sentence is often peculiar and, most important, always undergoes a radical change of meaning: it loses its existential meaning and acquires a non-existential, "declarative" reading, i.e. the subject

NP is interpreted as being definite and part of the sentence's presupposition (recall that the subjects of ES are indefinite).⁸

Karcevsky's (1927:125-26) discussion of the correlation between w.o. and the existential/declarative distinction is particularly revealing. He noted that (5a) is an ES, a fact which can be easily tested: When (5a) is negated, its subject is marked with the genitive case, which unambiguously indicates that the sentence is existential, cf (5b).

- (5) a. *Zdes' vodjatsja losi.*
'There are elk here.'
b. *Zdes' ne voditsja losej.*
'There are no elk here.'

But if the verb-subject w.o. in (5a) is changed to subject-verb, as in (6a), the resulting sentence is no longer existential (the function of (6a) is not to assert the existence of elk). This can be demonstrated by means of the negation test: When (6a) is negated, its subject NP remains retains its nominative case marking, a sure indication that (6a) is not an ES.

- (6) a. *Zdes' losi vodjatsja.*
'The elk abound/are found here.'
b. *Zdes' losi ne vodjatsja.*
'The elk do not abound/are not found here'

(6a) asserts that a specific group of elk are engaged in a certain action/state; *losi* carries an existential presupposition in (6a). But not in (5a); (6b) asserts that they are not involved in the action/state denoted by the verb (cf. Gvozdev 1955:305).⁹

The crucial difference between (5a) and (6a) is their theme/rheme structures; (5a) is an AES—its subject and verb are both rhematic; (6a), however, is a "declarative" sentence—its subject is part of the theme. The w.o. in these sentences is the only morpho-syntactic indication that their theme/rheme structures are significantly different. When we changed the w.o. from (5a) to (6a) we in fact changed the theme/rheme structure and, therefore, the sentences' semantic interpretation.

Karcevsky realized that there was a correlation between existential vs. nonexistential and verb-subject w.o. vs. subject-verb, but he could not explain it. This correlation is entirely predictable in terms of the sentences' theme/rheme structure (the observations presented in Peškovskij 1956:366 can also be explained in terms of theme/rheme structure).

English also uses "verb-first" syntax in ES (Givón 1976:173), but differs from Russian in two important ways: i) the syntactic position to the left of the verb is "filled" with the existential expletive *there* and ii) the *there* + verb + subject configuration is used in NES as well as AES, i.e. negation does not effect the morpho-syntactic structure of ES in English as it does in Russian.

5.0 NES

We established above that the function of the "fixed" verb-subject w.o. in AES is to mark the crucial fact that the subject NP and the verb are both part of the rheme. We can now turn our attention to the "free" w.o. in NES and its function. Let us begin by looking at the following minimal pair

- (7) a. [Vse byli teplo odety i] *moroz ne čuvstvovalsja*.
'[Everyone was warmly dressed and] the frost (nom) could not be felt.'
b. [Bylo teplo.] *Moroza ne čuvstvovalos'*.
'[It was warm.] No frost was felt/there was no frost (gen).'

(7a) is a negated "declarative" sentence (NDS): it presupposes that there is frost and asserts that people cannot feel the frost (because they are warmly dressed). The theme/rheme structure in (7a) can be schematically represented as follows ([...] _{R/NEG} indicates that the constituents in the square brackets are in both the scope of assertion (the rheme) and the scope of negation (Babby 1978)):

- (8) [moroz]_T [ne čuvstvovalsja]_{R/NEG}

(7b) is a NES. It asserts that there is no frost and can be paraphrased by *Moroza ne bylo* ((7a) does not have a paraphrase with *byt'* 'to be', which is predictable, see §4.1 and notes 8 and 9). The theme/rheme structure in (7b) can be represented as follows:

- (9) [moroza ne čuvstvovalos']_{R/NEG}

5.1 *The genitive case in NES*

So far we have considered four types of assertive sentences—AES, NES, ADS, NDS—and proposed that the key difference between existential and "declarative" sentences is the position of the subject NP with respect to the rheme. Now we must ask why it is only the subject NP of NES that has genitive case marking; the other three have nominative subjects.

The answer to this question can be found by comparing (8) and (9): genitive case marking in Russian is predictable in terms of a sentence's theme/rheme structure and its scope of negation. More specifically, the subject NP of a negated intransitive sentence is regularly marked genitive rather than nominative if it is part of the rheme and is in the scope of negation.¹⁶ ADS and AES have nominative subjects because they are not negated; in NDS, the subject NP is not in the scope of negation and is therefore not marked genitive, cf (8). It is only in NES that the subject is regularly in the scope of negation and, therefore, is regularly marked with the genitive case.

These facts can be summarized as follows:

	subject NP in rheme	subject NP in scope of negation	subject NP's case
ADS	-	-	nominative
NDS	-	-	nominative
AES	+	-	nominative
NES	+	+	genitive

These observations about NES can be stated in another way: genitive case marking on the subject NP of a negated intransitive sentence unambiguously signals that both the subject NP and the verb are part of the rheme. This is because it is only in NES that the subject is marked genitive and, as mentioned above, in ES the subject and the verb are obligatorily part of the rheme. Notice that changing the case of a NES from genitive to nominative has the same effect as changing the verb-subject w.o. in AES: in both cases the sentence loses its existential interpretation (Cf. Peškovskij 1956:366).

6.0 *Word order and case*

The nominative case is, as we would expect, unmarked or neutral with respect to the morpho-syntactic realization of a sentence's partition into theme and rheme. A nominative subject can be part of the theme (e.g. ADS and NDS) or part of the rheme (AES) (cf. Guiraud-Weber 1978:132). But a genitive subject in a negated sentence is marked: it signals that the subject NP is part of the rheme.

We can conclude from this discussion that the "fixed" w.o. in AES and the genitive case marking on the subject NP in NES have the same function: they both signal that the subject and the verb are grouped together in the rheme. This means that i) there is

in fact a correlation between case marking and word order in Russian ES, and ii) case marking must be added to the list of morpho-syntactic devices used in Russian to mark a sentence's theme/rheme organization.¹¹

7.0 *Word order in NES*

Since the genitive case on the subject NP marks the theme/rheme structure in NES, the w.o. is not needed for this purpose, and is therefore free to assume other functions. My hypothesis is that the "free" subject-verb vs. verb-subject w.o. in NES is regularly used to implement an opposition that is usually referred to in the literature as "old information" vs. "new information."¹²

Old information is that part of a sentence which has been mentioned in the preceding discourse; it normally stands at the beginning of the sentence. In NES, subject-verb w.o. indicates that the subject is "old." New information is that part of the sentence which was not previously mentioned; it normally stands at the end of the sentence. NES therefore use verb-subject w.o. to indicate that the subject is "new." While there is a natural tendency for theme to be "old" and rhemes to be "new," this clustering is not obligatory: e.g. a rheme can contain old information as well as new. This makes perfect sense: we make assertions about things already mentioned as well as about things newly introduced into the discourse.

The w.o. in NES is, strictly speaking, not "free"—it is rather determined by a set of factors different from those that determine the w.o. in AES. Verb-subject w.o. is preferred in NES that introduce a discourse (the subject here is 'new'). Subject-verb w.o. is preferred when the NES is part of an already established discourse and the subject has already been mentioned. Verb-subject w.o. in AES realizes theme/rheme structure, not old vs. new. The following sentences illustrate the principle governing the selection of w.o. in NES.¹³

The sentences in (10) are NES in which the subject NP, which is marked genitive, is mentioned for the first time; the w.o. is therefore verb-subject.

- (10) a. ...*ot nix daže ne isxodilo durnogo zapaxa.*
'...there wasn't even a bad smell coming from them' (Platonov, *Potomki solnca*)

- b. ... *ved' za vse gody vojny derevne ne perepalo ni edinogo metra manufaktury.*
'... not a single metre of dry goods got to the village during the war years' (F. Abramov, Vokrug da okolo)
- c. ... *v glazax Mečenova ne mel'knulo ni iskry interesa.*
'... there wasn't even a hint of interest in Mečenov's eyes' (Trifonov, Predvaritel'nye itogi)

In the following examples the genitive subject has already been mentioned in the discourse and is therefore old information; the w.o. is therefore subject-verb. Let us first look at the short discourse in (11): In the first sentence the word *sobaku* (acc.) is mentioned for the first time; later on the word *sobak* (gen.) is mentioned again, this time as the subject of a NES. The w.o. is accordingly subject-verb.

- (11) ... *devočka Katja zavela sobaku. ... Do ètoj pory ni u kogo iz žil'cov sobak ne vodilos'.*
'... little Katja got a dog. ... Up to then none of the tenants had dogs.' (*Izvestija*, Sept. 3, 1978, p. 4)

The short discourse in 12, which is a set of instructions for playing a party game, illustrates the same point: the ES *vystrela ne proisxodit* 'there is no (gun) shot' has subject-verb w.o. because *vystrela* (gen.) 'shot' is old information.

- (12) *Vy snimaete s pleča ruž'e, pricelivaetes' v zajca i proizvodite vystrel. Nastojaščego vystrela, konečno, ne proisxodit, tak kak ruž'ja detskie.*
'You take the gun from your shoulder, aim at the rabbit and fire (=take a shot). There is no real shot, of course, because guns are toy guns.' (Grekova, *Damskij master*)

The following are additional examples.

- (13) ... *ona mogla vyzvat' ogromnyj zator i daže avarii. No ni zatora, ni avarij ne slučilos'.*
'... it could have caused a terrible traffic-jam and even accidents. But there was no traffic-jam and no accidents. (*Pravda*, July 25, 1978, p. 6)

- (14) ... *byl obed, sostojaščij iz polnoj miski mjasnogo ili rybnogo supa. Ni ryby, ni mjasa samix v ètom supe ne popadalos'*.
'... dinner consisted of a full dish of meat or fish soup. There was neither meat or fish in this soup.' (Amal'rik)

If our hypothesis is correct, it should be the case that NES with anaphoric pronominal subjects overwhelmingly prefer subject-verb w.o. because the pronoun's referent is established in the preceding discourse. This, in fact, is precisely what we find.

- (15) *V kosvennyx padežax ètogo ne proizošlo.*
'This didn't happen in the oblique cases'
- (16) *Vam, vidimo, nužen dokument, udostoverja-juščij moju ličnost'. No takogo ne imeetsja.*
'You evidently need a document establishing my identity. But I don't have any such thing' (Ramošov)
- (17) ... *stroitel'naja ploščadka byla pusta. Takogo u menja ešče nikogda ne slučilos'*.
'... the construction site was empty. Nothing like this ever happened to me before' (Strugatskij)
- (18) *Vot ... krupnaja nedostača!. Podobnogo za ego mnogoletnjuju praktiku ešče ne slučalos'*. (Romašov)
'And now ... there is a major shortage. Nothing like this ever happened to him during all his years on the job'

If the proposal discussed above is correct, it provides additional evidence that theme/rheme and old/new are two distinct oppositions.

8.0 Theme/rheme, old/new, and meaning

The analysis of case and w.o. in ES outlined in this paper lends support to the widely held opinion that division into theme and rheme is part of a sentence's semantic representation.¹⁴ E.g. theme/rheme structure plays a central role in the distinction between existential and declarative sentences (see 5a vs. 6a and 7a vs. 7b) and, most likely, between simple declarative and locative (cf. note 9). The fact that theme/rheme interacts with negation and case marking clearly argues against treating theme/rheme as a superficial syntactic distinction. Speaking in purely impressionistic terms, the old/new distinction

seems, by contrast, to be less semantic, more mechanical: it does not appear to alter a sentence's meaning per se nor effect its case marking. Old/new might best be characterized as being a strictly discourse distinction whose function is to express a sentence's dependency on what preceded. By contrast, a sentence's theme/rheme structure is not dependent on discourse; it characterizes a sentence's 'internal' structure.

The conclusions about theme/rheme structure and old/new information presented in this paper is based almost entirely on my analysis of ES. It is therefore striking that other linguists working on different data have come to essentially the same conclusions. Of particular interest are the observations made in Bryleva 1977:4 (cf. Černjaxovskaja, 1971):¹⁵

... neobxodimo vydeljat' dva urovnja aktual'nogo členenija: aktual'noe členenie na urovne izolirovannogo predloženiya, vne konteksta, kogda ego možno rassmatrivat' kak postojannyj strukturnyj priznak predloženiya (=theme/rheme LHB), i aktual'noe členenie na urovne vyskazyvanija, kogda predloženie vključaetsja v situaciju i priobretaet konkretnoe komunikativnoe zadanie (=old/new LHB).

... it is necessary to distinguish two levels of functional sentence perspective: functional sentence perspective at the level of the isolated, context-free sentence, where functional sentence perspective can be viewed as one of the sentence's inherent structural properties (=theme/rheme LHB); functional sentence perspective at the level of the utterance, where the sentence is fit into a situation and assumes a concrete communicative role (=old/new LHB).

Summary

We have seen above that it is not an arbitrary fact that AES in Russian have nominative subjects and "fixed" w.o. while NES have genitive subjects and "free" w.o. Given the relation between theme/rheme, old/new, nominative/genitive, and subject-verb/verb-subject w.o. described above, the distribution of morpho-syntactic properties in (1) are in fact entirely natural and predictable.

NOTES

¹Traditional Russian grammar treats NES as subjectless sentences (cf. Galkina-Fedoruk 1958). It has been suggested recently that NES have 'genitive subjects' (Kostinskij 1969). In this paper I will use the term 'genitive subject' as a convenient way to capture the syntactic parallelism between AES and NES (cf. Babby 1979:chapter 2).

²Presence vs. absence of subject-verb agreement in ES is completely predictable in terms of the subject NP's case marking, and it is therefore unnecessary to include lc in our analysis.

³The subject of an ES is normally indefinite and the verb is intransitive.

⁴The Russian term *aktual'noe členenie predloženiija* is usually translated as 'functional sentence perspective' (cf. Browne 1972:584).

⁵The best treatments of theme and rheme in Russian are Adamec 1966 and Lobanova and Gorbačik 1976; see also Ščeglov 1970, Kovtunova 1976, Krylova and Xavronina 1976, and Gundel 1977.

⁶I am *not* claiming that ES can be characterized solely in terms of theme/rheme structure (cf. Babby 1979).

⁷Accordingly, all the examples in this paper will have neutral, nonemphatic intonation. Note also the w.o. is employed to realize syntactic relations in Russian as well as the theme/rheme structure (Kovtunova 1976:17).

⁸See Peškovskij 1956:366; Arutjunova 1976:238-9. When the w.o. in AES is changed to subject-verb something else happens: the verb is now felt to denote an action rather than a state (cf. Dahl 1969:33-4; Arutjunova 1976:225-8; Zolotova 1978:145; Guiraud-Weber 1978:133). This is exactly what we would expect, since in a 'declarative' sentence the focus of assertion is centered not on the subject NP, but on the verb.

⁹As mentioned above, changing the w.o. of an AES often results in a peculiar sentence. This is because the verb in ES is often lexically existential (e.g. *vodit'sja*) and the corresponding 'declarative' sentence therefore asserts that the subject is engaged in the action/state of existing or being located. These sentences sound far more natural, however, if the locative phrase is moved to the end of the sentence where, it is interpreted as being part of the rheme. These sentences are often classified as 'locative sentences' (cf. Arutjunova 1976:238-9). The relation of ES and locative sentence is a classic problem and these remarks are meant only to be suggestive (cf. Lyons 1967; the best discussion of locative and existential sentences with *byt'* 'be' as predicate can be found in Chvany 1973, 1975).

¹⁰The relation between rheme and scope of negation is well established in the literature, cf. Adamec 1968:25; Ščeglov 1970:186; Jackendoff 1972:251; Hajičová 1973; Givón 1975; Crockett 1977; Gundel 1977:chap. 6; Savel'eva 1977:62. In Babby 1978 it

is proposed that the rheme determines the scope of negation.

¹¹It is worth exploring the possibility that nominative vs. instrumental case in sentence pairs like the following is determined, at least partly, by the sentences' different theme/rheme structures: *Leď skoval reku* 'Ice covered/blocked the river' vs. *Reku skovalo l'dom* (inst.) 'The river was iced in'.

¹²The difference between theme/rheme and old/new is discussed in Kovtunova 1976:45; Gundel 1977:25. It should also be pointed out that old/new is different from definite/indefinite (cf. Chafe 1976).

¹³I use words like 'tendency' and 'prefer' because there are obviously other factors that influence the selection of w.o. (e.g. emphasis, contrast, etc.).

¹⁴See Šceglov 1970; Chomsky 1971; Jackendoff 1972; Mel'čuk 1974; Bryleva 1977; Gundel 1977; Zolotova 1978. Of particular interest is Kuroda's 1972 article.

¹⁵Bryleva and others (e.g. Chomsky 1971) associate the two "levels" of functional sentence perspective with the levels of deep and surface structure in a transformational-generative grammar. While this approach is plausible, it is by no means the only way to incorporate facts like those presented above into an explicit grammar of Russian (cf. Babby 1979 for discussion).

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OBLIQUE CONTROL OF RUSSIAN REFLEXIVIZATION

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1. Introduction. Control of reflexivization in Russian is generally assumed to be limited to subjects. A class of potential counterexamples to this generalization involves control by obliques, where this term is used in the traditional sense to refer to a nominal that is neither a subject nor a direct object. Obliques do not control reflexivization with active (in the sense of nonstative) predicates, but can with certain statives. Thus, datives cannot control when they function as indirect objects of active predicates ((1-2)), but they can be controllers with a variety of statives, such as modals ((3-4)), experientials ((5-6)), and quantifiers ((7-8)). For descriptive convenience these can be called 'inversion' predicates, using the term of Perlmutter (1978a).

- (1) *Na nego každye sutki v kondensirovannom vide svalivaetsja takoe količestvo ispytaniij, kotorye drugomu čeloveku ne vypadut za vsju ego/*svoju žizn'.*
'Every day there are piled on him in a condensed fashion a quantity of trials such as do not fall to another person throughout his whole life.' (KS 2.377: *ego*)
- (2) *Pered uxodom zadaju emu neskol'ko voprosov o nem samom/*samom sebe.*
'Before leaving I ask him a few questions about himself.' (KS 2.312: *nem samom*)
- (3) *Baba na košku poroža, ej *ee/svoj dom nužen.*
'A woman is like a cat, she needs her own house.' (lit. 'to her is necessary')
(PPr, S 564: *svoj*)
- (4) *A ved' dlja tnee/sebja ej ničego ne nužno.*
'After all, for herself she doesn't need anything.' (lit. 'for herself nothing is necessary to her') (PPr, S 164: *sebja*)

- (5) *Oni uže byli bol'šie, i ej nelovko bylo pered nimi za tee/svoju slabost' i nečistuju bolezn'.*
 'They were no longer small children, and she was uncomfortable around them on account of her weakness and unclean disease.' (lit. 'it was uncomfortable to her') (PPr, S 632: svoju)
- (6) *Do slez žalko mne stalo i *menja samogo/sebja samogo, i Filimona.*
 'I became sorry to the point of tears both for myself and for Filimon.' (lit. 'it became sorry to me') (MI 444: sebja samogo)
- (7) **Ego/Svoix zapasov gorjučego do Tixoj emu ne xvativ.*
 'His own supplies of fuel would not last him to Tixaja.' (MV 171: svoix)
- (8) *Mne ne xvataet vremeni dlja *menja/sebja.*
 'I don't have time for myself.' (lit. 'to me is not sufficient time')

Similarly, the prepositional phrase *u* + genitive cannot control as a locative in active sentences, as in (9-10), but it can as the possessor in existential sentences, as in (11-12) (see Chvany 1975):

- (9) *Ja uže čerez polčasa sidel u Moskalenko na ego/*svoem nabljudatel'nom punkte.*
 'After half an hour I was already sitting chez Moskalenko at his observation point.' (KS 2.706: ego)
- (10) *U Moskalenko ja obsuždal s nim/*soboj poslednie dejstviya.*
 'Chez Moskalenko I discussed the latest actions with him.'
- (11) *U sem'i Goranskix byl v Zarubinkax *ix/svoj dom.*
 'The Goranskij family had their own house in Zarubinki.' (lit. 'chez the family there was their own house') (MI 222: svoj)
- (12) — *Slušaj, Tarasyč, bityx-to von skol'ko, a u nix vsjakij zapas s *nimi/soboj.*
 'Listen, Tarasyč, there're a lot of corpses out there, and they have all kinds of supplies with them.' (lit. 'chez them are all kinds of supplies') (PPr, S 310: soboj)

Two strategies come to mind for describing control by obliques. On the assumption that only subjects can control reflexivization, one could hypothesize that an oblique controller must be the subject at some level of derivation. This can be termed the 'subject control hypothesis' (SCH). Alternatively, if one abandons the assumption that control is restricted to subjects, one could state that obliques can control under certain conditions and claim that control by obliques is due to something other than grammatical relations. This can be termed the 'oblique control hypothesis' (OCH). These are the two possibilities in basic terms; I will discuss concrete proposals in more detail below.

This paper discusses oblique control of Russian reflexivization in terms of these two alternative strategies of analysis. The principal concern, aside from the description of facts, is a set of arguments against the SCH. In a secondary and preliminary fashion, the paper sketches one possible variant of the OCH. Descriptively this study is a continuation of work on Russian reflexivization such as Klenin (1974), Chvany (1975), Yokoyama and Klenin (1977), Veyrenc (1978), and others. In the view of control advocated here this study follows Nichols (1979) and Rappaport (1979) in particular.

Some preliminaries. The examples below were taken directly or constructed from texts with reasonably extensive contexts, in which the intended reading of coreference is clear; speakers were asked to choose between reflexive and nonreflexive forms. In this way the task of the native speaker as informant is an encoding process parallel to that of the native speaker as author, and the results from the two sources can be compared. It is my impression that the metalinguistic responses of speakers basically correspond to textual usage, so the following gradation of acceptability can be read both as a characterization of speakers' judgments and as a characterization of relative textual frequency.¹

- | | | | |
|------|-----------|---------------------------|----------------------|
| (13) | [no mark] | acceptable, preferred | : most frequent |
| | [+] | acceptable, not preferred | : frequent |
| | [?] | marginally acceptable | : infrequent |
| | [*] | unacceptable | : rare, nonoccurring |

Methodology. The discussion here is conducted in terms of grammatical relations against the background of the theory of relational grammar of Perlmutter and Postal (see, for example, Perlmutter and Postal (1978), Perlmutter (1978a)). However, the

concepts and terminology of this theory are used only selectively. Thus, the major grammatical relations are referred to by the traditional names 'subject', 'object', and (exceptionally) 'dative' rather than by the names '1', '2', and '3' of relational grammar. As mentioned above, the term 'oblique' here is used as a cover term to refer to a class of relations that includes datives as well as obliques in the strict sense of relational grammar (benefactives, locatives, etc.) but excludes subject, object, and chomeur relations. Following relational grammar, relations at different levels are referred to as 'initial', 'intermediate', and 'final'; a 'consistent' nominal bears the same relation at all levels, an 'anytime' nominal is one that bears a given relation at some level. For convenience the notion of level is treated as derivational.

Organization. The next section (§2) discusses the SCH and OCH in greater detail. The following two sections (§§3-4) discuss whether the same rule of reflexivization is at work in inversion sentences with dative control and existential sentences with possessor control. Sections 5 and 6 present two types of arguments against the SCH. Section 7 considers some alternative versions of the SCH for existential sentences with possessor control; Section 8 discusses the version of the OCH proposed here.

2. SCH and OCH. In the oblique control of reflexivization there are two distinct issues: first, the question of whether obliques control because they bear the relation of subject or some other relation; and second, the relationship between oblique control and the predicates with which it occurs. As the examples above suggest, oblique control typically occurs with existential predicates and inversion (modal, experiential, and quantifying) predicates. These two classes of predicates are treated more or less equivalently in the discussion below, although there are some differences between them, and it is possible that different analyses are appropriate for the two classes. It is convenient to discuss the SCH first in terms of inversion predicates, making use of the explicit proposal of Perlmutter (1978a).

The SCH by definition assumes that control of reflexivization is restricted to subjects. In passives both the final subject (= initial object) and final agent, or chomeur (= initial subject), can in principle control reflexivization (Klenin 1974). Accordingly, the condition for control of reflexivization under the SCH must be phrased in terms of an

anytime subject, rather than in terms of subject at a particular level. This condition for control allows for the possibility that the initial subject could control reflexivization in some construction other than the passive.

If the SCH is to be maintained, the dative controller in inversion constructions must be a subject at some level. On the assumption that case marking and control of verb agreement are diacritic of final grammatical relations, datives in inversion constructions are presumably final datives, not subjects (Perlmutter 1978a); it can then be assumed that they are former—presumably, initial—subjects. If they are initial subjects but final datives, they must have been demoted to dative by a rule applying under certain conditions. This rule can be termed 'inversion' (Perlmutter 1978a).

One can construct a comparable hypothesis for possessors in existential sentences. If the SCH is correct, then a possessor controller must be the subject at some level. At the final level the possessor relation (which should not be confused with adnominal possessors, expressed in the genitive case) is almost certainly oblique in the narrow sense of the term, since it does not have the case marking of a subject, object, or dative. If it is a final nonsubject that controls reflexivization, it must be a former, presumably initial, subject; to explain its final oblique relation, one can hypothesize a rule of 'possessor demotion', analogous to the rule of inversion.

There is a problem, however, with a rule of possessor demotion internal to Perlmutter and Postal's theory of relational grammar. Within that theory dative belongs to the class of terms, while obliques are nonterms. And while a demotion from subject to dative—another term relation—is possible, a demotion from subject to oblique is not permitted, so that a rule of possessor demotion is not possible in that theory. At the same time, however, it would be desirable to have similar analyses for control by datives in inversion constructions and by possessors in existential sentences; moreover, if control by possessors does not count as evidence that possessors are former subjects, then it should not count as evidence that datives are former subjects. What I will do here is assume that the SCH includes a demotion analysis for possessors as well as for datives; later in Section 7 I will consider some alternative analyses for possessors in particular.

In contrast, the OCH does not assume that control is necessarily limited to subjects. First, it

is minimally necessary to state that the class of controllers includes not only subjects but also obliques, at least with certain predicates. Obliques are then consistently oblique and undergo no change in grammatical relations from one level to the next. Second, it is necessary in addition to state why certain obliques qualify as controllers with the given predicates. There are several ways to do this, one of which I outline here.

Under this proposal the representation of a sentence is not restricted to grammatical relations, but includes other types of representations; distinct types of representation can be termed 'axes'. A nominal argument bears different relations on each axis. It is generally agreed, for example, that the representation of a sentence must include an axis of information (or the equivalent), on which arguments bear relations like 'topic' and 'comment'.

For each axis it can be supposed that the relations are hierarchized according to a general category of prominence (see Klenin 1978, Rappaport 1979). On the axis of grammatical relations (or grammatical axis) the relation of subject is the relation of prominence; on the axis of information, the relation of topic is the relation of prominence. It can be supposed, further, that control of various processes is linked to prominence. Thus, the relation of topic can be shown, at least in some contexts, to affect control of gerunds (Yokoyama, this volume, Rappaport 1979) and predicate nominals (Nichols 1979).

Under the OCH control of reflexivization is not limited to the subject relation, but potentially can include relations of prominence on other axes, at least under some conditions. Control of reflexivization by obliques can then be explained if it is assumed that they hold the relation of prominence on some axis or axes other than the grammatical axis. It is reasonable to suppose, for example, that a dative with a modal predicative holds the relation of prominence on the axis of modality; it gives the 'standard' with respect to which modality (necessity, possibility, obligation, and so on) is defined. In (3) above, for example, the dative is the standard in the sense that it defines the participant for which the house is necessary. Similarly, the possessor in an existential sentence localizes the domain of existence of the participant whose existence is asserted; in (11), for example, the existence of the house is localized to a particular family. The possessor can then be considered to be the 'standard' on the axis of quantification.

It can be hypothesized, then, that prominence on an axis other than the axis of grammatical relations qualifies an oblique to be the controller of reflexivization even when it does not hold the relation of prominence on the grammatical axis. It is apparent, however, that prominence on the grammatical axis outranks prominence on other axes. Thus, the effect of the relation of topic on reflexivization is slight, and the standard becomes a controller only under restricted conditions.

The SCH and OCH, then, differ in two respects. First, using the term 'stratum' (Perlmutter and Postal 1978) to refer to levels of derivation, the SCH is multistratal while the OCH is (with respect to this class of constructions) monostratal. In terms of the types of representation, or axes, the SCH is monoaxial while the OCH is multiaxial. These differences provide a key to possible differences in the range of facts accounted for by each hypothesis. Two differences will be crucial below; these differences reflect the two basic issues defined at the start of this section.

First, the SCH allows for a more restrictive range of oblique controllers with respect to any given predicate. In the theory of relational grammar discussed here a nominal argument bears a single grammatical relation at any given level (Perlmutter and Postal 1978). In order to describe the fact that obliques can be controllers, the SCH claims that they are initial subjects. (There are perhaps other logically possible derivations in which a final oblique might result from an intermediate subject, but these derivations are either precluded by laws of relational grammar or else irrelevant to Russian.) Since an oblique controller can bear only the subject relation at the initial level, the identity of the final oblique relation—dative in inversion constructions, possessor in existential sentences—is not given in the initial representation, but instead must be produced by rule—inversion for datives, possessor demotion for possessors. For any predicate that allows an oblique controller, then, the SCH in effect predicts that there will be a unique oblique relation that can serve as controller. This is a concrete prediction made by the SCH that is not shared by the OCH.

Second, the SCH and OCH allow different ranges of predicates to have oblique control. Under the SCH there can be only one argument bearing a particular grammatical relation on a given level. With respect to control by obliques, the SCH predicts that there

will be no cases of oblique control in constructions whose oblique is *not* an initial subject. For example, the SCH precludes oblique control in an active sentence with a consistent subject.

These are two concrete predictions that can be used to test the SCH and OCH for Russian reflexivization.

3. Set Reference and Oblique Control. The arguments below depend crucially on the assumption that a single rule of reflexivization is responsible for reflexive forms in all cases below. In fact, however, possessor control in existential sentences and dative control in inversion sentences appear to be different at first glance. It is therefore imperative to discuss whether there is a single rule of reflexivization in both sentence types. Here I will consider two possible differences, one involving semantics and the other involving the grammatical relation of the target.

In existential sentences with possessor control the target phrase (possessive adjective plus head noun) is characterized by a semantic feature that can be called 'set reference' (Timberlake 1980). Under positive set reference, the participant is conceptualized as a member of a set of comparable participants, each of which (like the actual target) is correlated with a possessor; under negative set reference, the participant is not a member of a set of possible participants, and is referentially unique (see Klenin, this volume, for a similar concept). Positive set reference is common for targets in existential sentences with possessor control. It is transparent in sentences with an explicit set quantifier, as in (14); it is established by the contrast in the discourse in (15).

- (14) *Naverno, u každygo iz voevavšix ot načala i do konca vojny byl na nej *ego/svoj samyj trudnyj čas.*

'No doubt each of the people who fought from the beginning up to the end of the war had his own most difficult hour.' (KS 2.186: *svoj*)

- (15) — *Mne ponravitsja. Vy tol'ko napišite. Vot vam bloknot i karandašik.*

— *U menja ?moj/svoj karandaš est'.*

— *Da net už, vy moim.*

'— I'll like it. You just write it. Here's a notebook and pencil for you.'

—I've got my own pencil.

—No, go ahead, use mine.' (KS 2.212: *svoj*)

Speakers characterize the use of the reflexive in such sentences as 'emphasizing possession'; it gives the sense of 'one's own as opposed to other possible participants'.

In the relatively infrequent textual examples characterized by negative set reference, the non-reflexive form is used, and is preferred by speakers. In (16), for example, the package has been identified in the previous discourse and there is no implication of a set of individuals and corresponding packages, so the target phrase is characterized by negative set reference. (17) is similar.

- (16) *I vdrug ja ne stol'ko vspomnil, skol'ko instinktivno počuvstvoval, što u menja v rukax net moej/?svoej papki.*

'And suddenly I not so much remembered as sensed instinctively that I didn't have my package in my hands.' (MI 519: *moej*)

- (17) *U menja liš' odin iz moix/?svoix fel'tonov.*
'I have only one of my sketches.' (MI 544: *moix*)

Evidently the use of *svoj* in existential sentences with possessor control is highly dependent on the semantic feature of set reference. In contrast, it appears that the use of *svoj* in inversion sentences is not dependent on set reference; in (5) above, for example, the target phrase is characterized by negative set reference—there seems to be no implicit contrast of the grandmother's illness as opposed to others' illnesses—and yet the reflexive form is preferred. If this difference between existential and inversion sentences holds up, it could be taken as evidence that *svoj* in existential sentences with possessor control is not an instance of reflexivization at all, but a lexical adjective with the meaning of 'unique, not *čužoj*' (see Klenin 1974:21-23, Perlmutter 1978a:fn. 6).²

It turns out, however, that this apparent difference is illusory; this can be shown by two considerations, one involving *svoj* and the other *sebja*. I consider *svoj* first.

On the one hand, *Svoj* Reflexivization can apply in existential sentences with negative set reference under possessor control. In (18), for example, there is no particular implication of a comparison

between the possessor's strength and other people's strength, so set reference is in the range from negative to neutral; the reflexive form is used:

- (18) *U nego po-prežnemu ostavalos' čuvstvo tego/ svoej sily.*
 'With him as before there remained a feeling of his strength.' (PPr, KS 37: *svoej*)

On the other hand, *Svoj* Reflexivization in inversion sentences is also sensitive to set reference, and applies more readily under positive than under negative set reference. This is illustrated for a quantifying predicate in (19-20), the experiential *nadoest'* 'to be boring' in (21-22), and two impersonal experientials in (23-24):

- (19) *Mne vpolne dostatočno moej/?svoej kvartiry nad mjasnoj.*
 'My apartment above the butcher's shop is sufficient for me.' (ĚK: *moej*)
- (20) *Mne dostatočno ?moix/svoix druzej, mne ne nužny drugie ljudi.*
 'My own friends are sufficient for me, I don't need other people.'
- (21) — *Ty dumaeš', mne moja/svoja golova nadoela?*
 'You think I've gotten tired of my own head?' (DG 210: *svoja*)
- (22) *Tebe samomu nadoest tvoe/*svoe xoždenie v narod.*
 'Even you yourself will get tired of your going out among the people.' (PPr, KS 103: *tvoe*)
- (23) *Emu strašno stalo ?ego/svoego dolga i ?ego/svoej otvetstvennosti.*
 'He became terrified of his own duty and obligation.' (AP1 63: *svoego, svoej*)
- (24) *Praščuru teplo bylo v ego/+svoej prirodnoj šube.*
 'Our forefather was warm in his natural coat.' (LL 194: *ego*)

Finally, it should be noted that set reference also influences *Svoj* Reflexivization even in cases where the controller is the final subject, as shown in Timberlake (1980). Thus, set reference has a uniform effect on *Svoj* Reflexivization in all sentence types,

although there may be differences in degree: positive set reference encourages use of the reflexive, negative set reference inhibits it. In particular, there is evidently no significant difference between existential and inversion sentences in this respect.

Next, *Sebja* Reflexivization. It is generally assumed that *sebja* is always a controlled reflexive rather than a lexical noun; on this assumption, any property of *sebja* that is also observed for *svoj* can be assumed to be a property of reflexivization rather than a lexical property.

Sebja Reflexivization is also sensitive to the feature of set reference, even in inversion sentences. Sentence (4) above, given with a larger context here as (25), involves an explicit contrast between the woman and her husband as possible benefactives; it is therefore a context with positive set reference for the benefactive, and the reflexive form is preferred:

- (25) *A ved' dlja ?nee/sebja ej ničego ne nužno, ona želala bol'shego liš' dlja nego.*

'After all, for herself she doesn't need anything, she wanted more only for him.'
(PPr, S 164: *sebja*)

- (26) *Dlja nee/sebja ej ničego ne nužno.*

'For herself she doesn't need anything'

If this sentence is removed from this contrastive context, as in (26), the nonreflexive form is fully acceptable. Thus, *Sebja* Reflexivization is also sensitive to set reference. This suggests that set reference is a general condition on reflexivization, so there is nothing surprising about its effect on *Svoj* Reflexivization in existential sentences with possessor control.

I conclude, then, that instances of *svoj* in existential sentences can be interpreted as the result of *Svoj* Reflexivization under control by the possessor.

4. Target Relations and Oblique Control. *Svoj* Reflexivization in existential sentences under oblique control gives the impression of allowing only a restricted set of targets; virtually all the examples in texts involve target phrases that bear the relation of final subject or a derivative relation (namely, genitive former subject under negation; adnominal genitive modifier of the subject; and predicate nominal). In contrast, inversion predicates give the im-

pression of allowing a relatively wide range of target relations. If this difference in target relations holds up, it would be an argument for distinguishing reflexivization in existential sentences from reflexivization in inversion sentences. The facts on this point are not entirely clear, but there is enough evidence to suggest there is no difference in kind between the two types of oblique control. Again both *Svoj* and *Sebja* Reflexivization provide evidence.

On the one hand, existential sentences do allow *Svoj* Reflexivization of targets other than subjects (and derivative relations), provided the condition of positive set reference is met. In (27) there is an explicit contrast between the workers' own plots and public land, so the reflexive form is used for a locative target; in (28) there is no contrast, and the nonreflexive form is used:

- (27) *U kolchoznikov na ?ix/svoix učastkax čudesa agrotexniki, a na artel'nuju rabotu vyxodjat oni liš' "za koly", "za ptički".*
 'The kolchozniki have agricultural marvels on their own plots, but they go to work on the public land only to put in time.' (VA 24: *svoix*)
- (28) *U každygo čeloveka na fronte est' v ego/?svoix predstavlenijax kakaja-to osobennaja opasnost', kotoruju nado bojat'sja.*
 'Every person on the front has in his conceptions some special danger that must be feared.' (KS 1.284: *ego*)

On the other hand, if there is a difference in target accessibility, it is also shared by inversion predicates. Thus, the object target phrase with an experiential verb in (5) apparently reflexivizes more readily than the oblique target in (24) above. Thus, there is no difference in principle between existential and inversion predicates in target relations.

Also, *Sebja* Reflexivization can apparently be controlled by possessors in existential sentences, as in (12) above. Even if this example were interpreted as an idiom, there are other, nonidiomatic examples in which possessors control *Sebja* Reflexivization:

- (29) *U nego davno šel staryj bol'noj spor s *nim samim/samim soboj.*
 'For a long time he had an old painful argument with himself going on.' (PPr, KS 155:

samim soboj)

On the assumption that properties of *Sebja* Reflexivization are properties of reflexivization in general, this fact argues that nonsubjects can be targets of reflexivization under possessor control in existential sentences.

I conclude, then, that there is no principled difference between reflexivization in existential and inversion sentences with respect to possible grammatical relations of targets. Together with the argument of the preceding section, this fact suggests that there is a single rule of reflexivization operating in existential sentences with possessor control and in inversion sentences with dative control. We can now proceed to test the SCH and the OCH.

5. Range of Controllers. As argued above, the SCH in effect predicts that there will be a unique oblique controller for any predicate that allows oblique control; this of course does not preclude the final subject from being a controller. According to the SCH, a noun phrase can control reflexivization only if it was a subject at some level. Since obliques can control but are not final subjects, they are former subjects, most probably initial. At the initial level, no information about the ultimate grammatical relation of the oblique controller can be given. This instead must be derived by the rule that demotes it. On the assumption that a given predicate governs a single rule of demotion, each predicate should allow only one oblique controller.

Both existential and inversion predicates allow more than one type of oblique controller, although there are differences. In existential sentences with 'be' and other verbs, the controller can be one of several types of locative ((30-32)), a benefactive ((33-35)), or a dative ((36)):

- (30) *Vo vsjakom malo-mal'ski značitel'nom meste skoplenija rabočix dolžna byt' *ego/svoja sobstvennaja rabočaja gazeta.*

'Any place, no matter how insignificant, that has a concentration of workers must have its own workers' paper.' (lit. 'in each place there must be its own paper') (Lenin 151)

- (31) *Meždu nimi ustanovilis' *ix/svoi, osobyje otnošenija.*

'Between them were established their own

special relations.' (PPr, S 497: *svoi*)

- (32) *Nevol'no dlja tnego/sebja, v nem vse vremja šlo vyverenie ego/svoego sobstvennogo vnutrennego sostojanija.*
'Involuntarily for him there went on in him the checking of his own internal condition.'
(PPr, S 39: *sebja, svoego*)
- (33) *I menja krajne udivilo, čto, okazyvaetsja, dlja každygo čeloveka est' svoja, osobaja pesnja.*
'It completely surprised me that, apparently, for each person there is his own, special song.' (MI 33)
- (34) *Dlja nego ne bylo ničego ser'eznee ego/svoej raboty.*
'For him there was nothing more serious than his work.' (PPr, S 359: *svoej*)
- (35) *No vojna vse bol'se sosredotočivalas' dlja Pekareva v krugu ego/svoix del i objazannosti.*
'But more and more for Pekarev the war was concentrated in the realm of his own problems and responsibilities.' (PPr, S 422: *svoix*)
- (36) *Da i na vojne lošad' tože naxoditsja pri dele, ej tože est' tut *ee/svoja objazannost'.*
'And in war the horse also has a function, for it there is also its own responsibility.' (AP1 35: *svoja*)

Most of these examples involve *Svoj* Reflexivization of a subject target phrase under the condition of positive set reference. However, (32) and (35) show that it is not restricted to subject target phrases; (34) shows that it is not restricted to the condition of positive set reference; and (32) shows that control by obliques other than possessors is possible for *Sebja* as well as *Svoj* Reflexivization. A complete paradigm for *sebja* can be given with the existential verb *ostat'sja* 'remain':

- (37) *U nego ne ostavalos' vremeni na tnego/sebja.*
'He didn't have any time left for himself.'
(PPr, S 94: *sebja*)
- (38) *Emu ne ostavalos' vremeni na tnego/sebja.*
'No time for himself remained for him.'

- (39) *Dlja nego ne ostavalos' vremeni na nego/sebja.*
'For him there remained no time for himself.'
- (40) *V nix počti ničego ne ostalos' ot nix samix/
†samix sebja.*
'In them there remained almost nothing of
themselves.' (ADS-È 248: *nix samix*)

This paradigm, incidentally, suggests differences in control strength; benefactive seems to be weaker than dative or possessor, and locative is weaker than the others.

Among inversion predicates, the same range of controllers is possible for quantifying predicates. Thus, oblique control is possible for possessors ((41)), benefactives ((42)), datives ((43)), and perhaps locatives ((44)):

- (41) — *Budu ja tam iz-za kakix-to stul'ev ezdit'!*
Malo u menja ?moix/svoix boljaček?
'I should go there because of some chairs!
I don't have enough pains as it is?' (ASM
285: *svoix*)
- (42) *A kogda dlja nix *ix/svoix detej bylo malo,*
usynovljali sirot.
'And when their own children were too few
for them, they adopted orphans.'
- (43) *A kogda im *ix/svoix detej bylo malo, usyno-*
vljali sirot.
'And when their own children were too few
for them, they adopted orphans.'
- (44) *V redakcii malo *ix/svoix rabotnikov.*
'In the office there are few of its own
workers.'

With the other two types of inversion predicates the possibilities are more restricted because they do not naturally allow a possessor argument, regardless of coreference. Still, experientials allow benefactive controllers ((45)) and modals allow benefactive ((46)) and perhaps locative ((47)) controllers.

- (45) *Dlja nego vse okončatel'no stalo jasno v tnem/
sebe.*
'For him everything became finally clear in
himself.'

- (46) *Dlja každygo soldata nužen *ego/svoj avtomat.*
'For each soldier is necessary his own
rifle.'
- (47) *V takix delax nužny *ix/svoi metody.*
'Such matters demand their own methods.'

On the assumption that the different case forms represent different grammatical relations, I conclude that a given predicate does not determine a unique oblique controller.

There are in fact a number of considerations that suggest that these case forms represent different grammatical relations. First, assuming that case marking reflects final grammatical relations, the distinct cases of these oblique controllers argue that they are different relations. Recall, for example, that the dative case of the oblique controller in inversion constructions is taken by Perlmutter (1978a) to show that this nominal is a final dative.

Second, the different case forms have different strengths as controllers. A comparison of (37-39) vs. (40) suggests that locatives are weaker controllers than others. A comparison of (38) vs. (39) suggests that datives are stronger than benefactives; the fact that datives can regularly control *Svoj* Reflexivization of target phrases with negative set reference differentiates them from possessors, which usually require positive set reference. The difference between datives and others is confirmed by control of circumstantial predicate nouns. As Nichols (1979) observes, a circumstantial instrumental noun can be controlled by the inversion dative in (48), but at best marginally by the possessor in (49); the same presumably holds for other obliques:

- (48) *Mne zdes' veselo žilos' rebenkom.*
'I lived happily here as a child.'
- (49) *?U menja rebenkom byla interesnaja žizn'.*
'I had an interesting life as a child.'

Taken together, these facts (plus informal impressions) suggest a hierarchy of control strength like the following, although solid evidence for differentiating possessors from benefactives is lacking (see in general Nichols 1979):

- (50) dative \geq possessor \geq benefactive \geq locative

Third, the different case forms have different

degrees of accessibility as targets for reflexivization; in particular, datives are not as accessible as benefactives. Klenin (1974) observes that a dative cannot be the target of *Sebja* Reflexivization controlled the passive agent, while a benefactive can. Similarly, datives are harder to reflexivize as complements of adjectives modifying nouns:

- (51) *Andreev nazval imena nužnyx emu/?sebe ljudej.*
'Andreev named the names of the people
necessary to him.' (BG 135: *emu*)
- (52) *Tam bylo vse točno skazano — proektirovščiki mogli počerpnut' iz nee cennye dlja tnix/sebja svedeniya.*
'Everything was described exactly — the designers could draw out of it information valuable for them.' (BG 134: *sebja*)

On the assumption that the accessibility of targets to reflexivization is based on their grammatical relations, this fact argues at least that dative is distinct from benefactive and, by extension, other obliques.

Taken together, these facts suggest that the different oblique controllers do in fact represent different grammatical relations. If so, the SCH is contradicted, since it predicts that a given predicate will determine a unique oblique controller.

6. Range of Predicates. The SCH also makes a prediction about the range of predicates that will allow oblique controllers. Since, under the SCH, the oblique must be an initial subject in order to function as a controller of reflexivization, an oblique controller precludes any other initial subject. As a consequence, if there is a final subject in a sentence with an oblique controller, it must have become the subject during the derivation, presumably (in Russian) by advancement from object status. The SCH precludes a consistent (both initial and final) subject in a sentence with an oblique controller.

There are three classes of predicates that might plausibly allow oblique controllers under the SCH. (a) Impersonals: impersonals lack a final subject, and offer little evidence for an initial subject. (b) Reflexive verbs: a number of verbs have transitive nonreflexive and intransitive reflexive forms, where the final subject of the intransitive corresponds semantically to the initial object of the transitive. If this relationship is taken to be syn-

tactic rather than lexical, then intransitive reflexive verbs have final subjects that are initial objects (Babby 1975), and might conceivably allow oblique controllers. (c) Existential verbs: a number of intransitive verbs with existential sense (that is, they comment on the existential status of the subject) have the property that the subject can be expressed in the genitive (and fail to control verb agreement) under negation; the application of the genitive of negation for potential subjects is governed by complex conditions that have not been investigated fully (see Babby 1978 for a general condition). Since the genitive of negation rule otherwise applies only to direct objects, the application of the genitive of negation to subjects of existential verbs could be taken as evidence that the subjects are initial objects; this analysis would then require an advancement rule that promotes initial objects of existential verbs to subject, at least when the verb is not negated. (It is irrelevant here whether in negated sentences the initial object becomes genitive before or after it would be advanced.) This analysis is proposed, with some differences in detail and theory, by Chvany (1975) and Perlmutter (1978b), among others.

These are three classes of verbs which might be plausibly analyzed as not having initial subjects (other than the oblique). Various objections could be raised to these analyses; for example, the relation between transitive and intransitive reflexive verbs may be lexical, or the genitive of negation rule could perhaps apply to the class of objects and subjects of existential verbs. But if these analyses are adopted for the sake of argument, then they define the maximal range of verbs for which one might expect to find oblique controllers under the SCH.

Consistent with this prediction, examples with oblique controllers above were limited to predicates that are impersonal, reflexive, or existential (and allow the subject to undergo the genitive of negation rule). Thus, (5) has an impersonal verb; all the quantifying predicates are impersonal. (35) above has a benefactive controller with a reflexive verb. Existential 'be' regularly allows its subject to be in the genitive under negation, and regularly allows oblique control. (32) shows a locative controller of both *Svoj* and *Sebja* Reflexivization with the verb *idti* 'go, occur', which can (at least in some restricted contexts) allow the genitive of negation rule.

There are other examples, however, that are

not consistent with this prediction. Three distinct types can be documented. First, oblique control occurs with verbs that are neither reflexive nor existential, and whose subjects would never undergo the genitive of negation. An example with possessor control is (53), with *podrasti*; the subject genitive of negation rule is not possible for this verb (actually, a variant with another prefix). Similarly, (55) has locative control with *zagovorit'*, an intransitive verb that does not allow the genitive of negation:

- (53) — *Podumat', i my byli kogda-to bezusye, a teper' (u menja) moja/svoja gvardija podrosla, Ivanu-to moemu, staršemu, dvenadcat' skoro.*
'To think, even we were once young, but now I have my own squadron grown up; Ivan, my oldest, is almost twelve.' (PPr, S 203: *svoja*)
- (54) **Detej ne vyrastaet bez šišek.*
('There don't grow up children without bruises.')
- (55) — *Dumaju, (v nem) zagovorit ego/svoja krov'.*
'I think that his own blood will speak up in him.' (PPr, S 389: *svoja*)
- (56) **Nikogo ne zagovorit.*
('There won't speak up anyone.')

Both of these examples were attested textually, although without any explicit controller. Under the right discourse situation (namely, contrast), a possessor can even govern *Svoj* Reflexivization in the subject of a transitive verb:

- (57) — *Ne mogu zamenit' tebjja, i u menja svoi studenty pišut èkzamen.*
'I can't take your place, I also have my own students writing an exam.'

It goes without saying that subjects of transitive verbs cannot undergo the genitive of negation. In these cases, then, the final subject is also an initial subject; yet oblique control is possible under positive set reference.

A separate class of counterexamples involves ordinary copular sentences with predicate adjectives or nouns. Although these sentences are semantically stative, they are not existential in sense; the subject of a copular sentence can never be in the geni-

tive under negation. Since ability to undergo the genitive of negation rule is the only positive evidence for initial objecthood, the last fact argues that the final subject of a copular sentence is an initial subject, not an initial object. Nevertheless, copular sentences allow oblique control: possessor in (58), benefactive in (59), and dative in (60):

- (58) *Plan ee/svoej dal'nejšej žizni byl u Mani gotov.*
 'Manja had a plan for her future life ready.'
 (PPr, S 220: *svoej*)
- (59) *On ponimal, što ja ne smogu i ne budu sprašivat' s nego sliškom strogo i trebovatel'no, potomu što ja veđ' dlja nego svoj odnoklassnik.*
 'He understood that I couldn't and wouldn't be too strict or demanding with him, because I was for him his classmate.' (MI 258)
- (60) *Svoja-to von' každomu mila!*
 'One's own scent is pleasant to each person.'
 (LL 33)

A final, even more devastating class of examples involves passives. In a passive, the initial subject is demoted to chomeur status as the initial object is promoted; no oblique could be the initial subject. Yet control by obliques is attested in passives, with possessors ((61)), datives functioning as indirect objects ((62)), and benefactives ((63)). These examples are attested textually without agents, but agents can be provided:

- (61) *U nix byl v sadu ustroen (otcom) svoj tajnik.*
 'They had their own hiding place built (by their father) in the garden.' (PPr, S 623)
- (62) *Každomu na ètom svete svoja mera položena (sud'boj), ne perestupiš'.*
 'For each person his own limit has been set (by fate), you can't cross it.' (PPr, S 199)
- (63) *Dlja každygo na ètom svete svoja mera položena (sud'boj), ne perestupiš'.*
 'For each person his own limit has been set (by fate), you can't cross it.'

These examples argue convincingly that the SCH is incorrect, given that there is no level in the derivation when the oblique controller could have been the subject.

One point that should be mentioned is that the distribution of reflexives in such sentences is strictly limited: they can occur only in the subject target phrase, an adnominal genitive modifying the subject ((58)), or in predicate position ((59)). This distribution will be useful later.

7. Alternatives. Some alternative proposals that come to mind for possessor controllers are the following.

(a) Ascension analysis. One could suggest that possessors originate as adnominal constituents which can undergo a rule that makes them ascend from the noun phrase to assume a grammatical relation with respect to the predicate. This rule would leave a copy of the possessor in the host noun phrase which would later serve as the target for reflexivization. If the relation assumed by the ascendees were that of subject, control by possessors would be predicted.

There are several problems with such a proposal. First, there is no evidence that possessors are final subjects; case marking and control of agreement contradict this claim. Second, ordinarily an argument takes on the grammatical relation of the host out of which it ascends (Perlmutter and Postal 1974); the ascension analysis therefore works naturally for cases where the possessor can be assumed to ascend out of the subject—that is, where the target for reflexivization will be the (former) subject. But as argued in Section 4, reflexivization controlled by obliques is not limited to (former) subject targets. Third, it is not clear how an ascension analysis would be applicable at all to cases that result in *Sebja* Reflexivization. Fourth, in order for this proposal to be maximally applicable, it would be necessary to posit other ascension rules for benefactives, locatives, and datives (even in existential sentences). This proliferation of ascension rules is suspicious.

(b) Biclausal analysis. One could propose that any of the oblique controllers could appear in two clauses; in the higher it is the subject, in the lower it is an oblique. In a process of clause reduction all surface manifestations of the subject of the higher clause are lost, except that it is allowed to control reflexivization in the resulting single clause by virtue of having been the subject of the

higher clause. In strict syntactic terms this proposal has no merit. Inversion and existential sentences give no evidence for biclausality other than control of reflexivization, the fact which is to be explained. The higher clause has no properties of an ordinary clause, so in any case it is a representation of a different kind than the representation of grammatical relations in the real surface clause.

(c) Configurational analysis. Grammatical relations could be defined in terms of structural configurations, and control of reflexivization restricted to final configurational subjects (Chvany 1975). In existential and inversion sentences an oblique (marked with case) replaces a dummy subject and thereby becomes a controller. Some objections: such sentences often have a nominative that controls verb agreement; this nominative is frozen in object position, since the subject slot is filled first by the dummy and then by the oblique. This fact complicates the statement of nominative case distribution and control of verb agreement, which are otherwise limited to configurational subjects. More importantly, this configurational 'object' can control reflexivization, in direct contradiction to the basic statement of control. Finally, oblique control is not limited to sentences with initial dummy subject.

Thus, the alternatives have no advantages over the demotion analysis for possessors discussed above.

8. Conclusion. In summary, the SCH incorrectly predicts there will be a unique oblique controller per predicate, and it incorrectly predicts oblique control will be impossible in sentences with initial subjects distinct from the oblique controller. It is therefore necessary to adopt some version of the OCH, in which oblique control is motivated by some property other than grammatical relations. I suggested above that oblique control can be described by positing one or more axes with hierarchized relations such that the relation of prominence on a secondary axis can sometimes make up for a lack of prominence on the axis of grammatical relations and qualify an oblique to function as the controller.

To give some substance to this proposal it would be necessary to answer the two questions posed above in Section 2: first, what the class of possible oblique controllers is; and second, what the relation is between oblique control and the predicate. Answers to these questions require a semantic description of existential and inversion predicates that is beyond the scope of this paper. Two brief

remarks will have to do at this point.

First, any oblique that functions semantically as a standard for the axes of quantification or modality should be able to function as a controller; further, one might expect that the semantic strength of an oblique as standard will determine its strength as controller. Intuitively it is reasonable to suppose that benefactives can be standards on the axis of modality; they are like datives, only weaker. Consistent with this intuition, the benefactive is a weaker controller than the dative. For example, in (4) the dative controls reflexivization into the benefactive even though the latter is the topic; reverse control is impossible:

- (64) **Dlja nee sebe ne nužno ničego.*
 ('For her nothing was necessary to herself.')

Similarly, a locative is a weaker standard of quantification than a possessor, and seems to be a weaker controller.

Second, although oblique control is not limited to existential and inversion predicates, it clearly applies most naturally there: with those predicates reflexivization can apply to targets of any grammatical relation, and to some extent under the condition of negative set reference; with predicates with a consistent subject, reflexivization can apply only to subject target phrases (and derivative relations, like predicate nominal and adnominal modifier of the subject), and then only under the condition of positive set reference. This is an interesting distribution, whose significance is not entirely clear, but I suggest the following. By definition modals are those predicates that give prominence to the standard of modality; and existentials are those predicates that emphasize the standard of quantification. It seems reasonable, then, that the control strength of obliques as standards should be greater with those predicates that emphasize the standard than with those, like actives with consistent subjects, that do not.

NOTES

¹Thanks to Emil Draitser and Nadežda Mathison for serving as informants for this study. I found that there was considerable variation in judgments about the use of reflexive and nonreflexive forms in sentences with oblique controllers, more than in other aspects of Russian reflexivization. In any case,

what is crucial to the argument is that the reflexive form can be used at all under the conditions discussed in Sections 5 and 6. The idea of using the work of Petr Proskurin, which contains an unusual number of interesting examples of reflexivization, derives from Klenin (1974).

²I will not discuss here cases where the reflexive form is not controlled by any constituent of the sentence, as in:

- (i) *Svoi ved' i russkij jazyk znajut otlično, s nimi i perepisvat'sja možno po-russki.*

'After all, one's own people know Russian quite well, and one can correspond with them in Russian.' (i.e., rather than in Esperanto) (MI 278)

Although such sentences are usually taken as evidence that *svoj* can be a lexical adjective (Klenin 1974, Perlmutter 1978a: fn. 6), it can be noted that such uncontrolled reflexives share a number of semantic and distributional properties with reflexives controlled by obliques and, to a lesser extent, with controlled reflexives generally. Such sentences can then be taken as evidence for the necessity of positing a controller on an axis other than the axis of grammatical relations, an argument I will pursue in another place.

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THE HISTORY OF GERUND SUBJECT DELETION
IN RUSSIAN

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0. *Introduction*

This paper offers an analysis of one aspect of the development of modern gerund constructions in Russian. I propose that the major change in the structure of gerund clauses, namely the replacement of main subject deletion by gerund subject deletion, should be considered together with the more general change in subject deletion in Russian, i.e., the loss of the rule of subject deletion over a variable.

1. *Apparent Rule Reversal*

A typical 17th-early 18th century gerund clause is represented by (1); the subject of the gerund was not deleted, while the main subject underwent deletion:

- (1) *Šed Jakov, i vide mertvoe ego telo.* (Šujsk. 32)¹
having-gone J. and saw dead his body
'Jakov_i having gone, and (he_i) saw his dead body.'

The modern counterpart of this sentence is represented by (2):

- (2) *Pojdja, Jakov uvidel ego mertvoe telo.*
having-gone J. saw his dead body.'
'Going (there), Jakov saw his dead body.'

This situation, viewed by itself, could be analyzed as a case of "rule reversal," whereby the rule of gerund subject deletion under identity with a coreferent main subject replaced the old rule of main subject deletion under identity with a coreferent gerund subject.

2. *Cases where the Condition for Rule
Reversal is Not Met*

As opposed to sentences like (1), in which the main subject was deleted under identity with the gerund subject, there also existed sentences in the 17th and early 18th century in which the gerund and the main subject were not coreferent, such as (3)-(5):²

- (3) *On že skoro šed v sunduk, ona že*
 he [ptcl] quickly having-gone in chest she [ptcl]
zamknula ego v sunduke. (Karp 117)
 locked him in chest
 'He having quickly gotten into the chest, she
 locked him up in the chest.'
- (4) *Potom razbojniki priexavše s dobyči, i on ix*
 then robbers having-come from job and he them
vstretil po obyčaju atamanskomu. (Vasilij 116)
 met upon custom of-chief
 'Then the robbers, having returned from the job,
 and he met them in a manner customary for the
 chief.'
- (5) *I posle togo pod'jačeij iz sudnogo dela*
 and after that scrivener from judicial record
vypišet korotko, kto čto govoril, i
 will-extract briefly who what said and
vypisav, po kotoromu delu možno sud'jam
 having-extracted in which case possible to-judges
ukaz činit' ... i oni to delo veršat. (Kotoš. 121)
 judgment make and they that case rule-on
 'And after that, the scrivener makes a brief ex-
 tract from the judicial record, (concerning) who
 said what, and having written (it), ... and they
 (sc. the judges) rule on that case which (case) it
 is possible for judges to pass judgment on.'

In (3) and (4), neither the gerund subject nor the main subject is deleted; in (5), the gerund subject underwent deletion, while the main subject (non-coreferent with the gerund subject) is retained. If the main subjects were deleted in (3)-(5), they would not have been recoverable; the deletion of the gerund subject in (5) is triggered by a coreferent NP in the preceding context. Sentences like (3)-(5) appeared in contexts describing a succession of events caused by at least two different agents, and served precisely as the locus where the topic of the discourse changes from one NP to another. Cases like (3)-(5) became obsolete by the end of the 18th century.³

The second sentence type in which the condition for rule reversal is not met is that in which both the gerund and the main subject were deleted in the 17th-early 18th century. (6) is an example of this

type:

- (6) *I ottole bole podvizasja k bogu, xodja k cerkvi*
and thereupon more served to God going to church
po vsja večery moljašesja bogu
on all evenings prayed to-God

.....
.....
Ne pomnoze že skaza nam tajno i zapoveda
not after-long [ptcl] told us secretly and com-
manded

ne rešči nikomu že.
not tell noone [ptcl]

I poživ vo vdovstve 9 let, mnogu
and having-lived in widowhood 9 years much

dobrodeteľ' pokaza ko vsem, i mnogo imenija v
benefaction showed to all and much belongings in

milostynju razda, ... (Ulijanija 356)
alms gave-away

'And thereupon (she) served God more, going to
church, praying to God every night

.....
.....
Not much later, (she) told us secretly (what had
happened), and forbade us to tell anybody.

And having lived as a widow for nine years,
(she) showed great charity to all, and distributed
much of (her) belongings as alms.'

The larger context is adduced here to show that *ona* 'she' (Ulijanija) is the theme of the entire preceding paragraph (the omitted part describes her encounter with a saint and devils while praying in church). Notice that no subject occurs in the sentence preceding the gerund clause, and that the aorist and imperfect verb forms intervening between the first mention of *Ulijanija* and the gerund impart no information about the gender and, partly, about the person of the subjects (aorist and imperfect do not distinguish between the 2nd and 3rd person singular). It is the discourse structure of the paragraph that disambiguates the reference of the subjects of the sentences (most of which are, incidentally, deleted). The same holds true for the deleted subject of the gerund, which is deleted under identity with the coreferential NP of the preceding context. It is significant that the deletion of the gerund subject

must be a forward inter-S deletion, triggered by the topic of the preceding context. Examples of inter-S forward deletion abound in the 17th century, and need not follow a long paragraph with a single topic: the trigger need only be the topic of the sentence immediately preceding the gerund clause. By the first third of the 18th century, cases of the forward inter-S deletion of a gerund subject become noticeably less frequent; as such, they cease to be productive by the end of the 18th century.⁴

If we analyze the change of (1) into (2) as a case of rule reversal, cases like (3)-(6) must be treated separately from cases like (1); their disappearance must then be treated as a rule loss, and the two phenomena appear to be unrelated. As an alternative, we might try to relate the apparent rule reversal and rule loss to each other. In order to do so, I shall now consider the facts from a broader perspective, i.e. by placing the change in the structure of gerund clauses into the general context of subject deletion in Russian.

3. Loss of Inter-S Gerund Subject Deletion

The cases represented by (5) and (6) shed light on an important aspect of the change that occurred between the 17th century and modern times. Such cases demonstrate that inter-S forward deletion was a productive rule in the 17th century. When the subject of the main clause that followed the gerund clause was coreferent with the gerund clause, as in (6), it, too, was deleted until at least the end of the 17th century. When the main subject was different from the gerund subject, as in (5), it was, of course, retained, so as to satisfy the universal requirement on recoverability. Notice, however, that already by the end of the 17th century we have cases like (7), in which the main subject is retained, even though it is coreferential with the deleted gerund subject:

- (7) *I stolnik prikazal dat' dvoreckomu svoemu deneg*
and courtier ordered to-give to-butler self's
money

500 ru(blev). I prostjas', Frol Skobeev poexal na
rubles and having-bid-farewell F. S. went to
kvartiru svoju i z ženoju svoeju Annuškoju.
apartment self's and with wife self's A.

(Frol 430)

'And the courtier ordered his butler to give 500 rubles of money. And having bid farewell, Frol

Skobeev went to his apartment, and with his wife Annuška.'

In this sentence, gerund subject deletion cannot be controlled by a trigger in the preceding context, because no such trigger is found there, as the context of (7) indicates. Therefore, in (7), the subject of the gerund must have been deleted by the trigger in the main clause, i.e. by the modern rule of gerund subject deletion. Example (7) represents a growing class of sentences which become dominant in the second half of the 18th century, when they cease to coexist with sentences generated by the old rule of main subject deletion; it is this class that actually constitutes the overwhelming majority of modern cases of backward gerund subject deletion.

In (7) we see an early piece of evidence for a switch in the control of gerund subject deletion from inter-S forward deletion to intra-S backward deletion. Notice that the contrast between (1) and (2)—which could be analyzed, on the face of it, in terms of a "rule reversal"—and the contrast between (6) and (7) share a feature, namely that the new control in (2) and (7), as opposed to (1) and (6), is by the main subject. This particular point is of crucial importance when considered in connection with another general fact in the history of 17th-18th century Russian, namely the development of anaphoric surface subjects. This point requires some elaboration.

4. *Loss of the Rule of Subject Deletion over a Variable*

It is well known that subject pronouns are synchronically less deletable in Russian than in other Slavic languages.⁵ The traditional explanation for this fact (cf. e.g. Budde 1891:6, Sobolevskij 1907: 240, Istrina 1923:112ff., among others) is that it derives from the Russian past tense: this category imparts no information about person, and thus, if the subject is deleted, it is not recoverable. The need for the subject in the surface structure of sentences in the past tense is said to have been generalized, in Russian, to all tenses. Under this explanation, the loss of the copula in sentences with \bar{l} -participles played a crucial role in the non-deletability of Russian subjects, since with the loss of the copula (which had person marking), the \bar{l} -participles became ambiguous.

This explanation has been argued against by Borovskij (1952:13-30), and, more convincingly, by

Lomtev (1956:53-60). In particular, Lomtev argues that it is the spread of personal pronouns that made the use of the copula obsolete by rendering it informationally redundant. My materials indicate that a major change in the usage of subject pronouns and subject nouns took place around the middle of the 18th century. In texts before this time, subject pronouns could be deleted under identity with the first topic NP mentioned, over a span of a paragraph or more. Consider an example from a hagiography of St. Ulijanija: one subject pronoun is found separated from another by 22 verbs and gerunds, whose underlying subject is *Ulijanija*; between these two mentions of *Ulijanija*, several other persons are mentioned, although they are not agents or subjects. It is only after the mention of active agents that the pronoun *ona* 'she' appears after a long interval, and this pronoun is specifically marked by the so-called "emphatic" particle *že* (Ulijanija 353-54). (The traditional term "emphatic" is somewhat misleading, since *že* has a specific and definable function in these texts: it marks an anaphoric subject which differs from the subject of the preceding context, and in this function it is virtually obligatory in such situations.) Forward inter-S deletion of the subject was thus possible over an infinite number of S-boundaries, in the 17th century, unless the subject's recoverability was threatened by an intervening agentive NP.

Subject pronouns are deleted in this way, unless unrecoverable, until the beginning of the 18th century. Thus, in a text from the beginning of the 18th century, it is not difficult to find two coreferential subjects separated by 5-10 verbs and gerunds having the same underlying subject, and with other intervening non-agentive subject NPs. Yet, already at this time, we can find subject pronouns where they would not normally have been found half a century earlier; furthermore, such subject pronouns need not be followed by the particle *že*. Consider, for example, the following passage, from the early 18th century:

- (8) *Vasilij; že, vzjav ot otca svojego blagoslovenie*
V. [ptcl] having-taken from father self's blessing
priide v Sanktpeterburx i zapisalsja v morskoi
came to S. and signed-up in marine
flot v matrosy. I otoslali ego; na korabl' po
fleet in sailors and they-sent him to ship upon
opredeleniju; na korable prizyvaše po obyknoveniju
assignment on ship called according-to-custom

*matrosskomu zelo nelestno i pročix matrosov; v
sailors' very unpleasantly and other sailors in
naukax Ø_i prebyvaše i (u) vsex person znatnyx v
studies remained and at all nobles aristocratic in
usluženi poljubilsja, ktorogo vse ljubili i
service came-to-be-loved whom all loved and
žalovali bez mery. I slava ob nem velika prošla
favored without measure and fame of him great
went*

*za ego nauku i uslugu, poneže oni znal v naukax
for his studies and service for he knew in sciences
matrosskix vel'mi ostro ... (Vasilij 108-9)
sailors' very sharply*

'Vasilij, having received his father's blessing, came to Sankt-Petersburg and signed up in the marine fleet as a sailor. And (they) sent him to a ship as an assignment; on the ship other sailors too were addressed very rudely, as is the custom among sailors; (he) remained in training and came to be loved by all the nobles while serving them, (a man) whom all loved and favored without measure. And a great reputation has arisen about him for his knowledge and service, for he had a very sharp knowledge of seafaring ways.'

The Ø_i in (8) indicates the place where the subject pronoun would be expected, if it were a modern text; the lack of such a pronoun is thus an archaic feature of (8). On the other hand, the underlined pronoun *on* 'he' would not be present in this position half a century earlier; the presence of *on* 'he' in this position is therefore an innovative trait of (8).

By the second half of the 18th century, subject pronouns become generally obligatory in Russian declarative sentences. Consider, for example, (9), which is a description of a single person, uninterrupted either by a series of verbs or by other agentive subject NPs:

- (9) *Sej vel'moža imeet gorjačku veličat'sja svoeju
this nobleman has fever to-boast with-self's
porodoju. On proizvodit svoe pokolenie ot načala
origin he derives self's ancestry from start
vselennoj. (Truten' 118)
of universe*

'This nobleman has a disease of boasting about his

good birth. He traces his genealogy to the beginning of the universe.'

In this environment, the presence of *on* 'he' in the beginning of the second sentence is due to the new rule of obligatory subjects in declarative sentences. The previously unbounded rule of forward inter-S co-referential subject deletion has thus been lost in Russian by the middle of the 18th century.

5. *Loss of Gerund Subject Deletion over a Variable*

It is precisely this general rule, lost in Russian sometime in the middle of the 18th century, that is crucial for an understanding of the change that occurred in the structure of gerund clauses at about the same time. By the loss of the rule that enabled subject NPs to be deleted upon identity with an NP separated from them by an indefinite number of sentence boundaries, and by the newly arisen tendency to retain anaphoric subjects on the surface of sentences, as well as non-anaphoric ones, the subjects of the main clauses became generally undeletable in sentences with gerund clauses. Thus, when the gerund subject and the main subject were identical (as in the majority of sentences with gerund clauses), once the main subject had to be mentioned, the gerund subject became deletable, regardless of whether or not it was identical with the subject NP of the preceding context. In cases like (1) and (2), this process results in an apparent "rule reversal," as mentioned above. In cases like (6) and (7), it may be that forward inter-S deletion was reinterpreted as backward intra-S deletion at the point when the subjects became obligatory. Perhaps the few cases, like (10), in which both the gerund and the main subject are present in the surface structure, belong to that transitional stage during which the main subject was beginning to be felt less deletable, while intra-S backward deletion was not yet quite obligatory:

- (10) *Videv že Vasilij, što razbojniki i množestvo*
 having-seen [ptcl] V. that robbers and multitude
ix naroda stojašče ... p'janyx, to otvetstvoval
 their people standing drunk then answered
im Vasilij: ... (Vasilij 112)
 them V.

'Vasilij having seen that the robbers and their

many people were standing ... drunk, so Vasilij answered them: ...'

If this is the case, the few examples like (10) constitute important evidence in support of my claim that the newly arisen general undeletability of subjects of finite clauses is inseparable from the change in the structure of gerund clauses.

For reasons not yet entirely clear, gerund subject deletion by the main subject became an obligatory rule,⁶ once the main subject could no longer be deleted. It is a statistical fact, however, that cases in which the two subjects were totally unrelated and in which neither of them was deletable comprised less than 10% of all cases of sentences with gerund clauses in the 17th century; this situation may be one of the major factors which contributed to the development of the obligatory character of the deletion of the gerund subject. Once, however, the deletion of the gerund became obligatory, the few sentences in which the gerund subject differed from the main subject could no longer be retained; hence the loss of sentences like (3)-(6).

Thus far I have discussed only cases in which the gerund clause precedes the main clause; but the situation is essentially the same when the order of the clauses is reversed. In the 17th century, if the main clause preceded the gerund clause, both the main subject and the gerund subject were deleted, if they were identical to a topic NP in the preceding context. If they were not, the second occurrence, i.e. the gerund subject, would normally be deleted. The loss of the rule of coreferential subject deletion over a variable affected the former case, whereby only the gerund subject became deleted, while the main subject was now retained, regardless of whether or not it was coreferent with the topic NP of the preceding context. The rule of gerund subject deletion thus became intra-S when the main clause preceded the gerund clause, as well as in the reverse order. As for those cases in which the two subjects were different, and hence the gerund subject could not be deleted without destroying its recoverability: such cases ceased to be generated, just as with the reverse order.⁷

Thus, regardless of the order of the clauses, the following generalization can be made. While the rule of unlimited coreferential subject deletion was operative (unless recoverability was threatened by an intervening NP), all subjects of both verbs and gerunds, following the first occurrence, were normally

deleted. When this rule was lost, and subject NPs became generally obligatory for Russian, gerund subjects became obligatorily deleted; when this deletion rendered the gerund subject unrecoverable, gerund clause formation was blocked.

6. *Implications*

The analysis proposed here has several implications for the history of the Russian language as a whole.

Potebnja and grammarians after him tied the rise of gerund clauses, and the elimination of gerund clauses whose subjects were not identical to the main subjects, to an increase in the "centripetal" character of the sentence toward its predicate verb (Potebnja 1889:182, 187, 196). The analysis offered here, however, ties the origin of modern gerund clauses to a discourse-oriented phenomenon, namely to a change in the conditions on anaphoric coreferential deletions. Since the deletion of the gerund subject is, like any coreferential deletion, essentially a process related to the discourse structure of sentences, it is logical to expect that a change in the conditions on this deletion is a reflection of a change in constraints on discourse structure. When viewed in this way, it is impossible to dismiss as an accidental coincidence the fact that the major change in anaphoric coreferential deletions occurred at about the same time as the change in the structure of gerund clauses. Therefore, a discourse-oriented analysis of the sort presented in this paper must be considered to be crucial to the solution of the problem of the change in the structure of gerund clauses, regardless of whether or not the "centripetal" character of the sentence is related to this change.

Of course, in claiming that the change in the structure of gerund clauses is tied with the loss of the rule of anaphoric coreferential subject deletion over a variable, we have not explained everything. The question still remains as to why this particular change took place. This question, which has so far not received a satisfactory answer, nevertheless goes beyond the scope of this paper. But from the point of view of the discourse analysis offered here, it seems to me that a possible factor has been hitherto overlooked, and so the following speculations may be allowed.

The change in question occurred during the time when the genres of the Russian literary language underwent a sudden and drastic proliferation. The wide

variety of new genres, in turn, led to a dramatic increase in the number of subjects per paragraph of literary text: thus, such genres as fiction, and philosophical or political pamphlets, entailed a markedly high number of varying subjects per paragraph, compared to hagiographies and chronicles. It was perhaps this sudden high concentration of varying subjects per paragraph which called for the presence of (obligatory) subjects in each sentence, so as to avoid confusion in reference.

An interesting piece of evidence in support of this hypothesis concerns the behavior of the particle *že*. As noted above in section 4, the particle *že*, in the language of 17th century texts, served as a means of distinguishing an anaphoric subject which differed from the subject of the preceding context. But in the early novellas belonging to the late 17th and early 18th centuries, in contexts where several agents interact within one sentence or over a span of several sentences, the particle *že* began to appear after each mention of a new subject (cf. (3)). At the time when subjects became generally obligatory in Russian, however, the particle *že* ceased to mark newly mentioned subjects. It seems that, following a stage during which *že* was placed after the subject NP of practically every clause, the marking of each occurrence of a subject in this way was felt, finally, to be redundant. Thus, the hypothesis that a change in the content and make-up of texts effected a change in the structure of the language may actually be testable.⁸

An additional factor associated with the proliferation of new genres is the question of French influence. It is not excluded that French, with its obligatory surface subjects, exerted some pressure as to the presence of subjects in surface structures of sentences with finite verbs. Support for such a hypothesis could come from the fact that most of the new genres were introduced via French literature, and further, from the fact that subject deletion in modern Russian is not unusual in colloquial speech, while it is not part of the literary language, unless it reproduces colloquialisms.

Although the reasons for the loss of coreferential subject deletion over a variable are not entirely clear, the fact of the loss is indisputable. Given this fact, I have attempted here to re-evaluate a network of interesting facts within the diachrony of gerund clauses in Russian, and to suggest a relationship between the more general loss of subject deletion, and the history of the structure of gerund clauses. The analysis was performed from the point of view of dis-

course structure, and it is a challenging task for the future to investigate the ways in which this approach may deepen our understanding of syntactic change in general.

NOTES

¹For abbreviations of texts, see the list of sources below. The translations are mine: especially for the older material, the goal was literalness, at the cost of infelicity or even ungrammaticality in English. In punctuation, I have followed the sources.

²No statistics will be adduced in this paper; for statistical data, as well as for a fuller description of the material used as the basis of this paper, see Yokoyama 1979.

³The only exception to this loss involved sentences with unidentical gerund and main subjects in which the deletion of the gerund subject did not affect its recoverability: in other words, sentences in which the topic of the main clause was identifiable, in spite of its not necessarily being the main subject. For further discussion of such cases see Yokoyama 1979: II, §3.

⁴Such cases are in fact still possible in "private" styles, as in diaries, where the referent is maximally unambiguous; e.g.:

15. aprelja. Vernuvšis' a raboty, ne zastal ee
April having-returned from work not found her
doma.
home

'15 April. Returning from work, didn't find her at home.'

⁵The two major exceptions to this rule are: 1) first person subjects in intimate first person narratives (e.g. inner monologues, diaries; cf. n. 4 above) and 2) answers to questions in which the subject has just been mentioned.

⁶With the exception of the pronouns *oba* 'both', *každyj* 'each', and *sam* '(him)self', as discussed in Yokoyama 1979: II, §1.1.2.

⁷See fn. 3 for exceptions to this.

⁸Cf. also Klenin's discussion of *že* in the *Laurentian Manuscript* of 1377, 1978:183-8.

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DEIXIS AND DETACHMENT
IN THE ADVERBIAL PARTICIPLES OF RUSSIAN*

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0. *Introduction*

0.1 Contemporary Standard Russian (CSR) has a set of non-finite verb forms which are called *deepričastija* in Russian. These verb forms are used for the predicate of an adverbial clause without a subordinating conjunction. Although the English terms "gerund" and "verbal adverb" are often used to refer to *deepričastija*, the designation adverbial participle (AvPrt) is more suitable and will be adopted in this paper.

In CSR, an AvPrt clause never has its own subject, and tense is only marginally expressed in the morphological form of the AvPrt. This paper will address the question of how subject and temporal meanings are assigned to AvPrt clauses.

AvPrt clauses may be either detached (*obosoblennye*) or non-detached (*neobosoblennye*). This distinction is a fact of syntactic structure which can be naturally described in terms of a difference in the Immediate Constituent analysis of the sentence. It will be shown that subject and temporal interpretation of an AvPrt clause is dependent on whether the clause is detached or not. In the interests of maximal generality, this effect should be viewed within the context of the theory of deixis.

Before turning to an analysis of the facts, we must define and explicate the concepts of detachment and deixis.

0.2 The following is a representative definition of detachment:

The semantic and intonational isolation of secondary [attributive or adverbial—GR] constituents for the purpose of imbuing them with a certain independence in the sentence is called detachment (Rozental' 1957:257).

We will take the prosodic aspect of this definition as our operational definition of detachment.

Descriptions of the prosodic characterization of detachment note that the detached constituent is

set off by pauses, has a phrase stress, and is marked by a convex pitch contour peaking on the vowel with the phrase stress. The pitch at that peak and throughout much of the detached constituent exceeds the pitch level of the surrounding constituents.¹

According to Peškovskij (1956:416-17), the underlined AvPrt clauses in the following sentences are detached:

- (1) *Pridja domoj, ja vstretil [ego].*
'Having arrived home, I met [him].'
- (2) *Ja udivljamus', što vy, buđuči tak dobry, ne čuvstvuete etogo.*
'I am surprised that you, being so nice, do not feel this.'

The indicated sources cite the following sentences as examples of non-detached AvPrt clauses:

- (3) *On ušel prostivšis'.* (cited by Peškovskij 1956:422) 'He left having taken leave.'
- (4) *Mež niv zlatyx i pažitej zelenyx ono, sineja, steletsja široko.* (Puškin, cited by Peškovskij 1956:434) 'Between the golden cornfields and green pastures it showing blue stretches afar.'
- (5) *On šel s trudom peredvigaja pravuju nogu.* (Gor'kij, cited by Gvozdev 1973:163) 'He walked moving (his) right leg with difficulty.'

In literary Russian, comma placement does not accurately specify detachment. While the absence of commas indicates the absence of detachment (as in 3 and 5), commas may set off some non-detached constituents (cf. 4), as well as all detached constituents (as in 1 and 2). Šapiro (1955:268-69) points out that while there is no justification for setting off non-detached AvPrt clauses with commas, there is a tradition of doing so.

Many properties distinguishing detached AvPrt clauses from non-detached AvPrt clauses indicate that detachment is correlated with a difference in the Immediate Constituent analysis of the sentence. In particular, a non-detached AvPrt clause is a predicate constituent, while a detached AvPrt clause is a sentence constituent (see Rappaport 1979).

0.3 Paraphrasing Brecht (1974a:489), an index is a

sign which can only be completely defined if its relationship to some point outside of itself, its orientation point, is taken into account. An index need not be linguistic, but we will consider only those which are. Deixis, then, is the linguistic mechanism which interprets (linguistic) indexes. A pronoun is an example of an index, for it must always be coreferential with something, its antecedent.

In order to interpret an index, it is necessary to determine what its external orientation point is. In the case of a pronoun, one must be able to identify its antecedent.

Sometimes a language places fairly restrictive constraints on possible orientation points. For example, it is generally not difficult to identify the antecedent of the reflexive pronoun *sebja* in CSR. In the typical case, the reflexive pronoun must be coreferential with the grammatical subject of its clause. In (6), *sebe* must be coreferential only with the subject of its clause, *on_j* (subscripts are used to identify the referent of the given pronoun):

- (6) *Ja_i znaju, čto on_j uže rasskazal vam_k vse o sebe^{*i,j,*k}.*
 'I_i know that he_j has already told you_k everything about self^{*i,j,*k}.'

There are cases in which the clause subject principle is or may not be adequate (see Klenin 1974 and Timberlake 1979), but the antecedent of *sebja* is always syntactically present in the same sentence as the given occurrence of *sebja*. Deixis will be called tautosentential when the orientation point is a linguistic element in the same sentence as the index. The deixis of *sebja* is always tautosentential.

In the case of some other indexes, the set of possible orientation points is much less constrained. For example, consider the personal pronoun (discussed in some detail in Lasnik 1976). The antecedent may be in the same sentence as the pronoun (7a) or it may be in a different sentence (7b):

- (7) a. *Vanja otdal Bore_i ego_i knigu.*
 'Vanja gave Borja_i his_i book.'
 b. *Borja_i vošel. On_i sel.*
 'Borja_i came in. He_i sat down.'

Example (7a) illustrates tautosentential deixis, and

(7b)—allosentential deixis. Brecht (1974a) introduces the term endophoric deixis for cases in which the orientation point is contained in the message. Endophoric deixis may be tautosentential or allosentential. Thus, both (7a) and (7b) illustrate endophoric deixis.

Deixis need not be endophoric. The orientation point may stand outside the message. In Brecht's terminology, deixis may be exophoric. A personal pronoun may refer to the participants in the speech event, as in:

- (8) *Ja znaju tebjja.*
'I know you.'

As another example of exophoric deixis, Brecht (1974a:514) cites a father's exclamation "I think she's beautiful" upon seeing his new-born baby.

Thus, it is possible to identify various types of deixis in accordance with the status of the orientation point. Furthermore, some indexes are restricted to certain kinds of deixis, while other indexes are less restricted. In particular, we have seen that in CSR, the reflexive pronoun *sebjja* is restricted to tautosentential deixis. Personal pronouns, on the other hand, enjoy considerable latitude, allowing both endophoric (either tauto- or allosentential) and exophoric deixis. When an index is restricted to tautosentential deixis, we will say that it is bound by sentence grammar, or simply bound. When an index may range over endophoric and exophoric deixis, we will say that it is free. In CSR, reflexive pronouns are bound, personal pronouns are free.

Of course, the reflexive pronoun *sebjja* does not admit all forms of tautosentential deixis. And there is a complex of grammatical, semantic, functional, and pragmatic conditions on the interpretation of personal pronouns. Nevertheless, it is possible to abstract away from these facts and observe that there is a fundamental difference in the deictic nature of reflexive and personal pronouns. Although we cannot pursue this point here, the other constraints and conditions to a large extent follow from the fundamental difference between bound deixis and free deixis.

0.4 At this point, the conclusion of this paper can be expressed very concisely: subject and temporal meanings are assigned to non-detached AvPrt clauses by bound deixis, and to detached AvPrt

clauses by free deixis. This distinction is in principle parallel to the distinction between reflexive and personal pronouns.

This result is interesting for several reasons. First, I do not believe that the specific differences between detached and non-detached AvPrt clauses discussed below have been observed before. Second, one consequence of our conclusion is that syntactic structure expressible in Immediate Constituent analysis is among the factors which affect the way deixis functions (see Brecht 1974a for some discussion of other factors). Third, the deictic analysis developed to describe grammatical categories extends to the sort of syntactic and morphological neutralization which occurs in AvPrt clauses.

1. *Subject deixis and detachment*

1.0 An AvPrt clause in CSR never contains its own subject. Nevertheless, speakers have clear intuitions about what is understood to be the subject. An AvPrt clause is deictic in that it may not be fully understood without reference to an external point of orientation, the understood subject. In order for speakers to use AvPrt's, their internal grammars must specify how to determine the understood subject. Accordingly, an adequate description of AvPrt's in CSR must uncover the mechanism used to determine the understood subject. In this paper we provide a first approximation of this mechanism: the understood subject of a non-detached AvPrt clause is determined by bound deixis, while that of a detached AvPrt clause is determined by free deixis.

Before addressing the facts, it is important to define the linguistic object being described. Our task is to investigate the grammatical system of CSR, the linguistic competence of its speakers. The discussion will not be limited to normative CSR. The norm of a language is based upon many facts, including stylistic felicity, euphony, clarity, and the tradition of the literary language. All of these issues are important and interesting, but they should not be identified with the grammar of the language, especially the spoken language.

Many of the examples cited in this section violate the CSR norm. Nevertheless, it is justified to consider them as facts of CSR. Almost all of these examples originated in recent journalistic or belletristic writing. They have all been judged acceptable independently by several recent Soviet immigrants, native speakers of Russian.² Soviet grammars

and stylistics handbooks often confirm that such non-normative constructions are in fact grammatical.³ Not only do some sources state that these constructions are often used,⁴ but they provide indirect confirmation that such constructions are common by explicitly proscribing them. It would seem safe to assume that authorities would not warn speakers against using a given construction if it were not fairly frequent and ingrained. Often these sources are careful to characterize such constructions as "outside the literary norm" rather than as 'ungrammatical' (see, for example, Ickovič 1974). Surely a simple grammatical error, such as using the wrong case or an agreement failure, would not enjoy the approval of speakers and the notoriety among normative grammarians that these AvPrt constructions do. Rather, speakers are producing constructions according to their internal grammars which violate the requirements of an external literary norm. In such case of conflict, we are interested in the speaker's internal grammar.

1.1 It will be convenient to use the locution 'X controls the AvPrt' in the sense of 'X is the understood subject (external orientation point) of the AvPrt'. This use of the word control is not to be confused with other, more specialized uses found in other recent linguistic work.

By far the most typical case of AvPrt control is subject control. In this case, the grammatical subject of the matrix clause (the clause in which the AvPrt clause is embedded) is the understood subject of the AvPrt. Subject control, typical of both detached and non-detached AvPrt clauses, may be illustrated by the following examples:

- (9) a. *Ona poslala čeloveka i devušku iskat' ego i, ožidaja, sidela.* (cited by Peškovskij 1956:421) 'She sent a man and a girl to look for him, and, (while) waiting, sat.'
- b. *Ona poslala čeloveka i devušku iskat' ego i sidela ožidaja.* (L. Tolstoj, cited by Peškovskij 1956:421) 'She sent a man and a girl to look for him and sat waiting.'

Ona, the subject of the matrix clause, controls (is the understood subject of) the AvPrt's. We will assume that the interpretation of AvPrt's embedded under nonfinite verb forms involves a natural extension of subject control (Babby 1975, Rappaport 1979).

AvPrt control is by no means restricted to

subject control. There is a restricted group of circumstances under which a matrix clause noun phrase other than a nominative subject may control both detached and non-detached AvPrt clauses. There are five such cases.

In many Russian psychological predications, the experiencer is expressed in the dative case. The examples in (10) show that dative experiencers can control both detached and non-detached AvPrt's.

- (10)a. *Slušaja etot rasskaz, mne bylo strašno.*
(cited by Švedova 1970:645) 'Listening to this story, I was frightened.'
- b. *Mne skučno slušaja lekcii.*
'I am bored listening to lectures.'

Russian usually expressed possession with the verb *byt'* 'to be', in which case the possessor is expressed by a prepositional phrase (see Chvany 1975: Ch. 3 for details and analysis). For example, to say "I have money", Russian employs a construction resembling "by me is money": *u menja est' den'gi*. The possessor in such a construction will be called an oblique possessor. Oblique possessors may control both types of AvPrt's:

- (11)a. *Slušaja muzyku - preljudy i ballady Šopena - u nego slezy byli na glazax.* (*Nauka i žizn'*, cited by Ickovič 1974:80) '(While) listening to music, the preludes and ballads of Chopin, he had tears in his eyes.'
- b. *U menja xorošie perspektivy živja v Bostone.*
'I have good prospects living in Boston.'

The oblique agent of a passive clause may control either a detached AvPrt (12a) or a non-detached AvPrt (12b).

- (12)a. *Razvivaja navyki voždenija, voditeljami budut izučat'sja mery predostorožnosti, obespečivajuščie bezopasnost' pešexodov.* (*Za bezopasnost' dviženija*, cited by Ickovič 1974:86) '(While) developing driving skills, safety measures guaranteeing pedestrian safety will be learnt by the drivers.'
- b. *Točka povorota možet byt' najdena, tol'ko znaja epjuru davlenija.* (*Osnovanija, fundamenty i mexanika gruntov*, cited by Ickovič

1974:86) 'The point of rotation can be found only (by) knowing the vectors of pressure.'

AvPrt clauses can be embedded in a noun phrase rather than a verb phrase or sentence. In this case, the controller of the AvPrt is determined entirely by this noun phrase. The rest of the matrix clause is irrelevant. In the following examples, the square brackets enclose a noun phrase in which an AvPrt clause is embedded. The AvPrt clause in (13a) may be read as detached, and the one in (13b)—as non-detached.

- (13) a. *Ne isključena mogućnost' [ispol'zovanja podobnyx baterij i na površnosti Zemli, pokriva ja imi bol'sie prostranstva suši]. (Nauka i žizn', cited by Ickovič 1974:102)* 'Not excluded is the possibility of using such batteries on the Earth's surface as well, covering large areas of land with them.'
- b. ... *predusmatrival'sja drugoj variant - [pered rod sovetskix vojsk k aktivnym dejstvijam, ne ožidaja udarov protivnika]. (S. M. Štemenko, cited by Ickovič 1974:101)* 'Another variant was foreseen: the movement of the Soviet army into action without waiting for an attack by the enemy.'

Finally, both kinds of AvPrt's may be embedded in an impersonal clause.

- (14) a. *V syroj utrennej mgle blesnula zarnica. Buxnulo. Zavylo, uxodja ... i sejčas že ... zaxlopali vystrely. (A. N. Tolstoj, cited by Vlasov 1958:36)* 'In the damp morning darkness summer lightning flashed. It thundered. It began to howl, moving away and right now shots clapped.'
- b. *Lilo etogo doždja xolodnogo ne perestavaja. (Solženicyn)* 'It poured cold rain without stopping.'

These five cases of non-subject control intuitively seem to be extensions of subject control. Not only do the controllers share certain syntactic properties with canonical subjects (such as triggering reflexivization—see below), but they typically have certain non-syntactic subject properties as well, such as topic status and semantic prominence. These

facts have led linguists of various schools to assign some sort of subject status to these noun phrases. In order to account for the subject-like behavior of dative experiencers and oblique possessors, Chvany (1975:27, 99-100) has proposed that they have the same dominance relations as surface grammatical subjects. (In terms of the tree structures of transformational grammar, this means that they are immediately dominated by the S-node and are 'sisters' of the Verb Phrase.) As for the oblique agent of a passive clause, it has been traditional in transformational grammar to assume that it is the subject (in the same configurational terms) at the level of deep structure (see, for example, Chomsky 1957:42-43, 77-81). The generalized "X-bar" theory (\bar{X} grammar), as developed by Chomsky (1970) and Jackendoff (1977), proposes that noun phrases as well as sentences have subjects. This generalized notion of subject would undoubtedly be involved in the control of AvPrt's embedded in noun phrases. Recent work in Relational Grammar has argued that at least some impersonal sentences have a dummy subject, lexically expressed in some languages, not in others (see Perlmutter 1978). Independent of the correctness of these claims, we will use the term subjectoid control to capture the intuition that these types of control represent an extension of subject control to noun phrases or semantic actants that have some but not all of the properties traditionally associated with grammatical subjects.

1.2 So far, it has been shown that both detached and non-detached AvPrt's may be controlled by subjects and subjectoids in the matrix clause. Now we turn to other possible controllers.

The first logical step is to consider matrix clause noun phrases which are neither subjects nor subjectoids. Such noun phrases will be called oblique (as I use it here, this term includes accusative subjects). Detached AvPrt's admit oblique control.

- (15) a. *Projdja pervyj obžig, izdelie pokryvajut glazur'ju.* (*Nauka i žizn'*, cited by Ickovič 1974:84) 'Having passed through the first kilning, (they) cover the article with glaze.'
- b. *Ne imeja vozmožnosti lično otvetit' na vse pis'ma i telegrammy, pozvol'te mne čerez vašu gazetu vyrazit' blagodarnost' vsem tovariščam za pozdravlenija i dobre poželanija.* (from an unspecified newspaper, cited by Ickovič

1968:34) 'Not having the opportunity to personally answer all the letters and telegrams, allow me through your newspaper to express my gratitude to all my comrades for their greetings and good wishes.'

In (15a), it is the direct object of the matrix clause, *izdelie* 'the article', which is understood to pass through the kilning. In (15b), it is the indirect object of the matrix clause, *mne* 'me' which is the understood subject of the AvPrt clause.

Non-detached AvPrt's, on the other hand, do not admit oblique control. For example, a speaker who accepts direct object control of the detached AvPrt in (16a) will not accept direct object control of the non-detached AvPrt in (16b).⁵

(16)a. *Vozvraščajas' domoj, menja zastal dožd'*.
(cited as non-normative by Listvinov 1965:231)
'(While) returning home, the rain caught me.'

b. #*Menja zastal dožd' vozvraščajas' domoj*.
'The rain caught me returning home.'

(16b) must be understood as saying that the rain was returning home. Such a reading violates pragmatic knowledge, and the sentence is anomalous (which we designate by #).

The control of AvPrt's is a deictic process. The discussion so far has been restricted to tautosentential deixis. As noted earlier, some indexes allow deixis to extend beyond the boundaries of the sentence containing the index. Indexes of this sort have been termed free. We now ask whether or not an AvPrt is a free index with respect to subject control.

When an AvPrt is detached, it may be controlled by a noun phrase in a previous sentence. That is, allosentential deixis is possible:

(17) *Ivanovič opozdal. Podbežav k stancii, poezd uze otošel.*
'Ivanovič was late. Having run up to the station, the train had already pulled away.'

It is understood that it is Ivanovič who ran up to the station, not the train. Allosentential deixis is not possible for non-detached AvPrt clauses:

(18) #*Ivanovič opozdal. Poezd uže otošel podbežav k stancii.*
'Ivanovič was late. The train had already

pulled away having run up to the station.'

In (18), it must be the train which ran up to the station. Again, anomaly results.

A free index permits reference to an orientation point not even contained in the message, that is, exophoric deixis. Detached AvPrt clauses are capable of exophoric deixis, but non-detached AvPrt clauses are not. Several cases of exophoric deixis will now be discussed.

Sometimes it is simply up to the hearer to know who the speaker is talking about. For example, Gvozdev (1955:253) cites (19) as being uttered by a person intending the AvPrt to refer to himself, not to the mother.

(19) *Vošedši (Vojdja) v komnatu, mat' stojala u okna.*

'Having entered the room, (the) mother was standing by the window.'

Of course, in (19), the matrix clause subject *mat'* 'mother' can also control the AvPrt. While the detached AvPrt in (20a) has the same potential ambiguity, the non-detached AvPrt in (20b) can only refer to the matrix clause subject *mat'* 'mother'.

(20)a. *Zakryv dver', mat' ostalas' v komnate.*

'Having closed the door, (the) mother remained in the room.'

b. *Mat' ostalas' v komnate zakryv dver'.*

'(The) mother remained in the room having closed the door.'

No other interpretation of (20b) is even marginally possible.

In (21), the AvPrt refers to an indefinite person, clearly not the subject.

(21) *Opustiv udil'nik, blesna ... ne padaet otvesno, a uxodit v storonu.* (S. Bernštejn, cited by Ickovič 1974:80) 'Having lowered the fishing rod, the bait does not fall straight down, but goes off to the side.'

That is, whenever someone, a fisherman, lowers the fishing rod, the bait goes off to the side. Such an interpretation of the AvPrt would be impossible if

the AvPrt were non-detached:

- (22) #*Blesna uxodit v storonu opustiv udil'nik.*
'The bait goes off to the side having lowered
the fishing rod.'

This sentence can only be interpreted as saying that the bait lowers the fishing rod, an anomalous reading.

A detached AvPrt clause may be interpreted as modifying the speech event. In this case, the AvPrt is controlled by the speaker:

- (23) ... *imenno poètomu vstretil Blok Oktjabr'skuju revoljuciju 'krikom radosti' i, vozmožno, počuvstvoval 'bol' vyrvavšegosja iz okov tvorca' (govorja ego že slovami, skazannymi, pravda, po drugomu slučaju).* (S. Čikovani)
'... it is for just this reason that Blok greeted the October revolution with a 'cry of joy' and, possibly, felt the 'pain of a creator torn loose from his fetters' (speaking in his own words, said, it is true, in a different connection).'

In this example, it is clear that it is the speaker who is speaking in Blok's own words, not Blok himself. If Blok were the understood subject of the AvPrt *govorja* 'speaking', then the doubly underlined pronoun *ego* 'his' would have to be replaced by the appropriate form of the reflexive pronoun *svoj* 'self's' in order to refer to the subject of its clause. If the AvPrt in (23) were non-detached, two closely correlated changes would result:

- (24) *Blok počuvstvoval 'bol' vyrvavšegosja iz okov tvorca' govorja *ego že/svoimi slovami.*
'Blok felt the 'pain of a creator torn loose from his fetters' (when) speaking in *his/self's words.'

First, there is a clear shift in meaning. In (24), it must be Blok who is speaking in his own words. Second, and following from this first fact, the reflexive pronoun is obligatory in (24).

Finally, a detached AvPrt clause may function as a viewpoint adverbial (the term is from Huang 1975). Viewpoint adverbials qualify the truth of the sentence by indicating "the viewpoints around which discourse revolves" (Huang 1975:25). For example:

- (25) *Esli by Beskorovajnyj, učityvaja ego ser'eznuju pedagogičeskuju zapuščenost', probyl v kolonii bolee dlitel'noe vremja, to, ja uveren, novogo prestuplenija ne posledovalo by. (Izvestija, cited by Ickovič 1974:81) 'If Beskorovajnyj, considering his serious pedagogical neglect, had spent more time in the colony, then, I am sure, no crime would have resulted.'*

The understood subject of the AvPrt in (25) is some nonreferential observer. Again, reflexivization may be used to demonstrate our point. If the AvPrt in (25) referred to Beskorovajnyj, then the pronoun *ego* would have to be replaced by *svoju* 'self's (accusative)'.
 The situation becomes clearer when we contrast (26a) and (26b), close to a minimal pair.

- (26a) *B. vybral svoe poprišče razumno, učityvaja ego/*svoju pedagogičeskuju zapuščenost'.*
 'B. chose his line of work wisely, considering his/*self's pedagogical neglect.'
 b. *B. vybral svoe poprišče učityvaja *ego/svoju pedagogičeskuju zapuščenost'.*
 'B. chose his line of work considering *his/self's pedagogical neglect.'

According to (26a), in which the AvPrt is detached, the wisdom of B's choice becomes apparent to the outside observer when that observer takes B's educational disadvantage into account. Correspondingly, the pronoun in the AvPrt clause must be the nonreflexive *ego*. In (26b), where the AvPrt clause is non-detached, it is B. who takes his background into account, in order to make an appropriate choice about his future. Since B. is the understood subject of the AvPrt, the pronoun in the AvPrt clause must be in the reflexive form: *svoju*. This difference in interpretation, with the concomitant difference in reflexivization, follows from the difference in detachment. Only when an AvPrt is detached, as in (26a), can it function as a viewpoint adverbial.

The results of our discussion so far may be summarized as in (27), on the following page.

1.3 It has been shown that the subject control of non-detached AvPrt clauses is restricted to tautosentential deixis, and is therefore bound. The subject control of detached AvPrt clauses, on the other hand,

(27)		Non-detached AvPrt clause	Detached AvPrt clause
endophoric deixis	tauto- sentential deixis		
	subject control -----	✓	✓
	subjectoid control ----	✓	✓
	oblique control -----	*	✓
	allo- sentential-----	*	✓
exophoric deixis -----		*	✓

may involve tautosentential, allosentential, or exophoric deixis, and is therefore free. Thus, the detachment of an AvPrt clause affects the sort of deixis used to assign it an understood subject.

The contrast between non-detached and detached AvPrt clauses parallels that between reflexive pronouns (*sebja* in particular) and personal pronouns. Both non-detached AvPrt's and reflexive pronouns are bound indexes. Both detached AvPrt's and personal pronouns are free indexes.

Neither non-detached AvPrt's nor reflexive pronouns admit all cases of tautosentential deixis. The parallel between these two indexes becomes all the more striking when it is observed that both are subject to exactly the same restrictions within tautosentential deixis. That is, they are both bound in the same way. We have seen that subject control is typical for both. Furthermore, non-detached AvPrt's admit five kinds of subjectoid control. Four apply to reflexive pronouns as well:

Dative experiencer:

- (28) *Mne žal' sebja.*
'I am sorry for myself.'

Oblique possessor:

- (29) *U Ivana byli den'gi s soboj.* (cited by Chvany 1975:99) 'Ivan had money with him.'

Oblique agent:

- (30) *Xižina byla postroena Djadej Tomom dlja sebja.*
(cited by Klenin 1974) 'The cabin was built
by Uncle Tom for himself.'

Noun phrase embedding:

- (31) *Čto takoe "pobeda nad soboj"?* (*Komsomol'skaja pravda*) 'What is "victory over oneself"?''

The only difference between the subjectoid control of non-detached AvPrt's and that of reflexive pronouns is that there are certain impersonal sentences in which the former is possible but not the latter (e.g., 14a and 14b).⁶ A detailed discussion of impersonal sentences would take us too far afield. It is sufficient to note that the control of reflexive pronouns is more restricted than that of non-detached AvPrt clauses because of an independent fact. Although pronouns in CSR may refer to an unspecified or nonspecific referent, they cannot be used nonreferentially or impersonally, like the expletive *it* of English impersonals, for example.

Several interesting peripheral issues are raised by the preceding discussion. As far as detached AvPrt clauses are concerned, not all potential controllers are equally capable of controlling an AvPrt. The actual controller is determined by a generalized notion of prominence, incorporating syntactic, semantic, functional, and pragmatic factors (see Rappaport 1979). The existence of subjectoid control suggests fundamental questions concerning syntactic structure and rule conditions. These important issues have not been pursued here because they are incidental to the theme of this paper. In Section One, we have shown that a non-detached AvPrt is a bound index, just like a reflexive pronoun. The orientation point in both cases must be tautosentential. Furthermore, this orientation point is specified by a deictic process sensitive to syntactic structure. In both cases, the relevant deictic process is capable of distinguishing subject and subjectoid noun phrases from oblique ones. A detached AvPrt, on the other hand, is a free index, like a personal pronoun. Free deixis allows reference to an orientation point which may be a linguistic element in the same sentence as the index, but it need not be. The orientation point may be a linguistic element in another sentence of the discourse, or it may stand outside the message entirely.

2. *Temporal Deixis*

2.0 Tense is a morphological category of the Russian verb which specifies the temporal relation of a narrated event to some other point in time. The reference to another point in time identifies tense as a deictic category. For example, a past tense form specifies that an event is anterior to some external orientation point. This orientation point may be either the time of the speech event or the time of another narrated event. The deictic nature of tense is well-known (see especially Jakobson 1957 [1971] and Brecht 1974a, 1975, as well as the many references cited by Brecht).

A tense distinction is only marginally expressed in the AvPrt of CSR but this need not mean that the AvPrt forms have no tense meaning.⁷ Accordingly, Isačenko has written the following:

Adverbial participles do not have an "absolute" tense meaning. But they are characterized by a "dependent" or relational tense meaning, indicating the relative localization in time of the process or event expressed by the adverbial participle in relation to the main process or event expressed by the verbal predicate...

The opposition of "relational tense meaning" is represented in Russian by two members:

Adverbial participles of the imperfective aspect are the strong, or marked member of the opposition. They signal the simultaneity ("synchrony") of the secondary action with the primary action.

Adverbial participles of the perfective aspect are the weak, or unmarked member of the opposition. They say nothing about simultaneity ("synchrony") of the secondary action with the primary action (1960:521).

Isačenko's views are typical in their substance, although not all sources express their observations in terms of markedness. In the terminology adopted here, Isačenko's remarks can be rephrased as follows. The imperfective AvPrt is a bound index. It is restricted to tautosentential deixis in that it must describe a secondary event simultaneous with the primary event (that described in the matrix clause). The perfective AvPrt is a free index.

We will show that, while these remarks may describe the typical case, they are not entirely accurate in describing the grammatical facts. Rather, perfective and imperfective AvPrt's have exactly the same tense meaning. When detached, their tense meaning is free. When non-detached, their tense meaning is bound to that of the matrix clause.

2.1 Detached AvPrt clauses will be considered first.

Examples such as the following readily corroborate that perfective AvPrt's have no tense meaning when detached. A detached perfective AvPrt may describe an event which is anterior, simultaneous, or posterior to the primary event:

Anterior:

- (32) *Vojdja v kabinet, Rjabinin osmotrel'sja.*
(L. Tolstoj) 'Having entered the office, Rjabinin looked around.'

Simultaneous:

- (33) a. *Vstretja vas, ja (pri etom) ne poveril svojim glazam.* (cited by Jakobson 1957 [1971:141])
'(When) meeting you, I did not believe my eyes.'
- b. *V zaključitel'nom slove Tol'jatti podvel itogi rabotam s"ezda, podčerknuv značenje prizyva o sozdanii pravitel'stva...* (Pravda, cited by Deribas 1954:6) 'In the concluding remark, Togliatti summed up the work of the congress, emphasizing the significance of the call for the creation of a government ...'

Posterior:

- (34) *On brosil papirosku na zemlju, rastoptav ee dvumja sliškom sil'nymi udarami nogi.*
(Gor'kij, cited by Deribas 1954:6) 'He threw the cigarette on the ground, stamping it out with two excessively strong taps of (his) foot.'

My informants find these sentences equally acceptable when the matrix clause is put in the future tense. Thus, a secondary event described by a detached perfective AvPrt may be in any temporal relation with either the primary event or with the speech event.

The prevailing opinion on the tense meaning of

AvPrt's, expressed so clearly by Isačenko, would lead one to expect that imperfective AvPrt's would not enjoy the same temporal flexibility as perfective AvPrt's. This, however, is not the case. Examples (35) - (37), parallel to (32) - (34), demonstrate that a detached imperfective AvPrt, like a perfective one, may describe a secondary event which is anterior, simultaneous, or posterior to the primary event.

Anterior:

- (35) a. Znaja ètogo èeloveka v molodosti, ja sklonen doverjat' emu.
'Knowing (having known) this person as a youth, I am inclined to trust him.'
- b. Daže Boris Filippovič, ran'še vsegda govornja odobritel'no o komunizme, stal inače o nem otzyvat'sja posle ètogo skandala.
'Even Boris Filippovič, earlier always speaking positively of communism, changed his tune after this scandal.'

Simultaneous:

- (36) Idja rjedom s nim, ona ... s ljubopytstvom i udivleniem smotrela na nego. (Gor'kij)
'Walking alongside him, she was looking at him with curiosity and surprise.'

Posterior:

- (37) a. Staršina dal patriotu papirosu, i on zamolčal, prodolžaja vremja ot vremeni vsxlipyvat'. (Amal'rik) 'The senior representative gave the patriot a cigarette, and he fell silent, continuing from time to time to whimper.'
- b. Ja tak ustal [i] namerzsja za den', èto vse-taki usnul, inogda skvoz' son perevoráčivajas'. (K. Simonov) 'I was so tired and frozen from during the day that (I) fell asleep anyway, occasionally turning over in (my) sleep.'
- c. Ja opjat' prinjalsja za "Lolitu", zanimajas' eju po večeram ili v doždlyve dni. (Nabokov) 'Again I took up *Lolita*, working on it in the evening or on rainy days.'

Parallel to the case of detached AvPrt's of the perfective aspect, the tense of the matrix clause does not affect the ability of a detached imperfective AvPrt to describe a secondary event which is anterior, simultaneous, or posterior to the primary event.

We must conclude that when detached, neither

perfective nor imperfective AvPrt's have any grammatical tense meaning. There is no fixed temporal relation between the primary and secondary events, nor between the speech event and the secondary event. Any notions of anteriority, simultaneity, or posteriority are determined by clause order, semantic context, and pragmatic knowledge. These factors are not grammatical and extend beyond tautosentential deixis. Thus, in our terms, the temporal deixis of detached AvPrt's is free, regardless of aspect.

2.2 It will now be shown that the temporal deixis of non-detached AvPrt's, whether perfective or imperfective, is bound to the matrix clause. More specifically, the secondary event is asserted to accompany the primary event whenever the primary event occurs. We may define the temporality of a clause to be the totality of points in time occupied by the event described by that clause. The temporality of a non-detached AvPrt clause must be identical to that of the matrix clause. We begin our discussion by considering imperfective AvPrt's.

Example (38) can be interpreted as describing a single event or a repeated event:

- (38) *On rabotaet posvistyvaja.*
'He works/is working whistling.'

In either case, the temporal boundaries of the secondary event coincide with those of the primary event. Thus, (38) asserts that he whistles while he works, whenever it is that he works.

Of course, even a detached counterpart to the AvPrt clause in (38) would most naturally be interpreted as expressing an event simultaneous with the primary event:

- (39) *Posvistyvaja, on rabotaet.*
'Whistling, he works/is working.'

The effect of detachment is the following. A detached imperfective AvPrt is most naturally interpreted as describing an event simultaneous with the primary event, but semantic context may force a different interpretation. A non-detached imperfective AvPrt, on the other hand, must have a simultaneous reading. If semantic context requires a different interpretation, the result is anomaly. To prove that this difference exists, it would be helpful to find a minimal pair. Two examples follow.

The AvPrt clause in (40a) is detached, while

that in (40b) is non-detached:

- (40)a. *Ja sklonen doverjat' etomu čeloveku, znaja ego v molodosti.*
 b. #*Ja sklonen doverjat' etomu čeloveku znaja ego v molodosti.*
 'I am inclined to trust this person, knowing him as a youth.'

The notion of temporal sequence is expressed by the adverbial *v molodosti* 'as a youth', which seems most naturally to point to the past. The detached construction (40a) is perfectly compatible with a sequential interpretation. The non-detached construction (40b), on the other hand, is not compatible with a sequential interpretation, and the result is anomaly. If the semantic context were to suggest or admit simultaneity rather than a sequence, then the AvPrt clause may be non-detached:

- (41) *Ja sklonen doverjat' etomu čeloveku daže ne znaja ego.*
 'I am inclined to trust this person without even knowing him.'

Second, contrast the detached AvPrt construction (42a) with the non-detached AvPrt construction (42b):

- (42)a. *Imeja sil'nye ruki, velikan ukral/kral pianino.*
 (adapted from Dowty 1972) 'Having strong arms, the giant stole a piano/would steal pianos.'
 b. #*Velikan ukral/kral pianino imeja sil'nye ruki.*
 'The giant stole a piano/would steal pianos having strong arms.'

The secondary event in both cases, having strong arms, is a prolonged state, essentially a permanent attribute of the subject. The primary event is temporally more restricted. This difference causes no problem for a detached AvPrt clause construction, and a causal connection between the two clauses in (42a) is naturally assigned: because the giant had strong arms, he was able to steal a piano/pianos. Example (42b), on the other hand, is anomalous. The temporality of the matrix clause is imposed upon the non-detached AvPrt clause. This entails that the state of having strong arms is as singular or interrupted an event as the piano stealing. This temporality of the AvPrt clause contradicts pragmatic knowledge.

One is not able to develop strong arms in order to steal a piano, only to return to a ninety pound weakling immediately thereafter. As a result, the sentence is anomalous. There is no further recourse to other interpretations (for example, causal), as is the case in a detached AvPrt clause construction.

We now turn to non-detached AvPrt's of the perfective aspect. We begin obliquely with the observation that some languages (for example, English) have a category called the perfect, which indicates 'the continuing relevance of a previous situation' (Comrie 1976:56) or the state resulting from a previous event. Since Russian does not have a perfect form, perfective verbs may appear in contexts where the meaning of the perfect would be appropriate (Forsyth 1970:74-76). Similarly, a detached AvPrt clause with a perfective AvPrt may be used in a perfect context, as in:

- (43) *Skrestiv ruki, vcepivšis' pal'cami v pleči sebe, on stojal spokojno, prižimaja nogoj k palube kakoj-to uzel.* (Gor'kij) 'Arms crossed, fingers grasping his shoulders, he stood calmly, holding some sort of bundle along the deck with his foot.'

The use of a detached perfective AvPrt is not restricted to a perfect context, nor is such usage even typical. This is especially apparent when an AvPrt describes an event posterior to the primary event (as in 34), and it is rather clear in many cases of anteriority as well:

- (44) *Vstretiv ee v rannej mladosti, on nikogda s nej bol'se ne videlsja.* (Jakobson 1957 [1971:141]) 'After having met her once in his early youth, he never saw her again.'

A non-detached perfective AvPrt, on the other hand, almost invariably has a perfect sense. For example, in the following sentences, it is clear that a) the process described by the AvPrt clause precedes the primary event, and b) the state resulting from this process is simultaneous with the primary event.

- (45)a. *Starik dolgo xodil zadumavšis'.* (Aksakov) 'The old man walked for a long time lost in thought.'
- b. *Ja prišel k vam poobedav.* (cited by Brave 1940:25) 'I came to you having eaten (that

is, not hungry).

- (45)c. *Oni vytaskivali bol'nyx na matracax ili prsto vzjav pod myški.* (Fadeev, cited by Rozental' 1957:268) 'They carried the patients out on mattresses or simply having taken (them) under the arms.'

Sometimes the semantic context suggests that a perfect reading of the secondary event is not possible. In such cases, it is important that a secondary event described by a non-detached AvPrt clause may be understood as totally coinciding in time with the primary event. For example, the AvPrt clause in (46) must be read as detached:

- (46) *On poblagodaryl i otkazalsja, ob"jasniv, što emu tol'ko čerez dorogu, naprotiv.* (Pasternak, cited by Forsyth 1970:301) 'He expressed his thanks and declined, explaining that he only had to go across the road, to the other side.'

An explanation may be perceived as preceding, being contained in, or following a statement of declining, but not as temporally coinciding with it. Example (47), on the other hand, is one of the relatively rare cases in which a perfective AvPrt may be non-detached without having a perfect reading:

- (47) *On spisal tekst, podčerknuv vse suščestvitel'nye.* (cited by Brave 1940:26) 'He copied the text, underlining all the substantives.'

When (47) is read without detachment, it is clear that as the subject copies each word, he determines whether or not it is a substantive and underlines it if it is. Thus, the process of underlining all the substantives coincides in time with the process of copying the text. If the AvPrt clause in (47) were read as detached, then it would be possible to create a context in which the subject first copies the entire text and then goes back and underlines the substantives. In (48) we create such a context lexically by adding the adverb *potom* 'then':

- (48) *On spisal tekst, potom podčerknuv vse suščestvitel'nye.* 'He copied the text, then underlining all the substantives.'

Example (48), unlike (47) must be read as detached. A non-detached AvPrt clause may not describe an event

posterior to the primary event.

2.3 To summarize, it has been demonstrated that there is a well-defined constraint on the temporality of a non-detached AvPrt clause. The secondary event must be simultaneous (temporally coterminous) with the primary event. In other words, the secondary event occurs whenever the primary event occurs. This constraint does not apply to a detached AvPrt clause.

The temporality of an AvPrt clause is determined by reference to external points of orientation. That is, the assignment of temporality is deictic. The temporality of a non-detached AvPrt clause is determined exclusively by the matrix clause. Reference to the matrix clause is tautosentential deixis; exclusive reference to the matrix clause is bound deixis. On the other hand, the temporality of a detached AvPrt clause has no fixed temporal relation to any other point(s). Furthermore, it is conditioned in part by such extra-linguistic factors as semantic context and pragmatic knowledge. Thus, the temporal deixis of detached AvPrt clauses is free.

Just as the subject deixis of AvPrt clauses has a parallel in the reference of pronouns, the temporal deixis of AvPrt clauses has a parallel in the tense deixis of finite embedded clauses. Tense in finite embedded clauses is sometimes defined in relation to the temporality of the matrix clause ("relative tense") and sometimes in relation to that of the speech event ("absolute tense"). The conditions governing the distribution of these two types of deixis in CSR are complex and not well understood. The type of clause and the semantics of the matrix clause predicate are important factors (see Brecht 1974a). In any event, when the context dictates relative tense, the tense deixis is bound, since the tense meaning obligatorily refers to a tautosentential point of orientation, the matrix clause. When absolute tense is either possible or required, the tense deixis is, by definition, free.

3. *Conclusion*

The above discussion has considered two cases of neutralization which occur in the AvPrt clause of CSR. While finite personal clauses specify their grammatical subject, AvPrt clauses do not. This is a case of syntactic neutralization. While most verb forms express tense, the AvPrt does not. This is a case of morphological neutralization. In this paper

we have addressed the question of how the corresponding meanings are assigned when these two categories are neutralized in AvPrt clauses.

Two resolutions of this question were encountered. The meaning corresponding to a neutralized category may be assigned by reference to the immediate grammatical context. More specifically, the subject (or subjectoid) and the temporality of the matrix clause may be imposed on the AvPrt clause. This is bound deixis. Alternatively, these meanings may remain grammatically unspecified. Speakers interpret the AvPrt clause in a way which is consistent with the semantic context and pragmatic knowledge. This is free deixis.

The fact that these two possibilities exist is not surprising. There are other cases in which a neutralized category is interpreted by bound or free deixis. For example, in Russian, tense is neutralized in the infinitive and in the subjunctive mood. The temporality of a complement infinitive is bound, determined by the matrix verb (Brecht 1974b). The temporality of a verb in the subjunctive mood is free, and it may adapt to the context. It does not necessarily follow that a neutralized category is always bound in some context. The grammatical category of mood is neutralized in the morphology of the AvPrt, and yet the modality of an AvPrt clause is never bound. This topic, and the questions it raises, must be left to another study.

The subject and temporal deixis of AvPrt's have parallels which do not involve neutralization. Like the subject deixis of an AvPrt, the reference of a pronoun may be either bound or free, depending upon whether it is reflexive or personal. Like the temporal deixis of an AvPrt, the tense of a finite verb in an embedded clause may be either bound or free, depending upon a complex of syntactic and lexical factors. The subject and temporal deixis of AvPrt's is interesting because a single morphological form is either bound or free depending solely upon one syntactic fact: whether or not the AvPrt is detached. Furthermore, although subject neutralization is a fact of syntax and tense neutralization is a fact of morphology, detachment affects the two categories in fundamentally the same way.

NOTES

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nurture this paper and related work. Alan Timberlake and Richard Brecht have made important, if indirect, contributions. I have also benefited from discussion in Richard Brecht's Slavic Syntax Colloquium at Harvard University (1977-1978). Portions of this paper were presented at the 1978 Winter Meeting of the Linguistic Society of America in Boston, as well as in guest lectures at the Universities of Texas (Austin) and Virginia. Translations from Russian scholarly literature are mine.

¹For details on the intonation of detachment based on experimental evidence, see Ljubimova 1964. Gvozdev 1949 considers the question in some detail (see especially pp. 117-124) and distinguishes between the intonation of detachment and that of apposition, both of which can occur in the same environment. See also Peškovskij 1956:412-17, Rudnev 1968:129-31, and Čeremisina 1976:74-76.

²I wish to thank my informants for donating their time and intuitions. I have worked extensively with Aleksandr and Sara Selcov, and Ada and Nojax Vajsman. The judgments of Mr. Selcov, the most educated of my informants, tended to approximate the literary norm. The remaining three speakers uniformly accepted the examples cited in the text.

³By far the most interesting and detailed discussion of non-normative AvPrt constructions in CSR is found in Ickovič 1974:79-106. See also Gvozdev 1955:252-54, Peškovskij 1956:435, Vlasov 1958, Finkel' and Baženov 1960:424, Livšic 1964:169-70, Listvinov 1965:226-31, Ickovič 1968:34-35, Rozental' 1974:324-25, and Šatux 1975:222-23, as well as other sources.

⁴Ickovič 1974:79 mentions that "the spoken language tends to be less strict in the use of adverbial participles." Gvozdev 1955:254 notes that "mistakes of this type are encountered rather frequently in the writing of students ... Sometimes such constructions even make their way into the press ..."

⁵In this case and in several cases below, our attempt to construct a minimal pair distinguished only by detachment is hindered by the fact that in many semantic contexts, a detached AvPrt clause is most natural in sentence initial position, while a non-detached AvPrt clause is generally most natural in sentence final position. These characteristics of AvPrt clauses are quite independent of the issue of subject deixis. A non-detached AvPrt clause may be placed in sentence initial position under certain functional (and context dependent) circumstances. The position of a detached AvPrt clause is determined by factors which are not as well understood. In any case, the sentences in the text are given in their most natural and least-context-dependent order. It is hoped that with these remarks in mind, the reader will understand that the deictic contrast in pairs such as (16) is the result of the difference in detachment, not in clause order.

⁶There are also a very small number of verbs which allow a reflexive pronoun to refer to the direct object rather than to the subject if the reflexive pronoun is accompanied by the

emphatic particle *sam*. Klenin (1974) cites the following example: *obščestvo zaščitiščaet čeloveka ot samogo sebja* 'society protects man from himself/*itself'. Although such cases involve tautosentential deixis, they make the parallel between *sebja* and non-detached AvPrt clauses less than perfect.

⁷Jakobson (1957 [1971:141-43]) claims that there is a vestigial tense distinction among perfective AvPrt's, illustrated by the forms *vstretiv* (preterite) '(after) having met' and *vstretja* (present) '(when) meeting'. He also discusses the contrast among imperfective AvPrt's between the preterite form (e.g., *vstrečav* '(after) having met') and the present form (e.g., *vstrečaja* '(while) meeting'). Struve 1953 maintains that there remains a live tense distinction among imperfective AvPrt's in CSR. These are clearly minority views. In this paper it will be assumed that each verb has at most two grammatical AvPrt forms, distinguished by aspect, not tense (following, for example, Isačenko 1960:520,527,534). Considering the marginal forms would not invalidate our conclusions, but merely complicate the discussion.

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